THE TELANGANA FACTORIES RULES, 1950

Contents

[1][THE TELANGANA FACTORIES RULES, 1950]

CHAPTER I – PRELIMINARY

1. Short title, extent and commencement

1 (1) [2][These rules may be called the Telangana Factories Rules, 1950

2 (2) These rules shall extend to the whole of the State of Telangana.

3 (3) [3] [x x x]

2. Definitions

In these rules, unless there is anything repugnant in the subject or context—

(a) "Act" means the Factories Act, 1948.

(b) "Appendix" means an appendix appended to these rules.

(c) "Artificial humidification" means the introduction of moisture into the air of a room by any artificial means whatsoever, except the unavoidable escape of steam or water vapour into the atmosphere directly due to a manufacturing process.

Provided that the introduction of air directly from outside through moistened mats or screens placed in openings at times when the temperature of the room is 80 degrees or more, shall not be deemed to be artificial humidification.

(d) "Belt" includes any driving strap or rope.

(e) "Degrees" (or temperature) means degrees of the Fahrenheit scale.

(f) "District Magistrate" includes the Additional District Magistrate and any other officer appointed by the Government in that behalf 2[x x x].

(g) "Family" means the wife, son, daughter, mother, brother or sister of the owner of any place wherein a manufacturing process is carried on who lives with or is dependent on such owner.

(h) "Fume" includes gas or vapour.

(i) Health officer" means the Municipal Health Officer in a Municipality or Corporation, the District Health Officer concerned in any area within the jurisdiction of a district board or panchayat or such other officer as may be appointed by the State Government for any area in that behalf irrespective of whether such area is within the limits of a municipality or the jurisdiction of a district board or panchayat.

(j) "Hygrometer" means an accurate wet and dry bulb hygrometer conforming to the prescribed conditions as regards construction and maintenance.

(k) [4][x x x]

(l) "Maintained" means maintained in an efficient state, in efficient working order and in good repair.

(m) "Manager" means a person nominated or appointed as such by the occupier of the factory under Section 7 for the purposes of the Act.

(n) "Local Authority" means the Commissioner in the case of an area within the limits of a municipality or corporation, the executive officer in the case of an area within the jurisdiction of a panchayat and the president of a district board in the case of any other area.

(o) "Public Health Authority" means the Local Health Officer having jurisdiction over the area.

(p) “Section” means a section of the Act.
(q) “Week” for the purposes of Section 2(f) of the Act and these rules shall mean, for any local area or any class of factories, the period of seven days commencing from the midnight of Saturday or of such other day preceding the day on which the factories of that area or class are ordinarily closed every week according to any scheme, order, arrangement, regulation, usage or custom

Provided that, where work is ordinarily carried on continuously in the factory on all days of the calendar week, the term “week” in relation to any worker of the factory shall mean that period of seven days commencing from the day on which the worker is not required to work.

2A Competent Persons

1 (1) The Chief Inspector may recognize of the recognize (ignite area and for such period as may be specified for the purposes of such out the number of tests, examinations, inspections and certification as prescribed for such buildings, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure plant, confined space, ventilation systems, evaluation of exposure of employees to airborne contaminants and physical agents at the work place, solvent extraction plant " ; and such other process or plant and equipment as stipulated in the Act and the Rules made thereunder, located in a factory, if such a person possesses the qualifications, experience and other requirements as set out in the Schedule annexed to this rule.

The Chief Inspector of Factories may recognize any person or an institution of repute, as a Competent Person under the Act for the purpose of carrying out tests, examinations, inspections and issuing certification as stipulated under the Act and Rules in respect of buildings, dangerous machinery, hoists and lifts, lifting tackles, chains, ropes, pressure plants confirmed spaces, ventilation system, evaluation of exposure of employees to ‘airborne contaminants and physical agents at the work place, solvent extraction plant other processes or plants and equipment’s located in a factory:
Provided that such a person possesses the required qualifications, experience and other facilities, equipment etc., as set out in the schedule annexed to this rule, and

In case of an institution shall be equipped with persons possessing the required qualification and experience as prescribed and also the facilities, equipment’s, etc., for carrying out the tests, examinations and inspections.

1 (2) Every person/institution seeking recognition or renewal of recognition as competent person (CP) shall submit an application in the prescribed form accompanied by a treasury receipt towards the remittance of the prescribed fee and all the relevant documentary proof in the office of the Directories of Factories, Telangana, Hyderabad before 2 months in advance. The fee once paid is not refundable

2 (3) The person seeking recognition as a competent person shall not be above the age of 62 years and physically fit for the purpose of carrying out tests, examination and inspections.

3 (4) The chief Inspector may relax the requirements of qualifications in respect of a Competent Person if such person is exceptionally experienced and knowledgeable, but not the requirements in respect of the facilities at his end.

4 (5) The Chief Inspector, on receipt of an application in the prescribed form from a person of an institution intending to be recognized as a “Competent Person” for the purpose of this Act and the Rules made thereunder shall register such an application and, within a period of sixty days from the date of receipt of the application, wither, after having satisfied himself as regards competence and facilities available at the disposal of the applicant, recognize the applicant as a competent person and issue a certificate of competence in the prescribed form or reject the application specifying the reasons thereof Certificate of the recognition so granted shall be valid for a period of one year as specified in the certificates.

5 (6) Every application for recognition or renewal of recognition as competent person shall be accompanied by a treasury receipt towards the remittance of the prescribed fee shown in the Schedule annexed t this rule under the head of account as prescribed in the rule 11. The fee once paid is not refundable.

6 (7) The Chief Inspector may, after giving an opportunity to the competent person of being heard, revoke the certificate of competency,

7 (i) If he has the reason to believe that the competent person/Institutions-

8 (a) has violated any condition stipulated in the certificate of competency;

9 (b) has carried out a test, examination and inspection or has acted in a manner inconsistent with the intent or the purpose of this Act or rules made thereunder, or has omitted to act as required under the Act and the Rules made thereunder

10 (ii) For any other reasons to be recorded in writing

11 (8) The Chief Inspector may reason to be recorded in writing require recertification of lifting machines, lifting tackles, pressure plants or ventilation system, as the case may be, which has been certified nu a competent person

1 (9) The qualification required, experience for the purpose, facilities at his command, quantum of fee, application format and the competency certified prescribed are shown in separate schedules annexed to this rule.

Sl. No	**Section or Rules under Factories Act 1948 and A.P Factories Rules, 1950 under which competency is recognized**	**Qualification required**	**Experience for the purpose**	**Facilities at his command**	**Schedule of the prescribed**
Fee for Registration			**Fee for Renewal**		
1	**2**	**3**	**4**	**5**	**6 Rs.**	**7 Rs.**

1	1.	Rules made under section 6 and Section 112 Certificate of stability for building	Degree in Civil or Structural Engineering or Equivalent	(i) A minimum of 10 years' experience in the design of construction or testing or repairs of structured (ii) Knowledge of non-destructive testing, various codes of practices that the current and effect of the vibrations and natural forces on the stability building; and (iii) Ability to arrive at a reliable conclusion with regard to the safety of the structure of the building		3500	3000
1	2.	Rule 53 under Section 21 (2) for power presses	Degree in Mechanical or Electrical Engineering or equivalent	(i) A minimum of 7 years' experience in (a) design or operation or maintenance or	Gauges for measurements; instruments for measurement of speed and any	3000	2500

(b) testing examination and inspection of relevant machinery, their guards, safety devices and appliances (ii) He shall- (a) be conversant with safety devices and their proper functioning (b) be able to identify defects and any other cause leading to failure; and (c) have ability to arrive at a reliable conclusion with regard with regard to the proper functioning of safety device and appliance and machine guard.				other equipment or device to determine the safety in the use of the dangerous machines.		
1	3.	Section 28 Lifts and Hoists & Section 29- Lifiting Machinery and lifting tackles	A degree in Mechanical and/or Electrical or its equivalent	(i) A minimum experience of 7 years in (a) design or erection or maintenance or (b) Inspection and test procedure; of lifts and hoists (c) testing examination and inspection, of lifting machinery and lifting tackles	Facilities for load testing, tensile testing, heat treatment equipment, gauges equipment/gadget for measurement and other equipment required for determine the safe working conditions of lifts, hoists, lifting	2500	2000

machinery & lifting tackles
(ii) He shall be,
(a) Conversant with relevant codes of practices and test procedure that are current
(b) Conversant with other statutory requirements covering the safety of the hoists and lifts & lifting tackles
(c) able to identify defects and arrive at a reliable conclusion with regard to the safety of hoists and lifts, lifting machinery, chains, ropes and lifting tackles

(d) conversant with fracture mechanics and metallurgy of the material of construction (e)conversant with heat treatment/stress relieving techniques as applicable to stress bearing parts of lifting machinery and lifting tackles						
1 4.	Section 31- "Pressure Plant"	Degree in Mechanical or Electrical or Metallurgical Engineering or its equivalent	(i) A minimum experience of 10 years' in (a) design or erecrion or maintenance Or (b) testing examination and inspection, of pressure plants (ii) He shall be (a) Conversant with relevant codes of practices and test procedures relating to pressure vessels (b) conversant with statutory requirement concerning the	Facilities for carrying out hydraulic test, nondestructive test, gauges equipment/gauges for measurement and other equipment or gauges to determine the safety in the use of pressure vessel	300	2500

			safety of			

unfired pressure vessels and equipment operating under pressure; (c) conversant with non-destructive testing techniques as are applicable pressure vessels; (d) able to identity defects and arrive at a reliable conclusion with regard to the safety of pressure plants						
1 5.	(i)Section 36-Precatious against dangerous fumes (ii)Rules made under section 41 & 112 concerning ship building and ship repairs (iii) Safety bets under Rule 61-C (iV) Thermic Fluid heaters	Master's degree in Chemistry or a degree in Chemical Engineering or a degree in Mechanical Engineering or Electrical Engineering	(i) A minimum of 7 years in collection and analysis of environmental samples and calibration of monitoring equipment (ii) He shall, be conversant with the hazardous properties of chemicals and their permissible limit values (b) be conversant with the current	Meters instruments and devices duly calibrates and certified for carrying out the tests and certification of safety in working in the confined spaces	3000	2000

	under rule 61(M) (v) Oven and Drivers under Rule 61 (O)		techniques of sampling and analysis of the environmental contaminants; and (c) be able to arrive at a reliable conclusion as regards the safety in respect of entering and carrying out hot work			

1	6.	Ventilation system as required under various schedules framed under section 87, such as schedules on (i) Grinding or glazing of metals and process incidental thereto schedule V under Rule 95. (ii) Cleaning or smoothing roughening etc., of articles, by jet, sand, metal shot, or grit, or other abrasive propelled by a blast of compressed air or steam schedule XIX under Rule 95. (iii) Handling and processing of asbestos Schedule XVII under rule 95 (iv) Manufacturing of Rayon by viscos process and	Degree in Mechanical engineering or equivalent Degree in Chemical or its equivalent	(i) A minimum of 7 years in the design fabrication, installation, testing of ventilation system and system used for extraction and collection of ducts, fumes and vapor's and other ancillary equipment (ii) He shall be conversant with relevant codes of practice and tests procedures that are current in respect of ventilation and a traction system for fumes and shall be able to arrive at a reliable conclusion with regard to effectiveness of the system (i) A minimum of 5 years' industrial experience in the concerned field. (ii) he shall be (a) conversant with relevant codes of	Facilities for testing the ventilation system, instruments and gauges for testing the effectiveness of the extraction system for dusts, fumes and any other equipment needed for determining the efficiency and adequacy of these systems. He shall have the assistance of a suitable qualified technical person who can come to a reasonable conclusion as to the adequacy of the system. Facilities for carrying out tests in solvent extraction plant, chemical works and carbon	3500	3000

			practice and test procedure relating to ventilation system (b) Capable to identify defects and arrive at a reliable conclusion with regard to the safety of the system, (i) A minimum of 5years industrial experience in the concerned field (ii) He shall be			

schedule XXVIII under Rule 95 (v) Foundry operations Schedule XXX under Rule 95. (vi) Solvent Extraction plant Schedule XXII under rule 95 (vii)chemical works schedule XV under Rule 95 (viii) Carbon disulphate plant schedule XXIII under Rule 95	Degree in chemical or its equivalent degree in Mechanical/Electrical Engineering or Chemical Technology or is equivalent	(a) conversant relevant codes of practice and test procedures relating to oils, fats and chemicals (b) able to identity defects and arrive at a reliable conclusion with regard to the safety of the system	disulphide plant such as (a) portable Hexane vapor detector (b) Ultrasonic Thickness tester (c) Pressure gauge calibrator (d) vacuum gauge calibrator (e) Earth merger and (f) Techno meter]

Form of Application for Grant of Certificate to a Person/Under Sub-rule) (2) of Rule 2A

1 1.	Name and Address		:
1 2.	Date of Birth		:
1 3.	Name of organization (if not self-employed)		:
1 4.	Designation		:
1 5.	Educational Qualification (Xerox copies of testimonials to be attached		:
1 6.	Details of professional experience in (chronological order)		:
Name of the Organization	Period of service	Designation	Area of Responsibility

1	7.	Membership, if any of professional bodies	:
1	8.	Details of facilities (examination testing, etc.,) at his disposed	:
(ii) Arrangements for calibrating and maintaining the accuracy of these facilities		:	
Purpose for which competency Certificate in sought (section or)		:	
1	9.	Sections of the Act should be stated	:
1	10.	Whether the applicant has been declared as a competent person under any statute (if so the details)	:
1	11.	Any other relevant, information	:

I, ……. Hereby declare that the information furnished above is true. I undertake.

(a) That in the event of any change in the facilities at my disposal (either addition or deletion) or my leaving the aforesaid organization. I will promptly inform the Director of Factories
(b) To maintain the facilities in good working order, calibrated periodically as per manufactures instructions or as per national standards and
(c) To fulfil and abide by all the conditions stipulated in the certificate of Competency and instructions issued by the chief Inspector of Factories from time to time.

Signature of the Applicant
Place:
Date:
List of building so far:
i (i) Constructed and its value.
ii (ii) A detailed not regarding non-destructive testing various codes of practices that are current and the effect of the vibrations and natural forces on the stability of the building is enclosed

Form of Application for Grant of Certificate of competency to any Institution Under Sub-rule (2) of Rule-2A

1 1. Name and full address

2 2. Organisations status (specify whether government, autonomous, co-operative, corporate or private)

3 3. Purpose for which competency certificate is sought (specify section(s) of the Act);

4 4. Whether the organization has been declared as competent person under this or any other statute. If so, give details

5 5. Particulars of persons employed and possessing qualification and experience as set out in Schedule annexed to rule 2-A

6 6. Details of facilities (relevant to item 3 above and arrangements made for their maintenance and periodic calibration)

7 7. Any other relevant information.

8 8. Declaration:

I ……hereby, on behalf of……certify that the details furnished above are correct to the best of my knowledge.

I under taken to

(i) maintain the facilities in good working order, calibrated periodically as per manufacturer's instructions or as per National standards; and

(ii) to fulfil and abide by all the conditions stipulated in the certificate of competency and instructions issued by the or of the persons authorized to sign on his behalf Chief Inspector from time to time.

Place:

Date:

Signature of Head of the Institution or of the

persons authorized to Sign on his behalf

CERTIFICATE OF RECOGNITION AS COMPETENT PERSON

(Issued in pursuance of sub-rule (5) of Rule 2A)

(See Rule 2A)

CP (O) No. Date:

The Director of Factories, Telangana, Hyderabad in exercise of the powers conferred under Secion2 (ca) of the Factories Act and Rules made thereunder, hereby recognize*……represented by …….to be a competent person for the purpose of carrying out test, examination inspection and certifications for ***…… used in factories subject to the conditions overleaf.

The Jurisdiction extends all over Telangana/is restricted to M/s…….

This certificate is valid from…….

Office seal Director of Factories

Revalidation details

From	To	Signature of authority
(1)	(2)	(3)

*Name of the institution		
**Name of the competent person		
(a) Building	(b) Hoists	(c) lifts
(d) chains	(e) Lifting machines	(f) Ropes
(g) Lifting tackles	(h) Pressure plant	(i) Ventilation system
(j) Confined space	(k) Plants and equipment's of dangerous processes as applicable.	

This certificate is issued subject to the conditions stipulated hereunder:

i (i) Tests, examination and inspections shall be carried out in accordance with the provisions of the Act and the Rules

ii (ii) Tests, examinations and inspections shall be carried out under direct supervision of the competent person or by a person so authorized by an institution recognized to be a competent person.

iii (iii) The certificate of competency issued in favour of a person shall stand cancelled if the person leaves the organization mentioned in this application.

iv (iv) The institution recognized as a competent person shall keep the Chief Inspector informed of the names, designation and qualifications of the person authorized by it to carry out test, examinations and inspections.

i (v) The competent person should be physically present at the time of testing and examination.

ii (vi) Records of daily work done should be maintained in a log book incorporating therein the details regarding the date, the work done, observations made, directives given etc.

iii (vii) Copies of examination on certificates in all cases where defects are noticed and repairs are ordered or any conditions imposed on its use are to be marked to the Inspector of Factories concerned.

iv (viii) Application for renewal of certificate along with a brief account of work done during the period of validity of the certificate may be made at least one month before the certificate may be made at least one month before the certificate expires together with fees prescribed for the purpose;

v (ix) This recognition is subject to constant review and liable to be cancelled if deficiencies come to notice.

3. 5[Submission and Approval of plans

1 (1) In the case of any factory where,

2 (a) any hazardous process of the nature specified in the First Schedule of the Act is proposed to be carried on whether or not with the aid of power and notwithstanding that the number of persons employed is less than any number specified in Section 2(m) of the 2(m) of the Act; or

3 (b) the installed power is proposed to be or extended to 75 H.P. or more

No site shall be used for the location of a factory nor shall any building in a factory be constructed, extended or taken into use as a factory or part of a factory and no machine, or plant or any permanent fixture shall be installed or fixed, nor shall any manufacturing process be carried on in any factory or part of a factory, unless the occupier or the owner of the factory obtains the previous permission in writing approving the plans from the Chief Inspector.

1 (2) The owner or occupier of every factory falling under sub-rule (1) and the owner or occupier of any other factory may, send to the Chief Inspector, by delivery in person or by registered post, an application in Form No. 1 together with particulars and plans in triplicate and the original challan for the scrutiny fee at the following rates:

For small scale industries Rs. 100/-
For other industries. Rs.1000/-

1 (3) If the Chief Inspector is satisfied that the plan sent under sub-rule (2) are in accordance with the requirements of the Act, he shall, by order grant the permission applied for forthwith and send the said order along with a copy of the approved plans to the applicant

1 (4) If the Chief Inspector is of the Opinion that the plans sent under sub- rule (2) are not in accordance with the requirerne5 of the Act, or if he finds it fit or expedient to specify any Conditions of approval, including conditions relating to cancellation or modifications of prior approvals, he shall, after giving the applicant a reasonable opportunity of being heard, send to the applicant a speaking order either approving the plans subject to such conditions as may be specified therein or refuse the permission applied for along with a copy of the plans approved or rejected.

2 (5) If no order is communicated to the applicant within thirty days from the date on which the application has been delivered in person or sent by registered post, the permission applied for shall be deemed to have been granted.

3 (6) In the case of every other factory, where the installed power is proposed to be, or extended to more than 30 HP, the Owner or Occupier of the factory shall, at least one month before any manufacturing process is commenced in the factory, send to the Chief Inspector, by delivery in person or by register post, the particulars and plans specified in Form No. 1:

Provided that the Chief Inspector may, by order, after giving such Owner or occupier a reasonable opportunity of being heard, require him to modify any plan in any particular manner so as to conform to the requirern5 of the Act and thereupon the owner or occupier shall carry on the manufacturing process only in accordance with the plans So modified .Provided further that no order under the first proviso shall be served on the applicant after the expiry of thirty days after the date on which the plans are delivered in person or received by registered post.

1 (7) For the purposes of this rule, for computing the quantity of power the power for the plant, machinery used in the manufacturing process, or the installed horse power of any captive generation of power, whichever is higher, shall be taken into account and no account shall be taken of the power for lighting, or for any office equipment or appliances or any stand by captive generation of Power.

2 (8) In the case of any factory not covered by sub-rule (1) or (6) of this rule, the Government or the Chief Inspector may, having regard to any special circumstances in any particular existing or proposed factory, by order, require the owner or occupier to submit the particulars and plans of the factory in Form No. 1 within thirty days of the service of the order and the provisos to sub-rule (6) shall apply to any plans so submitted.]

3-A. Approval of Plans

1 (1) No developments shall be commenced on any site which is intended to be sold, leased, or let out on hire-purchase for the purpose of setting up of two or more factories by any person unless the prior written permission approving the plans by the Chief Inspector has / been obtained.

2 (2) An application for permission shall be in Form 1 accompanied by plans in triplicate along with particulars and the original challan of required scrutiny fee.

1 (3) On receipt of an application, the Chief Inspector may require the applicant to furnish, within thirty days of the date of the order, more detailed particulars and declarations as the Chief Inspector may, by order specify which may include particulars such as layout of site, roads ,drains, sewage and effluent disposal facilities, strength or load bearing capacity of any of the structures and floors, ventilation, common facilities like canteens, latrines and urinals or any other matter that he may consider necessary in the interest of the safety, health, and welfare of the workers in the factories and the general public.

2 (4) The Chief Inspector may, after giving the applicant a reasonable opportunity of being heard, by speaking order, refuse the permission or grant the permission with such conditions as he may impose.

3 (5) While granting any permission under sub-rule (4) of this rule, the Chief Inspector may require that every prospective buyer, lessee or tenant shall be given due written notice of such particulars and declarations and of the conditions of approval as the Chief Inspector may direct.

4 (6) No manufacturing process shall be carried on in any building in a factory which is not in accordance with the plans approved by the Chief Inspector and does not satisfy the conditions subject to which the plans have been approved.]

4. 6[Grant of Licence

1 (1) The occupier of every factory shall, 7[at least one month before commencing any manufacturing process] in any factory send, by personal delivery or by registered post to the Inspector, an application for the registration of the factory and the grant of a licence in the prescribed Form No. 2 along with the original challan for annual licence fee prescribed in the Schedule to Rule 6 or the original challan for 8[ten] times the Annual Licence Fee prescribed in the said Schedule in case, the Occupier prefers to pay for a block period of three calendar years at a time.

2 (2)

3 (a) 9[The occupier shall send 10[and intimate in Form No. 2] to the Inspector immediately after the commencement of manufacturing process.

4 (b) The premises shall be deemed to be licensed from the date of intimation of commencement of manufacturing process until such date the Inspector refuses in writing to grant the licence.]

5 (3) [11] [The Inspector on noticing any defect in the licence application or violation of any provision may be speaking order] and after giving the applicant a reasonable opportunity of being heard, refuse to grant a licence;

Provided that [12] [if no order is communicated to the occupier within a period of thirty days from the date on which the occupier has sent intimation under sub-rule 2(a)], the licence shall be deemed to have been granted and thereupon the licence shall be issued forthwith.

1 (4) If the grant of licence has not been refused in accordance with sub- rule (3), the Inspector shall grant the licence in Form No. 4 and send the licence to the applicant.

2 (5) "Every, Licence granted shall be valid till it has been duly cancelled. Every Licence has to be renewed annually by payment of Annual Licence Fee prescribed in the Schedule give under rule-6 or Licence Fee can receive Licence with a validate Licence Fee at the time of applying for grant of Licence".

3 (6) No manufacturing process shall be carried on in any factory unless a licence is valid for the time being.

4 (7) A licence granted shall be caused to be produced on demand by the Inspector.]

5. 13[Amendment of Licence

1 (1) [14] [The Occupier or the owner of a factory shall, within thirty days of the occurrence of any change of name, or in the particulars of the maximum horsepower installed or maximum number of persons employed, send to the Inspector an application for the amendment of the original licence stating the nature of the amendment to be mad&. And the reasons therefor together with the fee prescribed.

2 (2) The fee for the amendment of a licence shall be the amount, if any, by which the fee that would have been payable if the licence had originally been issued in the amended form exceeds the licence fee payable for the relevant calendar year but for the amendment along with an amendment fee of Rs. 50/- (Rupees Fifty)]

6. [15][Payment of Annual Licence Fee or for a block period of Ten calendar years

1 (1) Every licencee shall, before the commencement of any calendar year, pay the annual licence fee of such amount as is prescribed in the Schedule to this rule for each calendar year or up to ten times the Annual Licence fee prescribed in the said Schedule in case, provided that the period for which licence applied is for one year or more but does not exceed 10 years. Fees payable for renewal shall be equal to number of years applied for renewal times of the Annual Licence Fee.

[16][SCHEDULE]

Quantity of Max. HP/K.W. installed	Maximum Number of persons to be Employed on any day during the year													
9	20	50	100	150	250	500	1000	1500	2000	3000	5000	10000	Above 10000	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Nil	400	1000	1800	3600	4800	9600	12000	18000	24000	30000	36000	42000	51000	63000
20/15	1000	1800	3600	4800	9600	12000	18000	24000	30000	36000	42000	51000	63000	72000
50/37	1500	3600	4800	9600	12000	18000	24000	30000	36000	42000	51000	63000	72000	81000
100/75	3000	4800	9600	12000	18000	24000	30000	36000	42000	51000	63000	72000	81000	90000
150/112	4000	9600	12000	18000	24000	30000	36000	42000	51000	63000	72000	81000	90000	105000
250/186	5000	12000	18000	24000	30000	36000	42000	51000	63000	72000	81000	90000	105000	120000
500/373	6000	18000	24000	30000	36000	42000	51000	63000	72000	81000	90000	105000	120000	135000
1000/746	8000	24000	30000	36000	42000	51000	63000	72000	81000	90000	105000	120000	135000	150000
1500/1119	0	30000	36000	42000	51000	63000	72000	81000	90000	105000	120000	135000	150000	165000
2000/1492	0	36000	42000	51000	63000	72000	81000	90000	105000	120000	135000	150000	165000	195000
3000/2238	0	42000	51000	63000	72000	81000	90000	105000	120000	135000	150000	165000	195000	250000
5000/3730	0	51000	63000	72000	81000	90000	105000	120000	135000	150000	165000	195000	250000	325000
10000/7460	0	63000	72000	81000	90000	105000	120000	135000	150000	165000	195000	250000	325000	400000
Above 10000	0	72000	81000	90000	105000	120000	135000	150000	165000	195000	250000	325000	400000	500000

7. 17[Cancellation of Licence

The Inspector may, by a speaking order served on the occupier, cancel any licence issued if the annual licence fee together with interest has not been paid, and thereupon no manufacturing process shall be carried on in that factory.

Provided that the Inspector has previously served a written notice on the Occupier, calling upon him to pay the fee with interest within a period of thirty days from the date of service of the notice and the occupier has not complied with the terms of the notice:

Provided further that the Inspector may also cancel a licence if an application has been made for such cancellation by the owner or occupier and in such a case, the notice referred to in the first proviso of this sub-rule shall not be required.]

8. 18 [Transfer of Licence

A licence may be transferred from one owner or occupier to another consequent to any transfer of the factory and the transferee shall send to the Inspector, by personal delivery or registered post, an application together with Form No. 2 along with Transfer Fee of Rs. 50/- (Rupees Fifty) and the original licence and the acknowledging of such application shall be deemed to be the endorsement of transfer until the transfer is formally endorsed by the Inspector on the licence unless the application has been refused by a speaking order in writing within a period of thirty days from the date of sending and the applicant has been given a reasonable opportunity of being heard.]

9. Procedure on death or disability of licensee

If a licensee dies or becomes insolvent, the person carrying on the business of such licensee shall not be liable to any penalty under the Act for exercising the powers granted to the licensee by the licence during such time as may reasonably be required to allow him to make an application for the amendment of the licence under [19][Rule 5] in his own name for the unexpired portion of the original licence.

10. Loss of Licence

Where a licence granted [20][x x x] under these rules is lost or accidentally destroyed, a duplicate may be granted on payment of a fee of rupees [21][Fifty].

11. 22[Payment of Fee

1 (1) Every application under these rules for which a fee has been prescribed shall be accompanied by a treasury receipt showing that the appropriate fee has been paid

1 into the local treasury under the head of account 0230 Labour and Employment104 Receipts under Labour Laws—Fees realised under the Factories Act, 1948.

2 (2) If an application made under these rules is rejected, the fee paid shall be refunded to the applicant by the Inspector or Chief Inspector within thirty days of the date of order.]

12. 23 [Notice of Change of occupier or manager

1 (1) The occupier of every factory shall, within seven days of any change in the manager of any factory, send notice thereof in Form No. 2-A to the Inspector.

2 (2) Every new occupier of a factory shall, within seven days of the change of occupation, send notice thereof in Form No. 2-A to the Inspector.]

[24] **[12-A. Exemption from Section 7-A (3)**

All factories in which less than [25][three hundred workers] are employed shall be exempted from the provisions of sub-section (3) of Section 7-A of the Act.

Provided that this exemption shall not apply to cases where Chapter IV- A relating to hazardous processes apply.

Provided further that where the Chief Inspector is of the opinion that it is necessary to dos o, having regard, in the case of any particular factory, to the scale of operation and the dangerous or hazardous nature of the processes carried on or in the interest of public safety, he may, after giving the owner or occupier a reasonable opportunity of being heard, by a speaking order in writing, direct that the exemption contained in this rule shall not apply to that factory.]

[26][x x x]

27[28[12-B.] Guidelines, instructions and records

1 (1) without prejudice to the general responsibility of the Occupier to comply with the provisions of Section 7(a) the Chief Inspector may, from time to time, issue guidelines and instructions regarding the general duties of the occupier relating to health safety and welfare of all workers while they are at work in the factory:

2 (2) the Occupier shall maintain such records, as may be prescribed by the Chief Inspector in respect of monitoring of working environment in the factory.]

29[12-C Certificate of stability

1 (1) No manufacturing process shall be carried on in any building of a factory constructed, reconstructed or extended or in any building which has been taken into use as a factory or part of factory until a certificate of stability in respect of that building in the form given below has been sent by the occupier or manager of the factory to the Chief Inspector and accepted by him.

FORM OF CERTIFICATE OF STABILITY

1 1. Name of the factory

1 2. Village, town an district in which the factory is situated

2 3. Full postal address of factory

3 4. Nature of manufacturing process to be carried on the factory

4 5. Number of floors on which workers will be employed

I certify that I have inspected the building/buildings, the plans of which have been approved by Director of Factories in his letter No……. dated……and examined the various parts including the foundations with special reference to the machine, plant etc., that have been installed. I am of the opinion that the building/buildings which has/have been constructed reconstructed/extended/taken into use is /are in accordance with the plans approved by Director of Factories in his letter mentioned above, that it /they are structurally sound and that is/their stability will not endangered by its/their use factory/part of a factory for the manufacture of ……. for which the machinery, plant etc., are intended

Signature…….

Qualification…….

Address…….

Date…….

1 **(2)** The certificate of stability referred to it sub rule (1) shall be signed by a competent person]

CHAPTER II

THE INSPECTING STAFF

13. Powers of Inspectors

1 (1) 30[An Inspector shall, for the purpose of the execution of the Act have power to do all or any of the following things, that is to say

2 (a) to photograph any worker, to inspect, examine, measure, copy, photograph, sketch or test, as the case may be, any building or room, any plant, machinery, appliance or apparatus, any register or document or anything provided for the purpose of securing the health, safety or welfare of the workers employed in a factory;

(b) in the case of an Inspector who is a duly qualified medical practitioner, to carry out such medical examinations as may be necessary for the purposes of his duties under the Act;
(c) to prosecute conduct or defend before a Court any complaint or other proceeding arising under the Act or in discharge of his duties as an Inspector.
(2) The qualifications of the Inspectors to be appointed under the Act shall as specified in the rules issued under the proviso to Article 309 of the Constitution
(3) When, in any area, an inspection is made by an additional Inspector, he shall prepare the report and shall within ten days of the Inspection, send to the Inspector under Section 8(1) for action. In no case shall an additional Inspector communicate copy of his report to the occupier or the manager of a factory direct.
(4) 31[An Inspector may, if he has reason to believe, as a result of any inspection, examination or enquiry that an offence under the Act has been or is being committed, search any premises, plant and machinery and take pros session or copies of any register, records or other documents or portions thereof pertaining to the factory after following the provisions of the Code of Criminal Procedure, 1973 (Central Act 2 of 1974) so far as may be applicable, relating to search and seizure under that Act.]

14. Duties of certifying surgeon

1 (1) For purposes of the examination and certification of young persons, who wish to obtain certificates of fitness, the Certifying Surgeons hall arrange a suitable time and place for the attendance of such persons, and shall give previous notice in writing of such arrangements to the managers of factories situated within the local limits assigned to him.

2 (2) he Certifying Surgeon shall issue his certificates in Form No. 5. The foil and counter-foil shall be filled in and the left thumb mark of the person in whose name the certificate is granted shall be taken on them. On being satisfied as to the correctness, of the entries made therein and of the fitness of the person examined, he shall sign the foil and initial the counterfoil and shall deliver the foil to the person in whose name the certificate is granted. The foil so delivered shall be the certificate of fitness granted under Section 69. All counter-foils shall be kept by the Certifying Surgeon for a period of at least two years after the issue of the certificate

3 (3) The certifying surgeon shall, upon request by the Chief Inspector, carry out such examination and furnish him with such report as he may indicate, for any factory or class or description of factories where

4 (a) cases of illness have occurred which it is reasonable to believe or due to the nature of the manufacturing process carried on or other conditions of work prevailing therein, or

5 (b) by reason of any change in the manufacturing process carried on, or in the substances used therein, or by reason of the adoption of any new manufacturing process or of any substance for use in a manufacturing process,

there is a likelihood of injury to the health of workers employed in that manufacturing process, or
(c) young persons are or about to be, employed in any work which is likely to cause injury to their health.
(4) For the purpose of the examination of persons employed in process covered by the rules relating to dangerous operations, the Certifying Surgeon shall visit the factories within the local limits assigned to him at such intervals as are prescribed by the rules relating to such dangerous operations.
(5) [32][At such visits, the certifying surgeon after examining a worker, shall issue a certificate of fitness in Form 17-A. The record of examination and re-examinations carried out shall be kept in the custody of the manager of the factory. [33][x x x].]
(6) If the certifying Surgeon finds as a result of his examination that any person employed in such process is no longer fit for medical reasons to work in that process, he shall suspend such persons from working in that process for such time as he may think fit and no person after suspension shall be employed in that process without the written sanction of the certifying surgeon in the Health Register.
(7) The manager of a factory shall afford to the certifying surgeon facilities to inspect any process in which any person is employed or is likely to be employed
(8) The manager of a factory shall provide for the purpose of any medical examination which the certifying surgeon wishes to conduct at the factory (for his exclusive use on the occasion of an examination) a room which shall be properly cleaned and adequately ventilated and lighted and furnished with a screen, a table (with writing materials) and chairs.

14-A. [34][Fees for certifying surgeon for examination of young persons

1 (1) The certifying surgeon shall be entitled to the following fees for examination and grant of certificate of fitness under sub-section (2) of Section 69:

2 (i) Rs. 5 for the first young person examined and Rs. 3 for every subsequent person examined on a single day in a factory for the purpose of such examination.

3 (ii) Rs 3 for the first young person and Rs 1 for every subsequent young person examined on a single day when the person to be examined goes to the certifying surgeon for the purpose of such examination.

4 (iii) If a certifying surgeon has to travel beyond a radius of 8 kilometres from his dispensary or place of posting to examine any young person or persons he shall be entitled to an additional fee at the rate of 0.50 paise per kilometer for the total distance travelled by him. A certifying surgeon who is an employee of the State Government shall charge this additional fee from the occupier of a factory only if he does not charge any travelling allowance for the journey from the State Government.

1 (2) The certifying surgeon shall send his bill of fees direct to the occupier of the factory in which the young persons are employed or are to be employed.

2 (3) The fees and additional fees prescribed in this rule shall be paid by the occupier of the factory concerned.

3 (4) The fees and the additional fees for the renewal of certificate of fitness shall be the same as prescribed in these rules for grant of certificate of fitness.

14-B. Fees for certifying surgeons for carrying examination under sub-rule (3) of Rule 14-A
The certifying surgeon shall be paid by the occupier of the factory besides the additional fees for travelling a daily professional fee at the rate of Rs. 10 per day irrespective of the number of persons examined but this fee shall be reduced to Rs. 5 if the examination does not take more than half of a day.
Provided that if the number of factories visited exceeds four on a single day the professional fee shall be subject to a minimum of Rs. 15 per day per factory.
14-C. Fees for examination of persons employed in dangerous operations
The fees and additional fees for examination of persons employed in dangerous operations specified in Rule 95 shall be the same as prescribed in Rule 14-A and shall be payable by the occupier of the factory in which the persons examined are employed.]
CHAPTER III
HEALTH
15. [35][Exemption from Section 11 (1)(d)
1 (1) The provisions of Clause (d), (dd) and (e) of sub-section (1) of Section 11 shall not apply to any class of factory subject to the condition that the inside walls, partitions, ceilings or tops of rooms and all walls, sides and tops of passages and staircases are kept clean by effective means and they are painted as often as necessary, and subject to the condition in sub-rule (2) of this rule.
2 (2) If it appears to the Chief Inspector that any part of a factory which is exempted under sub-rule (1) of this rule is not kept in a clean state, he may after giving an opportunity to the occupier to be heard, by written order require the occupier to carry out washing, painting or varnishing within such reasonable period of not less than two months as may be specified in the order.]

16. 36[x x x]
17. Disposal of trade wastes and effluents
The arrangements made in every factory for the treatment of wastes and effluents due to the manufacturing process carried on therein shall be in accordance with those approved by the relevant Water and Air Pollution Boards appointed under the Water (Prevention and Control of Pollution) Act,1974 (Central Act No. 6 of 1974) and the Air (Prevention and

Control of Pollution) Act, 1981(Central Act No. 14 of 1981) and other appropriate authorities
17-A. Standards of ventilation
1 (1) In every room of a factory, doors and windows shall be provided in the proportion of [37][0.5 square meters at least for each worker employed in such a room, and the openings shall be such as to admit of a continued supply of fresh air.
2 (2) No window provided in a wall shall be of a size less than [38] [1.5 metres x 0.90 metres].
3 (3) The lower sill level of a window shall not be more than [39] [90 C.M.] from the floor level of the room.
4 (4) The doors and windows shall be so spaced as to be not more than 27[3 metres] from centre to centre.

5 (5) A second set of windows of not less than [40] [1.2 x 0.9 metres] shall be provided if the height of the building at the eaves is [41] [6 metres] or more and fixed directly above the first set of windows and doors.

6 (6) In every room of the factory where machinery is installed, roof openings to provide for adequate natural ventilation shall be provided to the satisfaction of the Inspector.

7 (7) No veranda, portico or any structure shall be constructed nor any material stored so as to adversely affect the entry of fresh air into the room of a factory.

42[17-B. Ventilation and Temperature

1 (1) Limits of temperature and air movement: In any factory the maximum wet bulb temperature of air in a work room at a height of 1.45 metres (5 feet) above the floor level shall not exceed 308-C, (860-I) and adequate air movement of at least 30 metres per minute (100 feet per minute) shall be provided; and in relation to dry bulb temperature in the wet bulb, temperature in the workroom at the said height shall not exceed the temperature shown in the Schedule below or as regards a dry-bulb reading intermediate between the two dry-bulb readings that specified in relation to the higher of these two dry-bulb readings.

Dry-bulb temperature		Wet-bulb temperature	
(°C)	(°F)	(°C)	(°F)
30	(86)	29.0	(84.2)
31	(87.8)	28.9	(84.0)
32	(89.6)	28.8	(83.8)
33	(91.4)	28.7	(83.6)
34	(93.2)	28.6	(83.5)
35	(95)	28.5	(83.4)
36	(96.8)	28.4	(83.2)
37	(98.6)	28.3	(83.0)
38	(100.4)	28.2	(82.7)
39	(102.2)	28.1	(82.6)
40	(104)	28.0	(82.5)
41	(105.8)	27.9	(82.3)
42	(107.6)	27.8	(82.1)
43	(109.4)	27.7	(81.7)
44	(111.2)	27.6	(81.7)
45	(113)	27.5	(81.5)

46	(114.8)	27.4	(81.3)
47	(116.6)	27.3	(81.1)

Provided that if the temperature measured with a thermometer to be inserted in a hollow globe of 15 cm. (6 in) dia-coated mat black outside and kept into the environment for not less that20 minutes exceeds the dry bulb temperature of air, the temperature so recorded by the globe thermometer shall be taken in place of the dry-bulb temperature;
Provided further than when the reading of the wet bulb temperature outside in the shade exceeds 27° C, (80.6°F)., the value of the wet bulb temperature allowed in the schedule for a given dry bulb temperature may correspondingly exceed to the same extent.
Provided further that this requirement shall not apply in respect of factories covered by Section 15 and in respect of factories where the nature of work carried on involves production of excessively high temperature referred to in clause (b) of sub-section (1) to which workers are exposed for short periods of time not exceeding one hour followed by an interval of sufficient durations in thermal environments not exceeding those otherwise laid down in this rule.
Provided further that the Chief Inspector, having regard to the health of the workers, may in special and exceptional circumstances; by an order in writing exempt any factory or part of a factory from the forgoing requirement, in so far as restricting the thermal conditions, within the limits and down in the schedule, are concerned, to such extent that he may consider necessary subject to such conditions as he may specify

1 (2) Provision of the thermometers

2 (i) If it appears to the Inspector that in any factory ,the temperature of air in a work room is sufficiently high and is likely to exceed the limits prescribed in sub-rule(l) he may serve on the manager or of the factory an order requiring him to provide sufficient number of whirling hygrometers or any other type of hygrometers and direct that the dry bulb and wet bulb readings in each such work room shall be recorded as such positions as approved by the Inspector twice during each

i working shift by a person specially nominated for the purpose by the manager and approved by the Inspector.

ii (ii) If the Inspector has reason to believe that a substantial amount of heat is added inside the environment of a work room by radiation from walls, roof or other solid surroundings, he may serve on the manager of the factory an order requiring him to provide one or more globe thermometers referred to in the first proviso in sub-rule(l), and further requiring him to place the globe thermometers at places specified by him and keep a record of the temperatures in a suitable register

iii (3) Ventilation.

iv (i) In every factory the amount of ventilation openings in a work room below the Caves shall, except where mechanical means of ventilation as required by Clause I(ii) are provided, be of an aggregate area of not less than 15% of the floor area and so located as to afford a continued supply of fresh air.

Provided that the Chief Inspector may relax the requirements regarding the amount of ventilating openings if he is satisfied that having regard to the location of the factory, orientation of the workroom, prevailing winds, roof height and the nature of manufacturing process carried on, sufficient supply of fresh air into work room is afforded during most part of the working time:

Provided further that this requirement shall not apply in respect of work rooms of factories

i (i) covered by Section 15; or

ii (ii) in which temperature and humidity are controlled by refrigeration.

iii (iii) Where, in any factory owing to special circumstances such as situation with respect to floor space, the requirements of ventilation openings under clause(i) cannot be complied with or in the opinion of the Inspector the temperature of air in a work room is sufficiently high and likely to exceed the limits prescribed in clause(i), he may serve on the manager of the factory an order requiring him to provide additional ventilation either by means of roof ventilators or by mechanical means.

iv (iv) The amount of fresh air supplied by mechanical means of ventilation in an hour shall be equivalent to at least six times the cubic capacity of the work room and shall be distributed evenly throughout the work room without dead air pockets or under draughts caused by high inlet velocities.

v (v) In regions where in summer (15th March-15th July) dry bulb temperatures of outside air in the shade during most part of day exceed 350 C (95°F) and simultaneous wet bulb temperatures are 25°C (67°F) or below and in the opinion of the Inspector the manufacturing process carried on in the work room of a factory permits thermal environments with relative humidity of 50% or more, the Inspector may serve on the manager of the factory an order to have

i sufficient supply of outside air for ventilation cooled by passing it through water sprays either by means of unit type of evaporative air coolers (desert coolers) or, where supply of outside air is provided by mechanical means through ducts in a plenum system, by means of central air washing plants.

17-C.

1 (1) [43][Columns pillars or walls supporting the roof in a factory in which a manufacturing process is carried on shall be at least 4.25 metres high from the floor level.

2 (2) Every factory shall be constructed with puce masonry walls of brick stone or other material approved by the Chief Inspector of Factories and of sufficient thickness.

3 (3) The roof material used in a factory shall be non-heat radiating and fire retarding:

Provided that the Chief Inspector of Factories may approve any other material used for a roof when a secondary ceiling of non-heat radiating material is provided with a minimum air gap of 10cms.

17-D. Powers of Chief Inspector to exempt

Where the Chief Inspector is satisfied in respect of any particular factory or part thereof or in respect of and description of workroom of process that any requirement of the Rules 17-A, 17-B, or 17-C is in appropriate or is not reasonably practicable, he may by order, in writing, exempt

the factory or part thereof, or description of workroom or process from such requirement to such extent and subject to such conditions as he may specify.]

18. When artificial humidification not allowed

There shall be no artificial humidification in any room of a factory

(a) by the use of steam during any period when the dry bulb temperature of that room exceeds [44][29.5 degrees centigrade'.]

(b) at any time when the wet bulb reading of the hygrometer is higher than that specified in the following schedule in relation to the dry bulb reading intermediate between any two bulb readings indicated consecutively in the schedule when the dry bulb reading does not exceed the wet bulb reading to the extent indicated in relation to the lower of these two dry bulb readings.

[45][SCHEDULE

READINGS IN DEGREES CENTIGRADE

Dry bulb	Wet bulb	Dry bulb	Wet bulb	Dry bulb	Wet bulb
15.5	14.5	25	24.5	34.5	30
16	15	25.5	25	35	30.5
16.5	15.5	26	24	35.5	31
17	16	26.5	25.5	36	31
17.5	16	27	26	36.5	31.5
18	16.5	27.5	26	37	31.5
18.5	17	28	26.5	37.5	31.5
19	18	28.5	27	38	32
19.5	18.5	29	27	38.5	32
20	19	19.5	28	39	32
20.5	19.5	30	28	39.5	32.5
21	20	30.5	28.5	40	32.5
21.5	20.5	31	28.5	40.5	33
22	21	31.5	29	41	33
22.5	21	32	29	41.5	33
23	21.5	32.5	29	42	33
23.5	22	33	29.5	42.5	30
24	23	33.5	29.5	43	33.5
24.5	23.5	34	30	43.5	33.5

Provided however, that clause (b) shall not apply when the difference between the wet bulb temperature is indicated by the hygrometer in the department concerned and the wet bulb temperature taken with a hygrometer outside in the shade is [46][less than 20 degrees centigrade].

19. Provision of Hygrometer

In all departments of a factory wherein artificial humidification is adopted hygrometers shall be provided and maintained in such positions as are approved by the Inspector. The number of hygrometers shall be regulated according to the following scale

(a) Weaving department: One hygrometer for departments with less than 500 looms, and one additional hygrometer for every 500 or part of 500 looms in excess of 500.

(b) Other factories: One hygrometer for each room of less than '8500' cubic metres' capacity and one extra hygrometer for each [47] ['5670 cubic metres'] or part thereof, in excess of this.

(c) One additional hygrometer shall be provided and maintained outside the factory wherein artificial humidification is adopted and in a position approved by the Inspector, for taking hygrometer shade readings.

20. Exemption from maintenance of hygrometers

When the Inspector is satisfied that the limits of humidity allowed by the schedule to Rule 18 are never exceeded, he may for any department of a factory grant exemption from the maintenance of the hygrometer. The Inspector shall record such exemption in writing

21. Copy of Schedule to Rule 18 to be affixed near every hygrometer

A legible copy of the schedule to Rule 18 shall be affixed near each hygrometer

22. Temperature to be recorded at each hygrometer

At each hygrometer maintained in accordance with Rule 19, correct wet and dry bulb temperatures shall be recorded thrice daily during each working day by competent persons nominated by the manager and approved by the Inspector. The temperature shall be taken between 7 a.m. and 9 a.m. between11 a.m. and 2 p.m. (but not in the rest interval) and between 4 p.m. and 5.30 p.m. In exceptional circumstances, such additional readings and between such hours as the Inspector may specify, shall be taken. The temperatures shall be entered in a Humidity Register in the prescribed Form No. 6, maintained in the factory. At the end of each month, the persons who have taken the readings shall sign the register and certify the correctness of the entries. The register shall always be available for inspection by the Inspector.

23. Specifications of hygrometers

1 (1) Each hygrometer shall comprise two mercurial thermometers of wet bulb and dry bulb of similar construction, and equal in dimensions, scale and divisions of scale. They shall be mounted on a frame with a suitable reservoir containing water.

2 (2) The wet bulb shall be closely covered with a single layer of muslin kept wet by means of wick attached to it and dropping into the water in the reservoir. The muslin covering and the wick shall be suitable for the purpose, clean and free from size or grease.

3 (3) No part of the wet bulb shall be within 3 inches from the dry bulb or less than one inch from the surface of the water in the reservoir and the water reservoir shall be below it, on the side of it away from the dry bulb.
4 (4) The bulb shall be spherical and of suitable dimensions and shall be freely exposed on all sides to the air of the room.
5 (5) The bores of the stems shall be such that the position of top of the mercury column shall be readily distinguishable at a distance of 2 feet.
6 (6) Each thermometer shall be graduated so that accurate readings may be taken between 50 and 120 degrees.
7 (7) Every degree from 50 degrees up to 120 degrees shall be clearly marked by horizontal lines, on the stem of each fifth and tenth degrees shall be marked by longer marks

1 than the intermediate degrees and the temperature marked opposite each tenth degree, i.e., 50,60, 70, 80, 90, 100, 110 and 120.
2 (8) The markings as above shall be accurate, that is to say, at no temperature between 50 and 120 degrees shall the indicated readings, be in error by more than two-tenths of a degree.
3 (9) A distinctive number shall be indelibly marked upon the thermometer.
4 (10) The accuracy of each thermometer shall be certified the National Physical Laboratory, London, or some competent authority appointed by the Chief Inspector and such certificate shall be attached to the Humidity Register

24. Thermometers to be maintained in efficient order
Each thermometer shall be maintained at all times during the period of employment in efficient working order, so as to give accurate indications and in particular
(a) the wick and the muslin covering of the wet bulb shall be renewed once a week;
(b) the reservoir shall be filled with water which shall be completely renewed once a day. The Chief Inspector may direct the use of distilled water or pure rain water in any particular mill or mills in certain localities;
(c) no water shall be applied directly to the wick or covering during the period of employment

25. An inaccurate thermometer not to be used without fresh Certificate
If an Inspector gives notice in writing that a thermometer is not accurate, it shall not, after one month from the date of such notice, he deemed to be accurate unless and until it has been re-examined as prescribed and a fresh certificate obtained which certificate shall be kept attached to the Humidity Register
26. Hygrometer not to be affixed to wall, etc., unless protected by wood
1 (1) No hygrometer shall be affixed to a wall, pillar, or other surface unless protected there from by wood or other non-conducting material at least half an inch in thickness and distant at least one inch from the bulb of each thermometer.
2 (2) No hygrometer shall be fixed at a height of more than 5 feet 6 inches from the floor to the top of thermometer stem or in the direct droughts from a fan, window or ventilating opening.

27. No reading to be taken within 15 minutes of renewal of water

No reading shall be taken for record on any hygrometer within 15 minutes of the renewal of water in the reservoir.

28. How to introduce steam for humidification

If any room in which steam pipes are used for the introduction c1 steam for the purpose or artificial humidification of the air the following provisions shall apply

(a) The diameter of such pipe shall not exceed [48][50 mm.] and in the case of pipes installed after 1st day of April, 1949 the diameter shall not exceed [49] [25 mm.]

(b) Such pipes shall be as short as is reasonably practicable

(c) All hangers supporting such pipes shall be separated from the base pipes by an efficient insulator not less than half an inch in thickness

(d) No uncovered jet from pipe shall project more than[50] [1.5 cm.] beyond the outer surface of any cover;

(e) The steam pressure shall be as low as practicable and shall not exceed [51][5 kg.] per square inch

(f) The pipe employed for the introduction of steam into the air in a department shall be effectively covered with such non-conducting material, as may be approved by the Inspector in order to minimize the amount of heat radiated by them into the department.

29. Artificial lighting

Omitted by G.O.MS.NO.978 dated 4-5-1960.

30. Lighting of interior parts

1 (1) [52][The general illumination over those interior parts of a factory where persons are regularly employed shall be not less than [53] [65 Lux] measured in the horizontal plain at a level of [54] [90 cm.] above the floor;

Provided that in any such parts in which the mounting height of the light source for general illumination has to necessarily exceed [55] [7.6 mtrs.] measured from the floor or where the structure of the room or the position or construction of the fixed machinery or plant prevents the uniform attainment of the standard specified above, the general illumination at the said level of [56][7.6 mtrs.] shall be not less than [57][22 Lux] and where work is actually being done the illumination shall be not less than [58][65 Lux] candles].

1 (2) The illumination overall other interior parts of the factory over which persons employed pass shall, when and where a person is passing be not less than 0.50. foot candles at floor level.

2 (3) The standard specified in this rule shall be without prejudice to the provision of any additional illumination required to render the lighting sufficient and suitable for the nature of the work.

31. Prevention of glare

1 (1) Where any source of artificial light in the factory is less than [59][4.9 mtrs.] above floor level, no part of the light source of the lighting fitting having a brightness greater than 55 candles per square inch shall be visible to persons while normally employed with [60][30 mtrs.] of

the source, except where the angle of elevation from the eye to the source or part of the fitting as the case may be exceeds 20 degrees.

1 (2) Any local light that is to say, an artificial light designed to illuminate particularly the area or part of the area of work of a single operative or small group of operatives working near each other shall be provided with a suitable shade of opaque material to prevent glare or with other effective means by which the light source is completely screened from the eyes of every person employed at a normal working place or shall be so placed that no such person is exposed to glare there from.

32. Power of Chief Inspector to exempt

Where the Chief Inspector is satisfied in respect of any particular factory or part thereof or in respect of any description of workroom or process that any requirement of Rules 30 and 31 is inappropriate or is not reasonably practicable, he may, by order in writing, exempt the factory or part thereof, or description of work room or process from such requirement to such extent and subject to such conditions as he may specify.

33. 61[x x x]

34. Quantity of drinking water

The quantity of drinking water to be provided for the workers in every factory shall be at least [62] [5 liters per worker] employed in the factory and such drinking water shall be readily available at all times during working hours.

35. Source of Supply

[63][The water provided for drinking shall be supplied from public water supply system or, where no public water supply is available to the factory, from such other source that provides clean potable water.]

36. Means of supply

if drinking water is not supplied directly from taps either connected with the public water supply system or any other water supply of the factory [64][xxx] it shall be kept in suitable vessels, receptacles or tanks fitted taps and having dust proof covers placed on raised stands or platforms in shade and having suitable arrangement of drainage to carry away the split water. Such vessels, receptacles and tanks shall be kept clean and the water renewed at least once every day. All practicable measures shall be taken to ensure that the water is free from contamination.

37. Cleanliness of Well or reservoir

1 (1) Drinking water shall not be supplied from any open well or reservoir unless it is so constructed, situated, protected and maintained as to be free from the possibility of pollution by chemical or bacterial and extraneous impurities;

1 (2) Where drinking water is supplied from such well or reservoir the water in it shall be sterilized once a week or more frequently if the Inspector by written order, so requires, and the date on which sterilizing is carried out shall be recorded:

Provided that this requirement shall not apply to any such well or reservoir the water therein is filtered and treated to the satisfaction of the Health Officer before it is supplied for consumption.

38. 65[Report from Health Officer

1 (1) The Inspector may, by order in writing, require the Health Officer at such intervals as he may direct, to enquire into and report on the fitness for human consumption of the water supplied to the workers in any factory.

2 (2) The Inspector may by order in writing require the occupier at such time or such interval as he may direct to get the water samples tested by the laboratories recognised by the Chief Inspector or Health Officer on the fitness for human consumption of the water supplied to the workers for drinking purpose.]

39. Cooling of water

In every factory wherein more than two hundred and fifty workers are ordinarily employed

(a) the drinking water supplied to the workers shall during hot weather, be cooled by ice or mechanical refrigeration Provided that, if ice is placed in the drinking water, the ice shall be clean and wholesome [66][x x x];

(b) the cooled drinking water shall be supplied in every canteen, lunchroom and restroom and also at conveniently accessible points throughout the factory which for the purpose of these rules shall be called water centres

(c) the water centre shall be sheltered from the weather and adequately drained;

(d) the number of water centres to be provided shall be one “centre” for every 150 persons employed at any one time in the factory

[67][Provided that in the case of a factory where the number of persons employed exceeds 500, it shall be sufficient if there is one such “centre” as aforesaid for every 150 persons up to the first 500 and for every 500 persons thereafter Provided further that the distance between the place of work of any worker shall not be more than 50 metres from the nearest water centre or any distance may be specified by the Inspector.]

(e) [68][every water centre shall be maintained in clean and orderly condition

(f) The means of supply of cooled drinking water shall be either directly through taps connected to water coolers or any other system for cooling of water or by means, of vessels, receptacles or tanks/fitted with taps and having dust proof covers and placed on raised stands or platforms in shades, and having suitable arrangements of drainage to carry away the split water. Such vessels, receptacles or tanks shall be kept clean and the water renewed at least once every day.]

40. Latrine accommodation

In every factory, latrine accommodation shall be provided on the following scale, namely

i (i) in the case of latrines of flush out system, one latrine for every twenty-five or lesser number of workers, where the number of workers does not exceed one hundred, and four for the first one hundred and one for every fifty or lesser number in excess of one hundred, where the number of workers exceeds one hundred;

ii (ii) in the case of latrines of non-flush out system, one for every twenty workers
iii (iii) in calculating the number of seats required under this rule, any odd number of workers less than 25, 50 or 20 specified in Clauses (i) and (ii) above shall be reckoned as 25, 50 or 20 respectively as the case may be; and only the maximum number of persons working in the factory at any time, and not the total number of persons employed in the factory shall be taken into account;
iv (iv) where workers of both sexes are employed separate latrines shall be provided for each sex.

41. Latrines to conform to public health requirements
Latrines, other than these connected with an efficient water-borne sewage system, shall comply with the requirements of the Public Health authorities
42. Privacy of latrines
Every latrine shall be under suitable cover and every seat in the latrine shall be so partitioned off as to secure privacy and each partition shall have a proper door and fastenings.
43. Signboards to be displayed
Where workers of both sexes are employed there shall be displayed outside each latrine block a notice in the language understood by the majority of the workers “For Men only” or “For Women only” as the case may be. The notice shall also bear the figure of a man or of a woman, as the case may be.
44. Urinal accommodation
Urinal accommodation shall be provided for the use of 44[males] and shall not be less than [69][60 cm] in length for every 50 workers: provided that where the number of workers employed exceeds 500, it shall be sufficient if there is one urinal for every 50 [males] up to the first 500 employed, and one for every 100 thereafter. Where women are employed separate urinal accommodation shall be provided for them on the same scale as mentioned above.
In calculating the urinal accommodation required under this rule, and odd number of workers less than 50 or 100, as the case may be, shall be reckoned as 50 or 100 and the maximum number of persons working in the factory, at any time and not the total number of persons employed in the factory, shall be taken into account

45. Urinals to conform to public health requirements
Urinals other than those connected with an efficient water-borne sewage system and urinals in a factory wherein more than two hundred and fifty workers are ordinarily employed shall comply with the requirements of the Public Health authorities.
46. Certain latrines and urinals to be connected to sewage system
When any general system of underground sewage with an assured water-supply for any particular locality is provided in a municipality all latrines and urinals other than such septic tank latrines and any other type of latrines and urinals to be approved for this purpose by the Public Health authority, of a factory situated in such locality shall, if the factory is situated within 100 feet of an existing sewer, connected with the sewage system.
47. 70[Cleaning and painting of latrines and urinals
The walls, Ceiling and partition of every latrine or urinal shall be kept clean and disinfected, washed and painted as often as is necessary:

Provided that the Chief Inspector may, by order in writing, having regard to the special circumstances of any particular case and after giving the occupier an opportunity of being heard, require that the latrines or urinals be disinfected, washed or painted in such, manner and such intervals as may be specified in the order.]

48. Construction and maintenance of drains

All drains carrying waste or sullage water shall be constructed in masonry or other impermeable materials and shall be regularly flushed and effluent disposed of by connecting such drains with a suitable drainage line;

Provided that, where there is no such drainage line, the effluent, shall be deodorized and rendered innocuous and then disposed in a suitable manner to the satisfaction of the Health Officer.

49. Water taps in latrines

Where piped water supply is available, a sufficient number of water taps, conveniently accessible shall be provided in or near such latrine accommodation. Where there is no continuous supply of water, cisterns with cans should be provided for washing purposes.

50. 71[Number and location of spittoons

1 (1) In any factory or part of a factory where spitting is prohibited by the occupier or manager, no spittoons shall be provided and no worker shall spit in any such factory or part of a factory.

2 (2) In cases not covered by sub-rule (1), there shall be provided adequate spittoons and no worker shall spit except in the spittoons provided.]

51. Type of spittoons

The spittoons shall be of either of the following types

(a) a galvanized iron container with a conical funnel-shaped cover. A layer of suitable disinfectant liquid shall always be maintained in the container, or

(b) a container filled with dry, clean sand and covered with a layer of bleaching powder, or

(c) any other type approved by the Chief Inspector.

52. Cleaning of spittoons

The spittoon mentioned in clause (a) of Rule 51 shall be emptied, cleaned and disinfected at least once every day and the spittoon mentioned in Clause (b) of Rule 51 shall be cleaned by scraping out the top-layer of sand as often as necessary or at least once every day.

CHAPTER IV

SAFETY

53. Further Safety precautions

1 (1) Without prejudice to the provisions of subsection (1) of Section 21 in regard to the fencing of machines, the further precautions specified in the schedules annexed hereto shall apply to the machines noted in each schedule.

2 (2) [Omitted by G.O.Ms.No.978, dated 4-5-19601.]

3 (3) Register prescribed under Section 22 (I): Register to record the name or specially trained adult workers shall be in Form No.35.

4 (4) The occupier of every 'factory', wherein the operations referred to in sub-section (1) of Sec.22 are carried on, shall provide free of cost, two sets of suitable and tight fitting clothing to each worker who is required to wear them, the used sets being replaced by new once after the end of every six months. Each such set shall consist of a closely fitting shirt and a closely fitting half-sleeve shirt or vest. No worker should be compelled to wear the tight fitting clothing which was once used by another worker and no worker shall be required to return the used set or sets on termination of his services or when the used sets are replaced by new sets.

5 (5) 72[x x x]

73[SCHEDULE-I

TEXTILE MACHINERY EXCEPT MACHINERY USED IN JUTE MILLS

1 1. Application: The requirements of this schedule shall apply to machinery in factories engaged in the manufacture or processing of textiles other than jute textiles. The schedule would not apply to machinery in factories engaged exclusively in the manufacture of synthetic fibres

2 2. Definitions: For the purpose of this Schedule

3 (a) "Calender" means a set of heavy rollers mounted on vertical side frames and arranged to pass cloth between them". Calenders may have two to ten rollers, or bowls, some of which can be heated

(b) "Embossing calender" means a calender with two or more rolls, one of which is engraved for producing figure effects of various kinds on a fabric;

(c) "Card" means a machine consisting of cylinders of various sizes and in certain cases flats covered with card clothing and set in relation to relationship The speed of cylinders and their director of rotation varies The finished product is delivered as a silver. Cards of different types are; the revolving flat card the roller and clear card, etc.

(d) "Card Clothing" means the material with which the surfaces of the cylinder differ, flats, etc., of a card are covered and consists of a thick foundation material made of either textile fabric through which are pressed many fine closely spaced, specially bent wires, or mounted saw toothed wire;

(e) "Comber" means a machine for combing fibres of cotton, wool, etc., The essential parts are device for feeding forward a fringe of fibres at regular intervals and an arrangement of combs or pins, which at the right time, pass through the fringe. All tangled fibres, short fibres, and nips are removed and the long fibres are laid parallel;

(f) "combing machinery" means a general classification of machinery including combers, silver lap machines, ribbon lap machines, and gill boxes but excluding cards;

(g) "Rotary staple Cutter" means a machine consisting of one or more rotary blades used for the purpose of cutting textile fibres into staple length;

(h) "Garnet machine" means any of a number of types of machines for opening hard twisted waste of wool, cotton, silk etc., Essentially, such machines consist of a liquor in; one or more cylinders, each having a complement worker and stripper rolls; and agency role and differ. The action of such machines is somewhat like that a wool card, but it is much more severe in that the various rolls are covered with garnet wire instead of card clothing

(i) “Gill box” means a machine used in the worsted system of manufacturing yarns. Its function is to arrange fibres in parallel order, Essentially, it consists of a pair of speed rolls and a serious of followers where the followers move at a faster surface speed and perform a combing action;
(j) “in—running rolls” means any pair of rolls or drums between which there is a “nip”;
(k) “interlocking arrangement” means a device that prevents the setting in motion of a dangerous part of machine or the machine itself while the guard, cover or door provided to safeguard against danger is open o unlocked and which will also hold the guard, cover or door closed and locked while the machine or the dangerous part is in motion;
(l) “Kier” means a large metal, vat usually a pressure type, in which fabrics may be boiled out, bleached etc.;

(m) “Ribbon lapper” means a machine or part of a machine used to prepare laps for feeding a cotton comb, its purpose is to provide a uniform lap in which the fibres have been straightened as much as possible;
(n) “Silver lapper” means a machine or a part of machine in which a number of parallel card silvers are drafted slightly, laid side by side in a compact sheet, and wound into a cylindrical package;
(o) “Loom” means a machine for effecting the interlocking of two series of yams crossing one another at right angles. The warp yams are wound on a warp beam and pass through headless and reeds. The filling is short across in a shuttle and settled in place by reeds and slay, and the fabric is wound on cloth beam;
(p) “Starch mangle” means a mangle that is used specifically for starching cotton goods. It commonly consists of two large rolls and a shallow open vat with several immersion rolls. The vat contains the starch solution;
(q) “Water mangle” means a calender having two or more rolls used for squeezing water from fabrics before drying. Water mangles also may be used in other ways during the finishing of various fabrics
(r) “Mule” means a type of spinning frame having a head stock and a carriage as its two main sections. The head stock is stationery. The carriage is movable and it carries the spindles which draft and spin the moving into yard. The carriage extends over the whole width of the machine and moves slowly towards and away from the head stock during the spinning operation;
(s) “Nip” is the danger zone between two rolls or drums which by virtue of their positioning and movement create a nipping hazard;
(t) “Openers and pickers” means a general classification of machinery which includes breakers pickers, intermediate pickers, finisher pickers single process pickers, multiple process pickers, willow machines, card and openers, shoddy pickers, bale breakers, feeders, vertical openers, lattive cleaners, horizontal cleaners, and any similar machinery equipped with either cylinders Screen section. calendars section, rolls, or beaters used for the preparation of a stock for further processing;
(u) “Paddler” means a trough for a solution and two or more squeeze rolls between which cloth passes after being passed through a mordant or dye bath;
(v) “Plaiting machine” means a machine used to lay cloth into folds of regular length for convenience of subsequent process or use;

(w) “Roller printing machine” means a machine consisting of large central cylinder, or pressure bowl, around the lower part of the perimeter of which is placed a series of engraved color rollers (each having a color through), a furnisher roller, doctor blades, etc. the machine is used for printing fabrics;

(x) “Continuous bleaching range” means a machine for bleaching of cloth in rope or open-width form with the following arrangement. The cloth after writing out, pass through a squeeze roll into a saturator containing a solution of caustic soda and then to an enclosed JBox. A V-shaped arrangement is attached to the front part of the J-Box for uniform and rapid saturation of the cloth with steam before it is packed down in the 3-Box. The cloth, in a single strand rope form, passes over a guide roll down the first arm of the ‘V’ and up the second. Steam is injected into the ‘W’ at the upper end of the second arm so that the cloth is rapidly saturated with steam at this point; the 3-Box capacity is such that cloth will remain hot for a sufficient time to complete the securing action. It then passes a series of washers with a squeeze roll in between. The cloth then passes through a second set of saturator. J-Box and washer, where it is treated with the peroxide solution. By slight modification of the form of the unit, the same process can he applied to open-width cloth;
(y) “Mercerizing range” means a 3-bowl mangle, a tent or frame, and a number of boxes for washing and squiring. The whole set up is in a straight line and all parts operate continuously. The combination is used to saturate the cloth with sodium hydroxide, stretch it while saturated, and washing out most of the caustic before releasing tension;
(z) “Sanforizing machine” means a machine consisting of a large steam heated cylinder, and endless, thick woollen felt blanket which in close contact with the cylinder for most of its perimeter, and an electrically heated shoe which presses the cloth against the blanket while the latter is in a stretched condition as it curves around feed- in roll;
(aa) “Shearing machine” means a machine used for shearing cloth Cutting action is provided by a number of steel blades spirally mounted on a roller. The roller rotates in a close contact with fixed ledger blade. There may be from one to six such rollers on a machine;
(bb) “Singeing machine” means a machine which comprises of a heated roller, plate, or an open gas flame. The cloth or yard is rapidly passed over the roller or the plate or through the open gas flame to remove fuzz or hairiness by burning;
(cc) “Slasher” means a machine used for applying a size mixture to warp yarns. Essentially it consists of a stand for holding section beams size, box, one or more cylindrical dryers or an enclosed hot air dryer, and a beaming end for winding the yard on the loom beams
(dd) “Tenter frame” means a machine for drying cloth under tension. it essentially consists of pair of endless travelling chains fitted with clips of fine pins and carried on tracks. the cloth is firmly held at the selvages by the two chains which diverge as they move forward as that the cloth is brought to the desired width.
(ee) “Warpe” means a machine for preparing and arranging the yarns intended for the warp of a fabric, specifically a beam wrapper.

1 3. General safety requirement

2 (1) Every textile machine shall be provided with individual mechanical or electrical means for starting and stopping such machines. Belt shifter on machines driver by belts and shafting should be provided with a belt shifter lock or an equivalent positive lacking device.
3 (2) Stopping and starting handles or other controls shall be of such design and so positioned as to prevent the operator's hand or fingers from striking against any moving part of any other part of the machine.
4 (3) All belts, pulleys, goals, chains, sprocket wheels, and other dangerous moving parts of machinery which either form part of the machinery are used association with it, shall be securely guarded.
5 4. Openers and pickers
6 (1) In all opening or picker machinery, beaters and other dangerous parts shall be securely fenced by suitable guards so as to prevent contact with them. Such guards and door or covers of opening giving access to any dangerous part of the machinery shall be provided with interlocking arrangements:

Provided that in the case of doors or covers of openings giving access to any dangerous part, other than seat or covers, instead of the interlocking arrangement, such openings may be so fence by guards which prevent access to any such dangerous part and which is either kept positively locked in position fixed in such a manner that it cannot be removed without the use of hand tools.
1 (2) The feed rolls on all opening picking machinery shall be covered with a guard designed to prevent the operator from reaching the hip while the machinery is in operation.
2 (3) The lap forming rollers shall be fitted with a guard or cover which shall prevent access to the nip at the intake of the lap roller and fluted roller as long as the weighted rack is down. The guard or cover shall be so locked that it cannot be raised until the machine is stopped, and the machine cannot be started until the cover or guard is closed Provided that the foregoing provision shall not apply to the machines equipped with automatic lap forming devices.

Provided further that any such machine equipped with an automatic lap forming device shall not be use unless the automatic lap forming device is in efficient working order.
1 5. Cotton Cards.
2 (1) All cylinder doors shall be secured by an interlocking arrangement which shall prevent the door being opened until the cylinder has ceased to revolve and shall render it impossible to restart the machine until the door has been closed;

Provided that the latter requirement in respect of the automatic looking device shall not apply while stripping or grinding operations are carried out

Provided further that stripping of grinding operations shall be earned out only by specially trained adult workers wearing tight fitting clothing whose names have been recorded in the register prescribed in this behalf as required in sub-section (1) of Section 22.
1 (2) The licker in shall be guarded so as to prevent access to the dangerous parts.

2 (3) Every card shall be equipped with an arrangement that would enable the card cylinder to be driven by power during shipping/grinding operations without having to either shift the main belt to the fast pulley of the machine or to dismantle the interlocking mechanism. Such an arrangement shall be used only for stripping or grinding operations.
3 6. Garnett machines
4 (1) Garnet licker in shall be enclosed,
5 (2) Garnet fancy rolls shall be enclosed by guards. These shall be installed in a way that keeps worker rolls rationally accessible for removal or adjustment.
6 (3) The underside of the garnett shall be guarded by screen mesh or other form of enclosures to prevent access.
7 7. Gill boxes
8 (1) The feed end shall be guarded so as to prevent fingers being caught in the pins of the intersecting fallers.
9 (2) All nips of in running rolls shall be guarded by suitable nip guards confirming to the following specifications;

Any opening which the guard may permit when fitted in position shall be so restricted with respect to the distance of the opening from any nip point through that opening and in any circumstances, the maximum width of the opening shall not exceed the following:

Distance of opening from nip point	**Maximum width of opening**
1	2
0 to 38mm.	6mm.
39 to 63mm.	10mm.
64 to 88mm.	13mm.
89 to 140mm	15mm.
141 to 165mm	19 mm.
166 to 190mm	22mm
191to215mm	32mm

1 8. Silver and Ribbon lappers (cotton): The calender drums and the lap spool shall be provided with a guard to prevent access to the nip between the in-running rolls.
2 9. Speed frames: Jack box wheels at the head stock shall be guarded and the guard shall have interlocking arrangement.
3 10. Spinning mules: Wheels on spinning mule carriages shall be provided with substantial wheel guards, extending to within 6 mm. of the rails.
4 11. Warpers: Swivelled double-bar gates shall be installed on all warpers operating in excess of 410 metes/mm. these gates shall have interlocking arrangement, except for the purpose of inching or jogging:

Provided that the top and bottom bars of the gate shall be at least 1 .05 and 0.53 meters high from the floor or working platform, and the gate shall be located 38 mm. from the vertical tanglement to the beam head.

1 12. Slashers

2 (1) Cylinder dryers:

3 (a) All open nips of in-running rolls shall be guarded by nip guards conforming to the requirements in paragraph 7.

4 (b) When slashes are operated by central levers, these levers shall be connected to a horizontal barer treadle located not more than 1 70 cm. above the floor or control the operation from any point.

5 (c) Slashes operated by push button control shall have stopped and start buttons located at each end of the machine, and additional buttons located in both sides of the machine at the size box and the delivery end. If calender rolls are used, additional buttons shall be provided at both sides of the machine at points near the nips, except when slashers are equipped with an enclosed dryer as in paragraph (b).

6 (2) Enclosed hot air dyer

7 (a) All open nips of the top squeezing roller shall be guarded by nip guards conforming to the requirements in paragraph 7 (2).

8 (b) When slashers are operated by controllers these levers shall be connected to a horizontal bar or treadle located not more than 170 cm. above the floor to control the operation from any point.

9 (c) Slashers operated by push-button control shall have stop and start buttons located at each end of the machine and additional stop and start buttons located on both sides of the machines at intervals spaced not more than 1 .83 metres on centres.

10 13. Looms: Each loom shall be equipped with suitable guards designed to minimize the danger from flying shuttles.

11 14. Valves of kiers, tanks, and other containers

1 (1) Each valve controlling the flow of steam, injuries gases or liquids into a kier or any other tank or container into which a person is likely to enter in connection with process, operation, maintenance or for any other tank or container into which a person is likely to enter in connection with a process, operation maintenance or for any other purpose, shall be provided with a suitable losing arrangement to enable the said person to lock the valve securely in the closed position and retain the key with him before entering the kier, tank or container.

2 (2) Wherever, boiling tanks, caustic tanks and any other containers from which liquids which are hot, corrosive or toxic may overflow or splash, or so located that the operator cannot see the contents from the floor or working area emergency shut off valves which can be controlled from a point not subject to danger of splash shall be provided to prevent danger.

3 15. Shearing machines - All revolving blades on shearing machines shall be guarded so that the opening between the cloth surface and the bottom of the guard will not exceed 10 mm.

4 16. Continuous bleaching range (Cotton and rayon) The nip if all in running rolls on open-width bleaching machine rolls shall be protected with a guard to prevent the worker from being caught at the nip. The guard shall extend across the entire length of the nip.

17. Mercerizing range (Piece goods)

(1) A stopping device shall be provided at each end of the machine:

(2) A guard shall be provided at each end of the frame between the in running chain and the clip opener.

(3) A nip guard shall be provided for the in running rolls of the mangle and washers and the guard shall conform to the requirements in paragraph 7(2).

18. Tender frames

(1) Stopping device shall be provided at each end of the machine.

(2) A guard shall be provided at each end of the machine frame at the in running chain and clip opener.

19. Paddlers: Suitable nip guards conforming to the requirements in paragraph 7 (2) shall be provided to all dangerous in-running rolls.

20. Centrifugal extractors

(1) Each extractor shall be provided with a guard for the basket, and the guard shall have interlocking arrangement.

(2) Each extractor shall be equipped with a mechanically or electrically operated brake to quickly stop the basket when the power driving the basket is shut off.

21. Squeezer of wringer extractor, water mangle, starch mangle, back washer 'worsted yarn' crabbing machines and detaching machines All in running rolls shall be guarded with nip guards conforming to the requirements in paragraph 7 (2).

22. Sanforizing and palmer machine

(1) Nip guards shall be provided on all accessible in-running rolls and these shall conform to the requirements in paragraph 7 (2).

(2) Access from the sides to the nips of in-running rolls should be fenced by suitable side guards.

(3) A safety trip rod, cable or wire centre cord shall be provided across the front and back of all palmer cylinders extending the length of the face of the cylinder. It shall operate readily whether pushed or pulled. The safety trip shall not be more than 170 cm. above the level at which the operator stands and shall be readily accessible.

23. Rope washers

(1) Splash guards shall be installed on all rope washers unless the machine is designed as to prevent the water or liquid from splashing the operator, the floor or working surface.

(2) A safety trips red, cable or wore centre cord shall be provided across the front and back of all rope washers extending the length of the face of the washer. It shall operate readily whether pushed or pulled. The safety trip shall be not more than 170 cm. above the level on which the operator stands and shall be readily accessible.

24. Laundry washer tumbler or shaker

(1) Each drying tumbler, each double cylinder shaker or clothes tumbler, and each washing machine shall be equipped with an inter-locking arrangement which will prevent the power operation of the inside cylinder when the outer door on the case or shell is open, and which will also prevent the outer door on the case or shell from being opened without shutting off the power and the cylinder coming to a stop. This should not prevent the movement of the inner cylinder by means of a hand operated mechanism or an inching device.

11 (2) Each closed barrel shall also be equipped with adequate means to holding open the doors or covers of the inner and outer cylinders or shall while it is being loaded or unloaded.
12 25. Printing machine roller type
13 (1) All in-running rolls shall be guarded by nip guards conforming to the requirement in paragraph 7 (2).
14 (2) The engraved roller gears and the large crown whool shall be guarded.

1 26. Calenders: The nip at the in-running side of the rolls shall be provided with a guard extending across the entire length of the nip and arranged to prevent the fingers of the workers from being pulled in between the rolls or between the guard and the rolls, and so constructed that the cloth be fed into the rolls safety.
2 27. Rotary staple cutters: The cutter shall be protected by a guard to prevent hands reaching the cutting zone.
3 28. Painting machines: Access to the trap between the knife and card bar shall be prevented by a guard.
4 29. Hand baling machine: An angle iron handle-stop guard shall be installed at right angle to the frame of the machine. The stop guard shall be so designed and so located that it will prevent the handle from travelling beyond the vertical position should be handle slip from the operator's hand when the paw] has been released from the teeth of the take-up gear.
5 30. Flat-work ironer: Each flat-work or collar ironer shall be equipped with a safety bar or other guard across the entire front of the feed or first pressure rolls, so arranged that the striking of the bar or guard by the hand of operator or other person stop the machine. The guard shall be such that the operator or other person cannot reach into the rolls without removing the guard. This may be either a vertical guard on all sides or a complete cover. If a vertical guard is used, the distance from the floor or working platform to the top of guard shall be not less than 1.83 metres.

SCHEDULE II
COTTON GINNING
1 1. The line shaft or second motion shall be completely enclosed by a Continuous wall or unclimbable fencing with only so many openings as are necessary for access to the shaft for removing Cotton seed, Cleaning and oiling and such openings shall be provided with gates or doors which shall be kept closed and locked.
2 2. The feed-mouth of the opener shall be fitted with a traverser or a grid guard so as to render it impossible for the operative to be within reach of the beaters when feeding on to the lattice; and discharge ends shall be guarded so as to 'prevent the operatives from inadvertently coming within reach of the beaters.
3 3. The spur gearing. t the side of the opener shall be completely covered by a strong metal guard.
4 4. The crank shaft pulleys and roller pulleys of all gins shall be securely guarded by strong box guards and hinged top covers.
5 5. The spur wheels, oscillating levers and rollers of gins shall be provided with guards.
6 6. All ginning machines and openers shall be provided with fast and loose pulleys and efficient belt shifters.

SCHEDULE III

WOOD WORKING-MACHINERY

1 1. Definitions: For the purposes of this schedule,

2 (a) "Wood-working machine" means a circular saw, band saw planning machine, chain mortising machine or vertical spindle moulding machine operating on wood or cork.

3 (b) "Circular saw" means a circular saw working in a bench (including a rack bench) but does not include a pendulum or similar saw which is moved towards the wood for the purpose of cutting operation.

4 (c) "Band saw" means a band saw, the cutting portion of which runs in vertical direction but does not include a log saw or band resawing machine.

5 (d) "Planning machine" means a machine for overhand planning or for thicknessing or for both operations.

6 2. Stopping and starting device: An efficient stopping and starting device shall be provided on every wood working machine. The control of this device shall be in such a position as to be readily and conveniently operated by the person in charge of the machine.

7 3. Space around machines: The space surrounding of every wood working machine in motion shall be kept free from obstruction.

8 4. Floors: The floor surrounding every wood working machine shall be maintained in good and, level condition, and shall not be allowed to become slippery, and as far as practicable, shall be kept free from chips or other loose material.

9 5. Training and supervision:

10 (1) No person shall be employed at a wood-working machine unless he has been sufficiently trained to work that class of a person who has a thorough knowledge of the working of the machine.

11 (2) A person who is being trained to works at a wood working machine shall be fully and carefully instructed as to the dangers of the machine and the precautions to be observed to secure safe working of the machine.

12 6. Circular saws: Every circular saw shall be fenced as follows:

13 (a) Behind and in direct line with the saw there shall be a riving knife, which shall have a smooth surface shall be strong, rigid and easily adjustable, and shall also conform to the following conditions:

14 (i) The edge of the knife nearer the saw shall form an area of a circle having a radius not exceeding of the largest saw used on the bench.

15 (ii) The knife shall be maintained as close as practicable to the saw, having regard to the nature of the work being done at the time, and at the level

i of the bench table the distance between the front edge of the knife and teeth of the saw shall not exceed half an inch.

ii (iii) For a saw of a diameter of less than [74][60 cms.] the knife shall extend upwards from the bench table to within [75][25 mm] of top of the saw, and for a saw of a diameter of [76][60 inches] or over shall extend upwards from the bench table to a height of at least nine inches.

iii (b) The top of the saw shall be covered by a strong and easily adjustable guard, with a flange at the side of the saw farthest from the fence. The guard shall be kept so adjusted that

the said flange shall extend below the roots of the teeth of the saw. The guard shall extend from the top of the riving knife to a point as low as practicable at the cutting edge of the saw.

iv (c) The part of the saw below the bench table shall be protected by two plates of metal or other suitable material one on each side of the saw; such plates shall not be more than [77] [15 cm] apart, and shall extend from the axis or the saw outwards to a distance of not less than [78][5 cm] beyond the teeth of the saw. Metal, plates, if not beaded, shall be of a thickness of at least [79][12.5mm] or, if beaded be of a thickness of at least [80] [1.25 mm].

v 7. Push sticks: A push stick or other suitable appliance shall be provided for use at every circular saw and at every vertical spindle moulding machine to enable the work to be done without unnecessary risk.

vi 8. Band saws: Every band saw shall be guarded as follows:

vii (a) Both sides of the bottom pulley shall be completely encased by sheet or expanded metal or other suitable material.

viii (b) the front of the top pulley shall be covered with sheet or expanded metal or other suitable material.

ix (c) All portions of the blade shall be enclosed or otherwise securely guarded except the portion of the blade between the bench table and the top guide.

x 9. Planning machines

xi (1) A planning machine (other than a planning machine which is mechanically fed) shall not be used for overhand planning unless it is fitted with a cylindrical cutter block.

xii (2) Every planning machine used for overhand planning shall be provided with a 'bridge', guard capable of covering the full length and breadth of the cutting slot in the bench, and so constructed as to be easily adjusted both in a vertical and horizontal direction.

xiii (3) The feed roller of every planning machine used for thicknessing except the combined machine for overhand planning and thicknessing, shall be provided with an efficient guard.

xiv 10. Vertical spindle moulding machines

1 (1) the cutter of very vertical spindle moulding machine shall be guarded by the most efficient guard having regard to the nature of the work being performed.

2 (2) the wood being moulded at a vertical spindle moulding machine shall, if practicable, be held in a jig or holder of such construction as to reduce, as far as possible, the risk of accident to the worker.

3 11. Chain mortising machines: (1) The chain of every chain mortising machines shall be provided with a guard which shall enclose the cutters as far as practicable.

4 12. Adjustment and maintenance of guards: the guards and other appliance required under this schedule shall be

5 (a) maintained in an efficient state;

6 (b) constantly kept in position while the machinery is in motion; and

7 (c) so adjusted as to enable the work to be done without unnecessary risk.

8 13. Exemptions: Paragraphs 6, 8, 9 and 10 shall not apply to any woodworking machine in respect of which it can be proved that other safeguards are provided, maintained and used which render the machine as safe as it would be if guarded in the manner prescribed in this schedule.

SCHEDULE IV

RUBBER MILLS

1 1. Installation of machines: Mills for breaking down, cracking, grating, mixing, refining and warming rubber or rubber compounds shall be so installed that the top of the front roll is not less than [81] [15 cm] above the floor or working level:

Provided that in existing installations where the top of the front roll is below the height, a strong rigid distance bar guards shall be fitted across the front of the machine in such position that the operator cannot reach the nip of the rolls.

1 2. Safety devices:

2 (1) Rubber mills shall be equipped with

3 (a) hoppers so constructed or guarded that it is impossible for the operators to come into contact in any manner with the nip of the rolls.

4 (b) horizontal safety-trip rods or tight wire cables across both front and rear, which will, when pushed or pulled operated instantly to disconnect the power and apply the brakes, or to reverse the rolls.

5 (2) Safety-trip rods or tight wire cables on rubber mills shall be extended across the entire length of the face of the rolls and shall be located not more than [82][175 cm] above the floor or working level.

6 (3) Safety-trip rods and tight wire cables on all rubber mills shall be examined and tested daily in the presence of the Manager or other responsible person and, if

1 any defect is disclosed by such examination and test, the mill shall not be used until such defect has been remedied.

SCHEDULE V

1 1. Special rule for printing presses: In printing works every platen machine driven by power shall be fitted with an efficient finger-guard and every guillotine machine, driven by power, with an efficient knife-guard.

2 2. Special rule for jute mills: In jute mills

3 (a) the feed table every softener machine shall, as far as practicable, be not less than [83] [1.5 cm] in the length;

4 (b) the feed table of such softener machine shall be provided with an automatic knocking off device which shall stop the machine in case the worker's hand is drawn in and prevent the hand from reaching the spiked rollers; and

5 (c) the automatic mention in clause (b) shall be maintained in an efficient state and be kept in position wherever the machine is working.

6 3. Special rule for tea factories: In tea factories, the roll table shall be fenced to the satisfaction of the Inspector and brushes shall be provided to the workers for the purposes of sweeping the roll table.

7 4. Special rule for brick and title works: In brick and tile works, a finger-guard shall be fitted at the feed end to full length of the mould of every revolving press

8 5. Special rule for decorticating factories: In decorticating factories, the beater arms and the feed mouth of the decorticator shall, as far as practicable, be guarded as following:

A grating of [84] [20 mm] diameter wrought iron rods spaced [85] [60 mm] apart and supported by iron stiffeners [86] [50 mm] by [87] [6 mm] thick shall be fixed at a height of [88][6 cms] above the tip of the beater arms. A strong wooden plank [89] [1.5 cms] thick and iron plated on the underside shall be clamped with bolts and nuts over this grating leaving space of [90] [4 cm] wide for the feeding of ground nuts. A grating of one-inch diameter wrought iron rods spaced [91][4 cms] apart shall be fixed at a height of [92][12 cm] just above the feed mouth and another wooden plank [93][22 cms] wide shall be fixed over the full length of the decorticable platform.

SCHEDULE VI

ALL FACTORIES

1 1. Wherever practicable and deemed necessary by the Inspector, service platforms and gangways shall be provided, or overhead shafting and where required by him these shall be securely fenced with guard rails and the boards.

2 2. Safe access shall be provided to all bearing clutches, belt shifting levers and all such other appliances which are required to be handled or operated while the machinery is at work.

1 3. All ladders used in replacing belts or in attending similar overhead machinery shall be specially made for that work and provided with books or an effective non-skid device.

2 4. No transmission machinery in motion shall be cleaned with cotton paste rags or similar materials held in hand.

3 5. All belts shall be regularly examined to ensure that the joints are safe and the belts are kept in proper tension.

4 6. Each water gauge glass of a boiler shall be fitted with an efficient guard.

5 7. All condenser pipes of steam engines and exhaust pipes of oil engines shall be adequately guarded.

94[SCHEDULE VII

1 1. Application: The Schedule-VII shall be applied to all types of power presses including press brakes, except when used for working hot metal.

2 2. Definitions: For the purpose of this Schedule

3 (a) ‘approved’ means approved by the Chief Inspector;

4 (b) “fixed fencing” means fencing provided for the tools of a power press being fenced which has no moving part associated with or dependent upon the mechanism of a power press and includes that part of closed tool which acts as a guard.

5 (c) “power press” means a machine used in metal or other industries for moulding, pressing, blanking, raising, drawing and similar purposes:

6 (d) “Safety device” means the fencing and any other safeguard provided for the tools of a power press.

7 3. Starting and stopping mechanism: The starting and stopping mechanism shall be provided with a safety stop so as to prevent over running of the press or descent of the ram during tool setting, etc.

8 4. Protection of tool and die

9 (1) Each press shall be provided with a fixed guard with a slip plate on the underside enclosing the front and all sides of tool.

10 (2) Each die shall be provided with a fixed guard surrounding its front and sides, and extending to the back in the form of a tunnel through which the pressed article falls to the rear of the press.
11 (3) The design, construction and mutual position of the guards referred to in (1) and (2) shall be such as to preclude the possibility of the worker's hand or fingers reaching the danger zone.
12 (4) The machine shall be fed through a small aperture at the bottom of the die guard, but a wider aperture may be permitted for a second or subsequent operations if feeding is done through a chute.

1 (5) Notwithstanding anything contained in sub-clauses(l) and (2) an automatic or an inter-locked guard may be used in place of a fixed guard, but where such guards are used they shall be maintained in an efficient working condition and if any guard develops a defect, the power press shall not be operated unless the defect to the guard is removed.
2 5. Appointment of persons to prepare power presses of use
3 (1) Except as provided in sub-paragraph (4), no person shall set, re-set, adjust or try out the tools on a power press or install or adjust any safety device thereon, being installation or adjustment preparatory to production of die proving or carry out an inspection and test of any safety device thereon required by paragraph 8 unless he
4 (a) has attained the age of eighteen
5 (b) has been trained in accordance with the sub-paragraph (2) and (c) has been appointed by the occupier of the factory to carry out those duties in respect of the class or description of power press of safety device to which the power press or the safety device (as the case may be) belongs, and the name of every such person shall be entered in a register in Form 35.
6 (2) The training shall include suitable and sufficient practical instruction in the matters in relation to each type of power press and safety device in respect of which it is proposed to appoint the person being trained.
7 6. Examination and testing of power presses and safety devices.
8 (1) No power press or safety device shall be taken into use in any factory for the first time in that factory, or in case of a safety device for the first time on any power press, unless it has been thoroughly examined and tested, in the case of power press, after installation in the factory, or in the case of a safety device, when in position on the power press in connection with which it is to be used.
9 (2) No power press shall be used unless it has been thoroughly examined and tested by a competent person, within the immediately preceding period of twelve months.
10 (3) No power press shall be used unless every safety device (other than fixed fencing) thereon has within the immediately preceding period of six months when in position on that power press, been thoroughly examined and tested by a competent person.
11 (4) The competent person carrying out an examination and test under the foregoing provisions shall make a report of the examination and test containing the following particulars and every such report shall be kept readily available for inspection:
12 (a) name of the occupier of the factory;
13 (b) address of the factory;

(c) identification number of mark sufficient to identify the power press or the safety device;
(d) date on which the power press or the safety device was first taken into use in the factory;
(e) the date of each periodical thorough examination carried out as per requirements of sub-paragraph (2) above;
(f) particulars of any defects effecting the safety working of the power press or the safety device found at any such through examination and steps taken to remedy such defects.
7. Defects disclosed during a thorough examination and tests:
(1) where any defect is disclosed in any power press or in any safety device by any examination and test under paragraph 6 and in the opinion of the competent person carrying out the examination and test, either
(a) the said defect is a cause of danger to workers and in consequence the power press or safety device (as the case may be) ought not to be used until the said defect has been remedied; or
(b) the said defect may become a cause of danger to workers and in consequence the power press or the safety device (as the case may be) ought not be used after the expiration of a specified period unless the said defect has been remedied. Such defect shall, as soon as possible after the completion of the examination and test, be notified in writing by the competent person to the occupier of the factory and, in the case of a defect falling within clause (b) of this subparagraph such notification shall include the period within which in the opinion of the competent person, the defect ought to be remedied.
(2) In every case where notification has been given under this paragraph, a copy of the report made under paragraph 6(4) shall be sent by the competent person to the inspector for the area within fourteen days of the completion of the examination and test.
(3) Where any such defect is notified to the occupier in accordance with the foregoing provisions of this paragraph the power press or safety device (as the case may be) having the said defect shall not be used
(a) In the case of a defect falling within clause (b) of subparagraph (1), until the said defect has been remedied; and
(b) In the case of a defect falling within clause (e) of subparagraph (1), after the expiration of the said defect has been remedied.
(4) As soon as is practicable after any defect of which notification has been given under sub-paragraph (1) has been remedied, a record shall be made by or on

1 behalf of the occupier stating the measures by which and the date on which the defect was remedied.
2 8. Inspection and test of safety devices
3 (1) No power press shall be used after the setting, resetting or adjustment of the tools thereon unless a person appointed or authorised for the purpose under Paragraph 5 has inspected and tested every safety device thereon while it is in position on the said power press:

Provided that an inspection, test and certificate as aforesaid shall not be required where any adjustment of the tools has not caused or resulted in any alteration to or disturbance of any

safety device on the power press and if after the adjustment of the tools, the safety devices remain, in the opinion of such a person as aforesaid, in efficient working order.

1 (2) Every power press and every safety device thereon while it is in position on the said power press shall be inspected and tested by a trained person every day.

2 9. Defects disclosed during an inspection and test:

3 (1) Where it appears to any person as a result of any inspection and test carried out by him under any of the inspections and tests carried on by him under paragraph 8 that any necessary safety device is not in position or is not properly in position on a power press on that any safety device which is in position on a power press is not in his opinion suitable, he shall notify the manager forthwith.

4 (2) Except as provided in sub-paragraph (3) where any defect is disclosed in a safety device by any inspection and test under paragraph 8, the person carrying out the inspection and test shall notify the manager forthwith.

5 (3) Where any defect in a safety device is the subject of a notification in writing under paragraph 7 by virtue of which the use of the safety device may be continued during a specified period without the said defect having been remedied, the requirement in sub-paragraph (2) of this paragraph shall not apply the said defect until the said period has expired.

6 10. Identification of power presses and safety devices; For the purpose of identification every power press and every safety device provide for the same shall distinctively be and plainly marked.

7 11. Training and instructions to operators. The operators shall be trained and instructed in the safe method to work before starting work on any power press.

8 12. Exemptions:

9 (1) If in respect of any factory, the Chief Inspector is satisfied that owing to the circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule are not necessary for the protection of the workers employed on any power press of any class or description of power press or in the factory, the Chief Inspector may by a certificate in writing (which he

1 may in his discretion revoke at any time), exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

2 (2) Where such exemption is granted, a legible copy of the certificate, showing the conditions (if any) subject to which it has been granted, shall be kept posted in the factory in a position where it may conveniently be read by the persons employed.

SCHEDULE VIII

SHEARS, SLITTERS AND GUILLOTINE MACHINES

1 1. Definitions: For the purpose of this Schedule

2 (a) “Guillotine” means a machine ordinarily equipped with straight bevel-edged blade operating vertically against a stationary resisting edge and used for cutting metallic or non-metallic substances;

3 (b) “Shears” or “Shearing machine” means a machine ordinarily equipped with straight, bevel-edged blades operating vertically against resisting edges, or with rotary, overlapping cutting wheels, and used for shearing metals or non-metallic substances;

4 (c) “Slitter” or “Slitting machine” means a machine ordinarily equipped with circular disc type knives, and used for training or cutting into metal or non-metallic substances or for slitting them into narrow strips; for the purpose of this schedule, this term includes bread or other food slicers equipped with rotary knives or cutting discs.

5 2. Guillotine and Shears:

6 (1) where practicable, a barrier metal guard of adequate strength shall be provided at the front of the knife, fastened to the machine frame and shall be so fixed as would prevent any part of the operator’s body to reach the descending blade from above, below or through the barrier guard or from the sides:

Provided that in case of machines used in the paper printing and allied industries, where a fixed barrier metal guard is not suitable on account of the height and volume of the material being fed, there shall be provided suitable starting devices which require simultaneous action of both the hands of the operator or an automatic device which will remove both the hands of the operator for the danger zone at every descent of the blade.

1 (2) At the back end of such machines, an inclined guard shall be provided over which the slit pieces would slide and be collected at a safe distance in a manner as would prevent a person at the back from reaching the descending blade.

2 (3) Power-driven guillotine cutters, except continuous feed trimmers, shall be equipped with

(a) starting devices which require the simultaneous action of both hands to start the cutting motion and of at least one hand on a control during the complete stroke of the knife; or
(b) an automatic guard which will remove the hands of the operator from the danger zone at every descent of the blade, used in conjunction with one-hand starting devices which require two distinct movements of the devices to start the cutting motion, and so designed as to return positively to the non-starting position after each complete cycle of the knife.

(4) Where two or more workers are employed at the same time on the same power driven guillotine cutter equipped with two hand control, the device shall be so arranged that each worker shall be required to use both hands simultaneously on the safety trip to start the cutting motion, and at least one hand on a control to complete the cut.

(5) Power-driven guillotine cutters, other than continuous trimmer, shall be provided in addition to the brake or other stopping mechanism, with an emergency device which will prevent the machine from operating in the event of failure of the brake when the starting mechanism is in the non-starting position.

3. Slitting Mechanics

(1) Circular disc-type knives on machines for cutting metal and leather, paper, rubber, textiles or other non-metallic substances shall, if within reach of operators standing on the floor or working level, be provided with guards enclosing the knife edges at all times as near as practicable to the surface of the metal and which may either

(a) automatically adjust themselves to the thickness of the material; or
(b) be fixed or manually adjusted so that the space between the bottom of the guard and the material will not exceed 6mm (1/4”) at any time.

(2) Potions of blades underneath the tables or benches of slitting machines shall be covered by guards.
4. Index cutters and vertical paper slotters: Index cutters, and other machines for cutting stripes from the ends of books and for similar operations, shall be provided with fixed guards so arranged that the fingers of the operators cannot come between the blades and the tables.
5. Corner Cutters: Corner cutters, used in the manufacture of Paper Boxes, shall be equipped with
(a) suitable guard, fastened to the machines in front of the knives and provided with slots or perforations to afford visibility of the operations; or
(b) other guards equally efficient for the protection of the fingers of the workers.

1 6. Band Knives - Band wheels on band knives, and all portions of the blades except the working side between the sliding guide and the table on vertical machines, or between the sheel guards on horizontal machines, shall be completely enclosed with hinged guards of sheet metal not less than 4mm (0.04n) thicknesses or of other material of equal strength.

54.
The machines specified in Section 28, 29 and 30 and the machines mention below shall be deemed to be of such dangerous character that young persons shall not work at them unless the provisions of Section 23 (1) are complied with.
Power press other than hydraulic presses;
Milling machines used in the metal trades;
Circular saws;
Platen printing machines;
Guillotine machines;
54-A. 95[x x x]
55. Hoists and lifts
1 (1) 96[The report of the competent person shall be obtained in Form No. 38.]
2 (2) Exemption of certain hoists and lifts: In pursuance of the provisions of sub-section (4) of Section 28, in respect of any class or description of hoist or lift specified in the first column of the following schedule, the requirement of the Section 28 specified in the second column of the said schedule and set Opposite to that class or description of hoists or lift shall not apply.

SCHEDULE

Class or description of hoist or lift.	**Requirements which shall not apply**
Hoists or lifts mainly used for raising material for charging blast furnaces or lime kilns	Sub-section (1) (b) in so far as it requires a gate at the bottom landing; sub-section (1) (b); sub-section (l)(e)

Hoists not connected with mechanical power and which are not used for carrying persons	Sub-section (1) (b) in so far as it requires the hoist way or lift way enclosure to be so constructed as to prevent any person or thing from being trapped between any part of the hoist or lift and any fixed structure or moving part; sub-sec. (l)(e).

1 (3) [97]['Competent person' means a person who is capable by virtue of his qualification5 training and experience of conducting a thorough examination and who is approved by Chief Inspector of Factories.]

[98]**[Explanation:** A person declared as competent person by the Chief Inspector of any State is deemed to be as competent person under this rule if he obtains an endorsement on the competency certificate from the Chief Inspector.]

[99] **[55-A. Lifting Machine**

Every lifting machine and lifting tackle in use in a factory shall be thoroughly examined by a competent person and particulars of examination shall be entered in a register in the prescribed Form No. 37 or a report in the prescribed Form No. 37 shall be filled.

Explanation: A person declared as competent person but the Chief Inspector of any state is deemed to be competent person under this rule if he obtains an endorsement on the competency certificate from the Chief Inspector.]

56. [100][Rules prescribed under sub-section (3) of Section 31

1 (1) Every pressure vessel or plant used in factory

2 (a) shall be properly designed on sound engineering practice;

3 (b) shall be of good construction, sound material, adequate strength and free from any patent defects; and

4 (c) shall be properly maintained in a safe condition:

Provided that the pressure vessel or plant in respect of the design and construction of either there is an Indian standard of the country of manufacture or any other law or regulation in force, shall be designed and constructed in accordance with the said standard, law or regulation, as the case may be, and a certificate thereof shall be obtained from the manufacturer or from the competent person which shall be kept and produced on demand by an Inspector.

1 (2) Every pressure vessel shall be fitted with

2 (a) a suitable safety valve or other effective pressure relieving device of adequate capacity to ensure that the maximum permissible working pressure and when more than one protective device is provided, only one of the devices need be set to operate at the maximum permissible working pressure and at the additional device shall be set to discharge or a pressure not more than 5 per cent in excess of the maximum permissible working pressure;

3 (b) a suitable pressure gauge with a dial range not less than 1.5. times the maximum permissible working pressure easily visible and designed to show at all times the correct

internal pressure marked with a prominent remark at the maximum permissible working pressure;

(c) a suitable nipple and globe connected for the exclusive purpose of attaching a test pressure gauge for checking the accuracy of the pressure gauge referred to in clause (b) of sub-rule
(d) a suitable stop valve or valves by which the pressure vessel may be isolated from other pressure vessels or plant or source of supply of pressure. Such a stop valve or valves shall be located as close to the pressure vessel as possible and shall be easily accessible and
(e) a suitable drain cock or valve at the lowest part of the pressure vessel for the discharge of the liquid or other substances that may collect in the pressure vessel

Provided that it shall be sufficient for the purpose of this sub-rule if the safety valve or pressure relieving device, the pressure gauge and the stop valve are mounted on a pipeline immediately adjacent to the pressure vessel and where there is a range of two or more similar pressure vessels served by the same pressure load. Only one set of such mountings need be fitted on the pressure load immediately adjacent to the range of pressure vessels, provided they cannot be isolated.

1 (3)

2 (a) Every pressure vessel which is designed for a working pressure less than the pressure at the source of supply or less than the pressure which can be obtained in the pipe connecting the pressure vessels with any other source of supply, shall be fitted with suitable pressure reducing valve or other suitable automatic device to prevent the maximum permissible working pressure of the pressure vessel being exceeded.

3 (b) To further protect the pressure vessel in the event of failure of the reducing valve or device, at least one safety valve having a capacity sufficient to release all the steam, vapour or gas without undue pressure rise as determined by the pressure at the source of supply and the size of the pipe connecting the source of supply, shall be fitted on the low pressure side of the reducing valve.

4 (4)

5 (a) No new pressure vessel or plant shall be taken into use in any factory after coming into force of this rule unless it has been hydrostatically tested by a competent person at a pressure at least 1 .3 times the design pressure and no pressure vessel or plant which has been previously used or has remained isolated or idle for period exceeding two months or which has undergone alterations or repairs shall be taken into use in a factory unless it has been hydrostatically examined by a competent person externally, and internally, if practicable; and has been hydrostatically tested by the competent person at a pressure which shall be 1.5 times the maximum permissible working pressure:

Provided that the pressure vessel or plant which is so designed and constructed that it cannot be safely filled with water or liquid or is issued in service when

even some traces of water cannot be tolerated, shall be pneumatically tested at pressure not less than design pressure to the maximum permissible working pressure as the case may be:

Provided further that the pressure vessel or plant which is lined with glass shall be tested hydrostatically or pneumatically as required at a pressure not less than the design pressure or maximum permissible working pressure as the case may be.

Note:

(a) Design pressure shall be not being less than the maximum permissible working pressure and shall take into account the possible fluctuations of pressure during actual operation.

(b) No pressure vessel or plant shall be used in a factory unless there has been obtained from the maker of the pressure vessel or plant or from the competent person a certificate specifying the design pressure or maximum permissible working pressure thereof, and stating the nature of tests to which the pressure vessel or plant and its fittings, if any, have been subjected, and every pressure vessels or plants so used in a factory shall be marked so as to enable it to be identified as to be the pressure vessel or plant to which the certificate relates and the certificate shall be kept available for perusal by the Inspector.

(c) No pressure vessel or plant shall be permitted to be operated or used at a pressure higher than its design pressure or maximum permissible working pressure as shown in the certificate.

(5) Every pressure vessel or plant in service shall be thoroughly examined competent person.

(a) externally, once in every period of six months;

(b) internally, once in every period if twelve months. If by reason of the construction of a pressure vessel or plant, a thorough internal examination is not possible, this examination may be replaced by a hydrostatic test which shall be carried out once in every period of two years;

Provided that for a pressure vessel or plant in continuous process which cannot be frequently opened, the period of internal examination may be extended to four years; and

(c) hydrostatically tested once in every period of four years;

Provided that in respect of pressure vessel of plant with thin walls, such as sizing cylinder made of copper or any other non-ferrous metal, periodic hydrostatic test may be dispensed with subject to the condition that the requirements laid down in sub-rule (6) are fulfilled.

Provided further that when it is impracticable to carry out thorough external examination of any pressure vessel or plant every six months as required in

clause (a) of this rule, or if owing to its construction and use, a pressure vessel or plant cannot be hydrostatically tested required in clauses (b) and (c) of this sub-rule, a thorough external examination of the pressure vessel or plant shall be carried out at least once in every period of two years, and at least once in every period of four years a thorough systematic non-destructive test like ultrasonic test for metal thickness or other defects of all parts the failure of which might lead to eventual rupture of the pressure vessel or plant, shall be carried out.

(d) The hydrostatic test pressure to be carried out for the purpose of this rule shall be 1.25 times the design pressure or 1.5 times the maximum permissible working pressure whichever is less

(6)

(a) In respect of any pressure vessel or plant of thin walls such as sizing cylinder made of copper or any other non-ferrous metal, the maximum permissible working pressure shall be reduced at the rate of five percent of the original maximum permissible working pressure for every year of

its use after the first five years and no such cylinder shall be allowed to continue to be used for more than twenty years after it was first taken into use.
(b) If any information as to the date of construction, thickness of walls, or maximum permissible working pressure is not available the age of such pressure vessel or plant shall be determined by the competent person in consultation with the Chief Inspector from the other particulars available with the manager
(c) Every new and second hand pressure vessel or plant of tick wall to which repairs likely to affect its strength or safety have been carried out, shall be tested before use to at least 1.5 times maximum permissible working pressure.
(7)
(a) If during any examination any doubts arises as to the ability of the pressure vessel or plant to work safely until the next prescribed examination the competent person shall enter in the prescribed examination the competent person shall enter in the prescribed register his observations, findings and conclusions with other relevant remarks with reasons and may authorise the pressure vessel or plant to be used and kept in operation subject to a lowering of maximum permissible working pressure, or to more frequent or special examination or test or subject to both of these conditions.
(b) A report of the result of every examination or test carried out shall be completed in Form No.8 and shall be signed by the person making the examination of test, and shall be kept available for perusal by the inspector at all hours when the factory or any part thereof is working

(c) Where the report of any examination under this rule specified any condition for securing the safe working of any pressure vessel or plant, the pressure vessel or plant shall not be used unless the specified condition is fulfilled.
(d) The competent person making report of any examination under this rule, shall within seven days of the completion of the examination, send to the Inspector a copy of the report in every case where the maximum permissible working pressure is reduced or the examination shows that the pressure vessel of plant or any part thereof cannot continue to be used with safety unless certain repairs are carried out or unless any other safety measure is taken.
(8)
(a) The requirements of this rule shall be in addition to and without any prejudice to and not in derogation of the requirements of any other law in force.
(b) Certificates or reports of any examination or test of any pressure vessel or plant to which sub-rules (5) to (7) to (9) do not apply, conducted or required to be conducted under any other law in force and other relevant record relating to such pressure vessel or plant shall be properly maintained as required under the said law and shall be produced on demand by the Inspector.
(9) In this rule
(a) ‘design pressure’ means the maximum pressure that a pressure vessel or plant is designed to withstand safety when operating normally;
(b) ‘maximum permissible working pressure’ means the maximum pressure at which a pressure vessel or plant is permitted to be operated or used under this rule and is determined by the technical requirements of the process;

(c) ‘Plant’ means a system of piping that is connected to a pressure vessel and is used to contain a gas, vapour or liquid under pressure greater than the atmospheric pressure, and includes the pressure vessel;
(d) ‘pressure vessel’ means a vessel that may be for containing, storing, distributing, transferring, distilling, processing or otherwise handling any gas, vapour or liquid under pressure greater than the atmospheric pressure and includes any pipeline fitting or other equipment attached thereto or used in connection therewith; and
(e) ‘competent person’ means a person who is capable by virtue of his qualifications, training and experience of conducting a thorough examination and pressure tests, as required, on pressure vessel or plant, and of making a full report on its condition and approved by Chief Inspector of Factories.
(10) Nothing in this rule shall apply to
(a) Vessels having internal diameter nor exceeding 150 mm. (6) and capacity not exceeding 141.585 liters (5 cu. ft.);

(b) Vessels made of ferrous materials having an internal operating pressure not exceeding I Kg. / om 2 (15 lbs, square inch);
(c) steam boilers steam and feed pipes and their fitting coming under the purview of Indian Boilers Act, 1923, (V of 1923);
(d) Metal bottles or cylinders used for storage or transport of compressed gases or liquefied or dissolved gases under pressure covered by the Gas Cylinder Rules, 1940 framed under the Indian Explosives Act, 1884 (TV of 1884);
(e) Vessels in which internal pressure is due solely to the static head of liquid;
(f) Vessels with a nominal water capacity not exceeding 500 litres connected in a water pumping system containing air that is compressed to serve as a cushion;
(g) Vessels for nuclear energy application
(h) Refrigeration plant having a capacity of 3 tons or less of refrigeration in 24 hours; and
(i) Working cylinders of steam engines or prime mover; feed pumps and steam traps turbine casings; compressor cylinders; steam separators or dryers; steam strainers; steam de super-heaters; oil separators, air receivers for fire sprinkles installations; air receivers of monotype machines provided the maximum working pressure of the air receiver does not exceed 1.33 Kg. f/cm. 2(20 cull.); and the capacity 84.95 litres (3 cu. ft.) air receivers of electrical circuit breakers; air receivers of electrical relays; air vessels on pumps pipe coils, accessories of instruments and appliances; such as cylinders and piston assemblies used for operating relays and interlocking, type of guards; vessels with liquids subjected to static head only; and hydraulically operating cylinders other than any cylinder communicating with an air loaded accumulator.
(11) The Chief Inspector may exempt, subject to such condition as he may deem necessary, any pressure vessel from the operation of all or any of the provisions of this rule, if he is satisfied that the construction or use of the vessel is such that the inspection of such vessel is not necessary or practicable.

56-A. Gas holder

1 (1) The expression “gas holder” means a water- sealed gas holder which has a storage capacity of not less than 141.5 cubic metres (5,000 cu. ft.).
2 (2) Every gas holder shall be of adequate material and strength, sound construction and properly maintained.
3 (3) Where there is more than one gas holder in a factory every gas holder shall be marked in a conspicuous position with a distinguishing number or letter.
4 (4) Every gas holder shall be thoroughly examined externally by a competent person, at least once in a period of 12 months.

1 (5) In the case of a gas holder of which any lift has been in the use for more than 10 years, the internal state of the sheeting shall, within one year from the date of coming into operation of this rule and thereafter at least once in a period of 12 months externally and once in a period of three years internally be examined by a competent person by means of electronic or other accurate devices:
2 (i) Provided that if the Chief Inspector of Factories is satisfied that such electronic or other accurate devices are not available, he may permit the cutting of samples from the crown and the sides of the holder;
3 (ii) Provided, further that if the above inspection raises a doubt, an internal visual examination shall be made.
4 (6) Every gas holder shall be provided with a gas mask readily available in case of emergency.
5 (7) All possible steps shall be taken to prevent or minimise ingress of impurities into the gas holder.
6 (8) No gas holder shall be repaired or demolished except under the direct supervision, of a person, who by his training and experience and his knowledge of the necessary precautions against risks of explosion and of person being overcome by gas, is competent to supervise such work.
7 (9)
8 (i) All sample discs cut under sub-rule (5) above, shall be kept readily available for inspection;
9 (ii) A permanent register in Form 8-A duly signed by the occupier or manager shall be maintained.]

57. Excessive weight

1 (1) No woman or young person shall unaided by another person, lift, carry or move by hand or on head, any material, article, tool or appliance exceeding the maximum limit in weight set out in the following schedule

101[SCHEDULE

Persons	**Maximum weight of material, article, tool or appliance Lbs.**
102[(a) Adult Male	55 Kgs.]
(b) Adult female	30 Kgs.

(c) Adolescent male	30 Kgs.
(d) Adolescent female	20 Kgs.
(e) Male child (above 14 years)	16 Kgs.
(f) Female child (above 14 years)	14 Kgs.

1 (2) No woman or young person shall engage, in conjunction with others, in lifting or moving by hand or on head any material, article, tool or appliances, if the weight thereof exceeds the lowest weight fixed by the schedule to sub- rule (1) for any of the persons engaged by the number of the persons engaged.

58. Protection of eyes

Effective screens or suitable goggles shall be provided for the following processes

(a) The processes specified in schedule annexed hereto, being processes which involve risk of injury to the eye, from particles or fragments thrown off in the course of the process.

(b) The processes specified in schedule II annexed hereto, being processes which involve risk or injury to the eyes by reason of exposure to excessive light [or infrared or ultraviolet radiations]

SCHEDULE I

1 (1) The breaking, cutting, dressing or carving of bricks, stone, concrete, slag or similar materials by means of a hammer, a chisel pick or similar hand tool, or by means of a portable tool driven by mechanical power, and the dry grinding of surfaces of any such materials by means of a wheel or disc driven by mechanical power wherein any of the foregoing cases or fragments are liable to be thrown off towards the face of the operator in the course of the process.

2 (2) The dry grinding of surfaces of metal by applying them by hand to a wheel, disc or hand driven or by mechanical power and of surfaces of metal by means of a portable tool driven by mechanical power.

3 (3) The dividing into separate parts of metal, bricks, stone, concrete or similar materials by means of high speed saw driven by mechanical power or by means of an abrasive cutting of wheel or disc driven by mechanical power.

4 (4) The turning of metals, or articles of metal, where particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.

5 (5) drilling by means of portable tools, where particles, or fragments are label to be thrown off towards the face of the operator in the course of the process.

6 (6) The welding and cutting of metals by means of electric oxy acetylene or similar process.

7 (7) The hot fettling of steel castings by means of flux-injected burner of air torch, and the deseaming of metal.

8 (8) The fettling or metal casting, involving the removal or metal, including runner, gates, and raisers and the removal of any other material during the course of such fettling.

9 (9) The chipping of metal and the chipping, knocking out, cutting out or cutting off cold rivets, bolts, nuts/structure or plant, or from part of any structure of plant by means

1 of a hammer chisel, punch, or similar hand tool or by means of a portable tool driven by mechanical power.
2 (10) The chipping of scurfing of plant, scale slag rust of other erosion forms the surface of metal and other hard materials by means of a hand tool or by a portable tool driven by mechanical power.
3 (11) The breaking of scrap metal by means of a tool driven by mechanical power.
4 (12) The routing of metal, where particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.
5 (13) Work with drop hammers and power hammers used in either case for the manufacture of forgings, and persons not working with such hammers whose work is carried on in such circumstances and in such a position that particles or fragment s are liable to be thrown off towards his face during work with drop hammer or power hammers.
6 (14) Work at a furnace where there is risk to the eyes from molten metal.
7 (15) Pouring or skimming of molten metal.
8 (16) Work involving risk o the eyes from hot sand being thrown off.
9 (17) Truning or dressing of an abrasive wheel.
10 (18) The handling in open vessels or manipulation of strong acids or dangerous corrosive liquids or materials, and the operation, maintenance or dismantling of plant or any part of plant, being plant or part of plant which contains or has contained such acids, liquids or materials unless the plant or part of plant has been so prepared (by isolation, reduction or pressure or otherwise) treated or designed and constructed as to prevent risk of injury.
11 (19) Any other process wherein there is a risk of injury to eyes from particles or fragments thrown off during the course of the process.

SCHEDULE II
1 (1) Welding or cutting off metals by means of an electrical, oxy acetylene or similar process.
2 (2) All work on furnace where there is risk of exposure to excessive light or infrared radiations.
3 (3) Process such as rolling, casting or forging or metals where there is risk of exposures to excessive light or infrared radiations.
4 (4) Any other process wherein there is a risk of injury to eyes from exposures to excessive light ultraviolet or infrared radiations.

59. Minimum dimensions of manholes
Every chamber, tank, vat, pipe, flue or other confined, space which persons may have to enter and which may contain dangerous fumes to such an extent as to involve risk of the

persons being overcome thereby, unless there is other effective means of egress, be provided with a manhole which may be rectangular, oval or circular in shape, and which shall
(a) in the case of rectangular or oval shape, be not less than 16 inches long and 12 inches wide;
(b) in the case of circular shape, be not less than 16 inches' diameter.

60. Exemptions

The requirements of sub-section (4) of Section 37 shall not apply to the following processes carried on in any factory:

(a) The operation of repairing a water-sealed gas-holder by the electric welding process subject to the following conditions:

(i) The gas-holder shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely, town gas coke-oven gas, producer gas, blast furnace gas or gases other than air used in their manufacture: Provided that this exemption shall not apply to any gas-holder containing acetylene or mixture of gases to which acetylene has been added intentionally.

(ii) Welding shall only be done by the electric welding process and shall be carried out by experienced operative under the constant supervision of a competent person.

(b) The operations of cutting or welding steel or wrought iron gas mains and services by the application of heat subject to the following conditions

(i) The main of service shall be situated in the open air, and it shall contain only the following gases, separately or mixed at a pressure greater than atmospheric pressure, namely gas, coke-oven as, producer gas, blast furnace gas or gases other than air, used in their manufacture;

(ii) the main or service shall not contain acetylene or any gas or mixture of gases of which acetylene has been added intentionally;

(iii) the operation shall be carried out by an experienced person or persons and at least two persons (including those carrying out the operations experienced in work on gas mains and over 18 years of age shall be present during the operation;

(iv) the site of the operation shall be free from any inflammable or explosive gas or vapour;

(v) where acetylene gas is used as a source of heat in connection with an operation, it shall be compressed and contained in a porous substance in a cylinder; and

(vi) prior to the application of any flame to the gas main or service this shall be pierced or drilled and the escaping gas ignited.

(c) The operation of repairing an oil tank on any ship by the electric welding process, subject to the following conditions:

(i) The only oil contained in the tank shall have a flash point of not less than 150 degrees F. (close test) and a certificate to this effect shall be obtained from a competent analyst;

(ii) the analyst's certificate shall be kept available for inspection by an inspector or any person employed or working on the ship;

(iii) the welding operation shall be carried out only on the exterior surface of the tank at a place (a) which is free from oil or oil leakage in inflammable quantities and (b) which is not less than one foot below the nearest part of the surface of the oil within the tank; and

(iv) welding shall be done only by the electric welding and shall be carried out by experienced operative under the constant supervision of a competent person.

61. Fire Protection

1 (1) Processes, equipment, plant, etc., involving serious explosion and serious fire hazards

2 (a) All processes, storages, equipment's, plants etc. involving serious explosion and flash fire hazards shall be located in segregated buildings where the equipment shall be so arranged that only a minimum number of employees are exposed to such hazards at any one time.
3 (b) All industrial processes involving serious fire hazard should be located in buildings or work places separated from one another by walls of fire-resistant constructions.
4 (c) Equipment and plant involving serious fire or flash fire hazard shall, wherever possible, be so constructed and installed that in case of fire, they can be easily isolated.
5 (d) Ventilation ducts, pneumatic conveyors and similar equipment's involving a serious fire risk should be provided with flame arresting or automatic fire extinguishing appliances, or fire resisting dampers electrically interlocked with heat sensitive/smoke detectors and the air-conditioning plant system.
6 (e) In all workplaces having serious fire or flash fire hazards, passages between machines, installations or piles the clearance between the ceiling and the top of the pile should not be less than 2mm.
7 (2) Access for fire fighting
8 (a) Buildings and plan shall be so laid and roads, passage ways etc. so maintained as to permit unobstructed access for firefighting.
9 (b) Doors, and window openings shall be located in suitable positions on all external walls of the building to provide easy access to the entire area within the building for firefighting,

1 (3) Protection against lighting: Protection from lighting shall be provided for
2 (a) buildings in which explosive or highly flammable substances are manufactured, sued handled or stored;
3 (b) storage tanks containing oils, paints, or other flammable liquids;
4 (c) grain elevators;
5 (d) Buildings, tall chimneys or stacks where flammable gases, fumes, dust or lint are likely to be present; and switch yards;
6 (e) sub-station buildings and out-door transformers and switch yards.
7 (4) Precautions against ignition: Wherever there is danger of fire or explosion from accumulation of flammable or explosive substances in air-
8 (a) all electrical apparatus shall either be excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition
9 (b) Effective measures shall be adopted for prevention of accumulation of static charges to a dangerous ex' extent;
10 (c) workers shall wear shoes without iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction;
11 (d) smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited;
12 (e) transmission belts with iron fasteners shall not be used; and
13 (f) all other precautions as are reasonably practicable shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks overheated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat.

14 (5) Spontaneous ignition: Where materials are likely to induce spontaneous ignition, care shall be taken to avoid formation of air pocket and to ensure adequate ventilation, the material susceptible to spontaneous ignition should be stored in dry conditions and should be in heaps of such capacity and separated by such passage which will prevent fire. The materials susceptible to ignition and stored in the oven shall be at a distant not less than 10 metres away from process or storage buildings.
15 (6) Cylinders containing compressed gas: Cylinders containing compressed gas may only be stored in open if they are protected against excessive variation of temperature, direct rays of sun, or continuous dampness. Such cylinders shall never be stored near highly flammable substances, furnaces or not processes. The room where such cylinders are stored shall have adequate ventilation.
16 (7) Storage of flammable liquids

(a) The' quantity of flammable liquids in any work room shall be the minimum required for the process or processes carried on in such room. Flammable liquids shall be stored in suitable containers with close fitting covers;

Provided that not more than 20 litres of flammable liquids having a flash point of 21ºC or less shall be kept or stored in any work room.
(b) Flammable liquids shall be stored in closed containers and in limited quantities in well ventilated rooms of fire resisting constructions which are isolated from the remainder the building by fire walls and self-closing fire doors.
(c) Large quantities of such liquids shall be stored in isolated adequately ventilated building or fire resisting construction or in storage tanks, preferably underground and at a distance from any building as required in the Petroleum Rules, 1976.
(d) Effective steps shall be taken to prevent leakage of such liquids into basements, sumps or drains and to confine any escaping liquid within safe limit.
(8) Accumulation of flammable dust, gas, fume or vapour in air or flammable waste material on the floors:
(a) Effective steps shall be taken for removal or prevention of the accumulation in the air of flammable dust, gas, fume or vapour to an extent which is likely to be dangerous.
(b) No waste material of a flammable nature shall be permitted to accumulate on the floors and shall be removed at least once in a day or shift, and more often, when possible, such materials shall be placed in suitable metal containers with covers wherever possible.
(9) Fire Exits.
(a) For the purpose of this sub-rule
(i) "horizontal Exit" means an arrangement which allows alternative egress from a floor area to another floor at or near the same level in an adjoining building or an adjoining part of the same building with adequate separation; and
(ii) "travel distance" means the distance an occupation has to travel to reach an exit.
(b) An exit may be a doorway, corridor, passageway to an external stairway or to a verandah or to an internal stairway segregated from the rest of building by fire resisting walls which shall provide continuous and protected means of egress to the exterior of a building or to an exterior

open space. An exit may also include horizontal exit leading to an adjoining building at the same level.
(c) Lifts, escalators and revolving doors shall not be considered as exits for the purpose of this sub-rule.

(d) In every room of a factory exits sufficient to permit safe escape of the occupants in case of fire or other emergency shall be provided which shall be free of any obstruction.
(e) The exits shall be clearly visible and suitable illuminated with suitable arrangement, whatever artificial lighting is to be adopted for this purpose, to maintain the required illumination in case of failure of the normal source of electric supply.
(f) The exits shall be marked in a language understood by the majority of the workers.
(g) Iron ring ladders or spiral staircases shall not be used as exit staircases.
(h) Fire resisting doors or roller shutters shall be provided at appropriate places along the escape routes to prevent spread of fire and smoke, particularly at the entrance of lifts or stairs where funnel or flue effect may be created inducing an upward spread of fire.
(i) All exits shall provide Continuous means of regress to the exterior of a building or to an exterior open space leading to a street.
(j) Exits shall be so located that the travel distance to reach at least one of them on the floor shall not exceed 30mts.
(k) In case of those factories where high hazard materials are stored or used, the travel distance to the exit shall not exceed 22.5 metres and there shall be at least two ways of escape from every room, however small except toilet rooms, so located that the points of access thereto are out of or suitably shielded from areas of high hazard.
(l) Wherever more than one exit is required for any room space or floor, exits shall be placed as remote from each other as possible and shall be arranged to provide direct access in separate directions from any point in the area served.
(m) The unit of exit with used to measure capacity of any exit shall be 50 cm A clear width of 25 cm shall be counted as an additional half unit. Clear width of less than 25 cm shall not be counted for exit width.
(n) Occupants per unit width shall be 50 for stairs and 75 per doors.
(o) For determining the exits required, the occupant load shall be reckoned on the basis of actual number of occupations within any floor area or 10 square metres per person, whichever is more.
(p) There shall not be less than two exits serving every floor area above and below the ground floor, and at least one of them shall be an internal enclosed stairway.
(q) For every building or structure used for storage only, and every section thereof considered separately, shall have access to at least one exit so arranged and located as to provide a suitable means of escape for any person employed therein, and in any such room wherein more than 10 persons as may be

normally present at least two separate means of exit shall be available, as remote from each other as practicable.
(r) Every storage area shall have access to at least one means of exit which can be readily opened.

(s) Every exit door way shall open into an enclosed stairway, a horizontal exit on a corridor or passage way providing continuous and protected means of regress.
(t) No exit doorway shall be less than 100 cm. in width Doorways shall be not less than 200 cm. in height.
(u) Exit doorways shall open outwards, that is, away from the room but shall not obstruct the travel along any exit. No door when opened, shall reduce the required width of stairway or landing to less than 90 cm. Over-head of doors shall not be installed for this purpose.
(v) An exit door shall not open immediately upon a flight of stairs. A landing at least 1.5 m X 1.5 m in size shall be provided in the stairway at each doorway. The level of landing shall be the same as that of the floor which it serves.
(w) The exit doorways shall be open able from the side which they serve without the use of a key.
(x) Exit corridors and passage ways shall be of a width not less than the aggregate required width of exit doorways leading from there in the direction of travel to the exterior.
(y) Where stairways discharge through corridors and passageways the height of the corridors and passageways shall not be less than 2.4 mts.
(z)
(aa) A staircase shall not be arranged round a lift shaft unless the latter is totally enclosed by a material having a fire resistance rating not lower than that of the type of construction of the former.
(bb) Hollow combustible construction shall not be permitted.
(cc) The minimum width of an internal staircase shall be 100 cm.
(dd) The minimum width of treads without nosing shall be 25 cm for an internal staircase. The treads shall be constructed and maintained in a manner to prevent slipping.
(ee) The maximum height of a riser shall be 19 cm. and the number of risers shall be limited to 12 per flight.
(ff) Hand rails shall be provided with a minimum height of 100 cm and shall be firmly supported.
(gg) The use of spiral staircase shall be limited to low occupant load and to a building of height of 9 metres, unless they are connected to platforms such as balconies

and terraces to allow escapes to pause. A spiral staircase shall be not less than 300 cms. in diameter and have adequate headroom.
(hh) The width of a horizontal exit shall be same as for the exit doorways.
(ii) The horizontal exit shall be equipped with at least one fire door of self-closing type.
(jj) The floor area on the opposite or refuge side of a horizontal exit shall be sufficient to accommodate occupants of the floor areas served, allowing not less than 0.3 square mt. per person. The refuge area shall be provided with exits adequate to meet the requirements of this sub-rule. At least one of the exits shall lead directly to the exterior or Street.
(kk) Where there is difference in level between connected areas for horizontal exit, ramps not more than I in 8 slope shall be provided. For this purpose, steps shall not be used.
(ll) Doors in horizontal exits shall be openable at all times.
(mm) Ramps with a slope of not more than I to 10 may be substituted for the requirements of staircase. For all slopes exceeding 1 to 10 and wherever the use in such as to involve danger of slipping, the ramp shall be surfaced with non-slipping material.

(nn) In any building not provided with automatic fire alarm a manual fire alarm system shall be provided if the total capacity of the building is over 500 persons, or if more than 25 persons are employed above or below the ground floor, except that no manual fire alarm shall be required in one storey buildings where the entire area is undivided and all parts thereof are clearly visible to all occupants.

(10) First-aid firefighting arrangements

(a) In every factory there shall be provided and maintained adequate and suitable firefighting equipment for fighting fires in the early stages, those being referred to first-aid firefighting equipment in this rule.

(b) The types of first-aid firefighting equipment to be provided shall be determined by considering the different types of fire risks which are classified as follows

(1) “Class A fire” - Fire due to combustible materials such as wood, textiles, paper, rubbish and the like.

(i) “Light hazard” - Occupancies like offices, assembly halls, canteens, rest-rooms, ambulance rooms and the like;

(ii) “Ordinary hazard” - Occupancies like saw mills, carpentry shop, small timber yards, book binding shops, engineering workshop and the like;

i (iii) “Extra hazard” - Occupancies like large timber yards, godowns storing fibrous materials, flour mills, cotton mills, jute mills, large wood working factories and the like.

ii (2) “Class B fire” - Fire in flammable liquids like oil, petroleum products, elements, paint etc.

iii (3) “Class C fire” - Fire arising out of gaseous substances.

iv (4) “Class D fire” - Fire from reactive chemicals, active metals and the like.

v (5) “Class E fire” - Fire involving electrical equipment and delicate machinery and the like.

vi (c) The number and types of first-aid firefighting equipment to be provided for ‘light hazard’ occupancy shall be as given in Schedule I. For “ordinary hazard or extra hazard” occupancies equipment as given in paragraph 10 shall be provided in addition to that given in Schedule I.

vii (d) The first-aid firefighting equipment shall conform to the relevant Indian Standards

viii (e) As far possible the first-aid firefighting equipment shall be similar in shape and appearance and shall have the same method of operation.

ix (f) All first-aid firefighting equipment shall be placed in a conspicuous position and shall be readily and easily accessible for immediate use. Generally, this equipment shall be placed as near as possible to the exits or stair landing of normal routes of escape.

x (g) All water buckets and buckets pump type extinguishers shall be filled with clean water. All and buckets shall be filled with clean dry and fine sand.

xi (h) All other extinguishers shall be charged appropriately in accordance with the instructions of the manufacturers.

xii (i) Each first-aid firefighting equipment shall be allotted a serial number by which it shall be referred to in the records. The following details shall be painted with white paint on the body of each equipment

xiii (1) Serial number;

xiv (2) Date of last refilling; and
xv (3) Date of last inspection.
xvi (j) First – aid firefighting equipment shall be placed on platforms on in cabinets in such a way that their bottom is 750 mm. above floor level. Fire buckets shall be placed on books attached to a suitable stand or wall in such a way that their bottom is 750 mm. above the floor level. Such equipment if placed outside the building shall be under sheds or cover.

(k) All extinguishers shall be thoroughly cleaned and re-charged immediately after discharge. Sufficient refill material shall be kept readily available for this purpose at all times.
(l) All first-aid firefighting equipment shall be subjected to routine maintenance, inspection, and testing to be carried out by properly trained persons. Periodicity of the routine maintenance, inspection and test shall conform to the relevant Indian Standards,
(11) Other firefighting arrangements:
(a) In every factory adequate provisions of water supply for firefighting shall be made and where the amount of water required in litres per minute as calculated from the formula A+B+C+D divided by 20 in 550 or more, power driven trailor pumps of adequate capacity to meet the requirement of water as calculated above shall be provided and maintained. In the above formula:

A=the total area in square meters of all floors including galleries in all buildings of the factory;
B= the total area in square meters of all floors and galleries including open spaces in which combustible materials are handed or stored;
C= the total area in square meters of all floors over 15 meters above ground level; and
D= the total area of square meters of all floors of all buildings other than those of fire resisting construction.
Provided that in areas where the fire risk involved does not require use of water, such areas under B, C or D may for the purpose of calculation, be solved.
Provided further that where the areas under B, C or D are protected by permanent automatic firefighting installations approved by any fire association or fire insurance company such areas may, for the purpose of calculation, be halved.
Provided also that where the factory is situated at not more than 3 kms. from an established city or town fire service, the pumping capacity based on the amount of water arrived at by the formula above may be reduced by 25% but no account shall be taken of this reduction in calculating water supply required under clause (a).
(b) Each trailer pump shall be provided with equipment as per schedule II appended to this rule. Such equipment shall conform to the relevant Indian Standards.
(c) Trailer pumps shall be housed in a separate shed or sheds which shall be sited close to a principal source of water supplies in the vicinity of the main risks for the factory.
(d) In factories where the area is such as cannot be reached by man- hauling of trailer pumps within reasonable time vehicles with towing attachment shall be

provided at the scale of one for every four trailer pumps with a minimum of one such vehicle kept available at all times.

(e) Water supply shall be provided to give flow of water as required under clause (a) for at least 100 minutes. At least 50% of this water supply or 450,000 litres whichever is less, shall be in the form of static tanks of adequate capacities (not less than 450,000 litres each) distributed round the factory with due regard to the potential fire risks in the factory.

Where piped supply is provided, the sizer of the main shall not be less than 15 cms in diameter and it shall be capable of supplying a minimum of 4500 litres per minute at a pressure of not less than 7 kilograms per square centimetre.
(f) All trailer pumps including the equipment provided with them and the vehicles for towing them shall be maintained in good condition and subjected to periodical inspection and testing as required.
(12) Personnel in charge of equipment and for firefighting, fire drills, etc.
(a) The first-aid and othe0 firefighting equipment to be provided as required in sub-rules (10) and (11) shall be in charge of a trained responsible person.
(b) Sufficient number of persons shall be trained in the proper handling of firefighting equipment as referred to in clause (a) and their use against number of persons are available for firefighting both by means of first-aid firefighting equipment and others. Such persons shall be provided with clothing and equipment including helmets, belts and boots, preferably gumboots. Wherever vehicles with towing attachment are to be provided as required in clause (d) of sub rule (II) sufficient number of persons shall be trained in driving these vehicles to ensure the trained persons are available for driving them whenever the need arises.
(c) Fire fighting drills shall be held as often as necessary and at least once in every period of 2 months.
(13) Automatic sprinklers and fire hydrants shall be in addition and not in substitution of the requirements in sub rules (10) and (11).
(14) If the Chief Inspector is satisfied in respect of any factory or any part of the factory that owing to the exceptional circumstances such as inadequacy of water supply or infrequency water supply or infrequency of the manufacturing process or for any other reason, to be recorded in writing, all or any of the requirements of the rules are impracticable or not necessary for the protection of workers, he may by order in writing (which he may at his discretion revoke) exempt such factory or part of the factory from all or any of the provisions of the rules subject to conditions as he may by such order prescribe.

SCHEDULE—I
FIRST AID FIRE FIGHTING EQUIPMENTS

1 (1) The different types of fires and first aid firefighting equipment's suitable for use on them are as under:

Class of fire	**Suitable type of appliances**
A. Fires in ordinary combo's tables (wood, vegetable, fibres, paper and the like).	Chemical extinguishers of Soda-acid, Gas expelled water and anti-freeze types, and water buckets.

B. Fires inflammable liquids paints, grease, solvents the like.	Chemical Extinguishers of foam, carbondioxide and dry powder types and sand buckets.
C. Fires in gaseous substances under pressure.	Chemical Extinguishers of Carbon dioxide and dry powder types.
D. Fires in Reactive Chemicals active metals and the like.	Special type of dry powder extinguishers and sand buckets
E. Fires in electrical equipment's	Chemical extinguishers of carbon-dioxide and dry powder type and sand buckets

1 (2) One 9 litres water bucket shall be provided for every 100 Sq.m. of the floor area or part thereof and one 9 litres water type extinguishers shall be provided to six buckets or part thereof with a minimum of one extinguishers and two buckets per compartment of the building. Buckets may be dispensed with provided supply of extinguishers is double that indicated above.

2 (3) Acceptable replacements for water buckets and water type extinguishers in occupancies where class B fires are anticipated are as under:

Acceptable Replacements	**Buckets of water**		**Water Extinguisher**
For one bucket	**for three buckets**		**for each 9 Lts. (or 2 gallons) Extinguishers**
Dry sand	1 bucket	3 buckets	----
Carbon	3 Kg.	9 Kgs.	5 Kg. (or 20lbs)
Dioxide	(or 7 lbs)		(or 20 lbs in not less than 2 Extinguishers)
Dry powder	2 Kgs. (or 5 lbs.)	5 Kgs. (or 11 lbs.) (in one or more,	5 Kg. (or 11 lbs.) 9 litres (or 2 gallons)

extinguishers) 9 litres (or 2 gallons)

1 (4) The following provisions shall be complied with where Class E fires are anticipated.

2 (a) For rooms containing electrical transformers, switch gears, motors and or other electrical apparatus only, not less than two kg. dry powder or carbon-di-oxide type extinguishers shall be provided within 15 m. of the apparatus.

3 (b) Where motors and or other electrical equipment are installed in rooms other than those containing such equipment only, one 5 kg. Dry powder of carbon-di-oxide, extinguisher shall be installed within 15 m. of such equipment in addition to the requirement as mentioned in (3) and (4) above. For this purpose, the same extinguisher may be deemed to afford protection to all apparatus within 15 m. thereof.

4 (c) Where electrical motors are installed on platforms one 2 kg. dry powder or carbon-dioxide type extinguishers shall be provided on or below each platform. In case of a long platform with number of motors, one extinguisher shall be acceptable as adequate for every 3 motors on the common platform. The above requirements will be in addition to the requirements mentioned at item (3) and (4) above.

5 (5) The first aid firefighting equipment's shall be so distributed over the entire floor area that a person has to travel not more than 15 m. to reach the nearest equipment.

6 (6) Selection of sides of the installation of first and firefighting equipment's.

7 (a) While selecting sites for first aid firefighting equipment's due consideration shall be given to the nature of the risk to be covered. The equipment's shall be placed in conspicuous positions and shall be readily accessible for immediate use in all parts of the occupancy. It should always be borne in mind while selecting sites that first aid firefighting equipment's are intended only for use on incipient fires and their value may be negligible if the fire is not extinguished or brought under control in the early stages.

8 (b) Buckets and extinguishers shall be placed at convenient and easily accessible locations either on hangers or on stands in such a way that their bottom is 750 mm. above the floor level.

The operating instructions of the extinguishers shall not be defaced or obliterated. In case of the operating instructions are obliterated or have become illegible due to passage of time fresh transfers for the same shall be obtained from the manufacturers of the equipment's and affixed to the extinguishers.

SCHEDULE – II

EQUIPMENT TO BE PROVIDED WITH TRAILER PUMP

For light trailer pump of a capacity of 680 litres/minute

1	Armoured suction hose of 9 mts. length, with wrenches.
1	Metal suction strainer
1	Basket strainer
1	Two-way suction collecting head
1	Suction adapter
10	Unlined or rubber lined 70 mm delivery hose of 25 metres length complete with quick release couplings.

1	Dividing breaching-piece
2	Branch-piece with 15 mm nozzles
1	Diffuser Nozzle
1	Standpipe with blank cap
1	Hydrant key
4	Collapsible canvas buckets
1	Fire hook (preventor) with cutting edge
1	25 mm manilarope of 30 metres length
1	Extension ladder of 9 meters length (where necessary)
1	Heavy axe
1	Spade
1	Pick axe
1	Crowbar
1	Saw
1	Hurricane lamp
1	Electric torch
1	Pair rubber gloves

For large trailer pump of capacity of 19\890 litres/minute

1	Armoured suction hose of 9 meters length, with wrenches
1	Metal strainer
1	Basket strainer
1	Three-way suction collecting and
1	Suction adaptor
14	Unlined or rubber lined 70 mm delivery hose of 25 meters' length complete with quick release countings
1	Dividing breaching-piece
1	Collecting breaching piece
4	Branch pipes with one 25 mm two 20 mm and one diffuser nozzles
2	Standpipe with blank cap
2	Hydrant keys
6	Collapsible canvas buckets

1	Coiling hood (preventer) with cutting edge
1	50 mm manila rope of 30 metres length (where necessary)
1	Heavy axe
1	Spade
1	Pick axe
1	Crow bar
1	Saw
1	Hurricane lamp
1	Electric torch
1	Pair rubber gloves

Note: If it appears to the Chief Inspector of Factories that in any factory the provision of breathing apparatus is necessary he may order in writing require the occupier to provide suitable breathing apparatus in addition to the equipment for light trailer pump or large trailer pump as the case may be.]

[103][61-A. Safety Officer

1 (1) Qualifications:

2 (a) A person shall not be eligible for appointment as Safety Officer unless he

3 (i) Possesses a recognised degree in any branch of engineering or technology and has had practical experience of working in a factory in supervisory capacity for a period of not less than two years; or

a recognised degree in physics or chemistry and has had practical experience of working in a factory for a period of not less than five years; or a recognised diploma in any branch of engineering or technology and has had practical experience of working in a factory in a supervisory capacity for a period of not less than five years;

i (ii) Possesses a degree or diploma in industrial safety recognised by the State Government in this behalf from time to time (as specified in the annexure at the end of this rule); and

ii (iii) has adequate knowledge of the language spoken by majority of the workers in the region in which the factory where he is to be appointed is situate.

iii (b) Notwithstanding the provisions contained in clause (a), any person who--- Possesses a recognised degree or diploma in engineering or technology and has had experience of not less than 5 years in a Department of the Central or State Government which deals with the administration of the Factories Act, 1948 or the Indian Dock Labourers Act, 1934; or

Possesses a recognised degree or diploma in engineering or technology and has had experience of not less than 5 years, full time, on training, education,

consultancy, or research in the field of accident prevention in industry or in any institution shall also be eligible for appointment as a Safety Officer.
Provided that the Chief Inspector may subject to such conditions as he may specify, grant exemption from the requirements of this sub-rule, if in his opinion, a suitable person possessing the necessary qualifications and experience is not available for appointment:
Provided further that in the case of a person who has been working as a Safety Officer for a period of not less than 3 years on the date of commencement of this rule, the Chief Inspector may, subject to such conditions as he may specify, relax all or any of the qualifications, specified above in respect of such office.
1 (2) Number of Safety Officers to be appointed: The required number of Safety Officer to be appointed in the factories shall be specified in the table below.

S.No	Number of Workers	Number of Safety Officers to be appointed
1 1.	Upto 2000 workers	One
1 2.	From 2001 to 3000	Two
1 3.	From 3001 to 4000	Three
1 4.	From 4001 to 5000	Four
1 5.	From 5001 to 10,000	Five
1 6.	From 10,001 to 20,000	Six
1 7.	For every additional 5,000 workers or fraction there of	One additional

1 (3) Recruitment:
2 (i) The post of Safety Officer shall be advertised in at least two newspapers having a wide circulation in the State, one of which shall be an English Newspaper.

3 (ii) Selection for appointment to the post of Safety Officer shall be made from among the candidates applying for the post by a committee appointed by the Occupier of the factory.
4 (iii) The appointment when made shall be notified by the occupier to the Chief Inspector of Factories giving the details of the qualifications. age, pay, previous experience and other relevant particulars of the officer appointed and the terms and conditions of his service.
5 (4) Conditions of Service:
6 (a) Where the number of Safety Officers to be appointed in a factory as required by a notification in the Official Gazette exceeds one, one of them shall be designated as the Chief Safety Officer and shall have a status higher than that of the others. The Chief Safety Officer shall be in overall charge of the safety

functions as envisaged in sub-rule (4), the other safety officers working under his control.
(b) The Chief Safety Officer or the Safety Officer in the case of factories where only one Safety Officer is required to be appointed, shall be given the status of a senior executive and he shall work directly under the control of the Chief Executive of the factory. All other Safety Officers shall be given appropriate status to enable them to discharge their functions effectively.
(c) The scale of pay and the allowance to be granted to the Safety Officer including the Chief Safety Officer, and the conditions of their service shall be the same as those of the officers of the corresponding status in the factory. In no case the total emoluments being paid by a State Government to an Inspector of Factories at the minimum of his scale of pay and in the case of Chief Safety Officer to that of a Regional Inspector of Factories.
(d) The condition of service of Safety Officer shall be the same as those of the other members of the executive staff of corresponding status in the factory.
(e) The services of a Safety Officer shall not be discharged with, or he shall not be reverted, without the written concurrence of the Director of factories, Hyderabad who shall record reasons therefore.
(f) No punishment such as withholding of increments, including stoppage at any efficiency bar, reduction to a lower state in the time scale, suspension dismissal or termination of service, except censure shall be imposed by the management on a safety Officer, except with the previous concurrence of the Director of Factories.
(g) A Safety Officer, who has been dismissed from service or whose services have been terminated in any other manner than as provided above may within 30 days from the date of receipt of the order by him, appeal to the State Government against the order of punishment made by the management with the concurrence of the Director of Factories and the decision of the State Government thereon shall be final.

Provided that when the management terminates the service or probation of a safety officer the reasons for such a termination of service of probation shall be reported to the State Government or such authority, as may be, empowered by them in this behalf.
1 (5) Duties:

The duties of the Safety Officer shall be to advise and assist the factory management in the fulfilment of its obligation, statutory or otherwise, concerning prevention of personal injuries and maintaining a safe working environment These duties shall include the following namely:

i (i) to advise the concerned departments in a factory in planning and organising measures necessary for the effective control of personal injuries.

i (ii) to check and evaluate the effectiveness of the action taken or proposed to be taken to prevent personal injuries.

ii (iii) to advise on safety aspects in all job studies, and to carry out detailed job safety studies of selected jobs

iii (iv) to advise the purchasing and stores department in ensuring high quality and availability of personal protective equipment;

iv (v) to provide advice on matters related to carrying out plant safety inspections;

v (vi) to carry out plant safety inspections in order to observe the physical conditions of work and the work practices and procedures followed by the workers and to render advice on measures to be adopted for removing unsafe physical conditions and preventing unsafe actions by workers;

vi (vii) to render advice on matters related to reporting and investigation of industrial accidents and diseases;

vii (viii) to investigate selected accidents;

viii (ix) to investigate the case of industrial diseases contracted and dangerous occurrences under Rule 96;

ix (x) to advise on the maintenance of such records as are necessary relating to accidents, dangerous occurrences and industrial diseases;

x (xi) to promote setting up of safety committees and act as adviser and catalyst to such committees

xi (xii) to organise in association with the concerned departments campaigns, competitions, contests and other activities which will develop and maintain the interest of the workers in establishing and maintaining safe conditions of work and procedures; and

xii (xiii) to design and conduct either independently or in collaboration with the training department, suitable training and educational programmes for the prevention of personal injuries.

xiii (6) Facilities: An occupier of the factory shall provide each Safety Officer with such facilities, equipment and information as are necessary to enable him to discharge his duties effectively.

xiv (7) Prohibition of Performance of other duties: No Safety Officer shall be required or permitted to do any work which is inconsistent with or detrimental to the performance of the duties prescribed in sub-rule (5).

xv (8) Safety Officer's Report: Every Chief safety officer or safety officer where there is no Chief safety officer, working in a factory as required under this rule, shall submit through the occupier of his factory, a report in writing with all relevant details to the Chief inspector of Factories, in the month of January every year, on the activities taken up during the preceding calendar year and the progress achieved

ANNEXURE

GUIDELINES FOR APPROVAL OF DIPLOMA AND DEGREE COURSES ON INDUSTRIAL SAFETY FOR APPOINTMENT OF SAFETY OFFICERS

1 1. Contents of Course and Teaching Hours: The course leading to the grant of diploma or degree in Industrial safety should fulfil the following minimum requirements:
2 (a) The hours allocated for teaching of subjects on Industrial Safety (including industrial health) should not be less than that allocated by Central Labour Institute, Mumbai for the course of Advanced Diploma in Industrial Safety. This includes time allocated for lectures, discussion, seminars, case studies, and laboratory work does not include the time allocated for visit to the factories and term work/project work accidents.
3 (b) The subjects of study shall be in confirmation to the syllabus followed by Central Labour Institute, Mumbai for the Course of Advanced Diploma in Industry Safety
4 (c) The Chief Inspector may add or substitute any of the subjects and topics in the said syllabus depending upon the need based requirement of industry and technologies.
5 2. Standard for Admission to the Course:
6 (A) Basic Educational qualification and Minimum Experience required for admission to the Course leading to a degree or diploma or certificate course in Industrial Safety:

Basic Educational Qualification	**Minimum Experience Required**
Recognised degree in any branch of technology/engineering	No Experience is required for the purpose of admission to the said course
Recognised Diploma in any branch of technology/engineering	At least 2 years of practical experience in supervisor capacity in manufacturing, maintenance or safety department in a factory
Recognised degree in physics/chemistry	At least 1 year of practical experience in supervisory capacity in manufacturing, maintenance, R&D or safety department in a factory.

61-B Electricity Rules
These rules shall apply to all factories
1 (1) Definitions:
2 (a) “Authorised person” means a person over 21 years of age who may be either- (i) the occupier or (ii) a contractor for the time being under contract with the occupier or (iii) a person employed, appointed or selected by the occupier or by

a contractor as aforesaid, to carry out certain duties incidental to the generation, transformation, conversion switching, controlling, regulating, distribution or use of electrical energy; such occupier, contractor, or person being a person who is competent for the purposes of the rule in which the terms is used.
(b) “Apparatus” means electrical apparatus, and includes all apparatus, machines and fittings in which conductors are used or of which they form a part.
(c) “Bare” means not covered with insulating material.

(d) “Circuit” means an electrical circuit forming a system or branch of a system.
(e) “Conductor” means an electrical conductor arranged to be electrically connected to a system.
(f) “Covered with insulating material” means adequately covered with insulating materials of such quality and thickness that there is no danger.
(g) “Danger” means danger to health or danger to life or limb from shock, bum, or other injury to persons employed, or from fire attendant upon generation, transformation, distribution or use of electrical energy.
(h) ‘‘Dead” means at, or about, zero potential, and disconnected from any live system.
(i) “Earthed’’ means connected to the general mass of earth in such manner as will ensure at all time an immediate discharge of electrical energy without danger.
(j) ” Insulating Stand” means a floor, platform stand or mat.
(k) ‘Insulating Screen” means a screen.
(l) “Insulating Books” means books.
(m) “Insulating Gloves” means gloves. (Of such size: quality and construction according to the circumstances of the use thereof that a person is thereby adequately protected from danger).
(n) “Live’’ means electrically charged.
(o) Pressure” means the difference of electrical potential between any two conductors or between, a conductor and earth as read by a hot wire an electrostatic Volta-meter.
(p) “Low pressure’’ means a pressure in a system normally not exceeding 250 volts where the electrical energy is used.
(q) “Medium pressure” means a pressure in a system normally above 250 volts but not exceeding 650 volts where electrical energy is used.
(r) “High pressure” means a pressure in a system normally above 650 volts, but not exceeding 3,000 volts, where the electrical energy is used or supplied.

(s) “Extra High pressure” means a pressure in a system normally exceeding 3,000 volts where the electrical energy is used or supplied.
(t) ‘‘Switch Board’’ means the collection of switches or fuses. conductors and other apparatus in connection therewith. used for the purpose of controlling the current or pressure in any system or part of a system.
(u) Switch Board Passage-way” means any passage way or compartment large enough for a person to enter. and used in connection with switch board when live.
(v) ‘System’’ means an electrical system in which all the conductors and apparatus are electrically connected to a common source of electro motive force.
(2) All apparatus and conductors shall be adequate in size and power for the work they are called upon to do and so constructed, installed, protected. worked and maintained as to prevent danger so far as reasonably practicable.
(3) Every electrical joint and connection shall be of proper construction as regards conductivity, insulation, mechanical strength and protection.
(4) Efficient means, suitably located, shall be provided for protecting from excess of current to every part of a system as may be necessary to prevent danger.

(5) All parts, of generators, motors, transformers, or other similar apparatus. within reach from any position in which any person employed may be required to be, shall be, so far as reasonably practicable, so protected as to prevent danger
(6) All accessible metallic portions of electrical plant or apparatus which though normally not forming part of an electrical circuit. may become alive, accidentally, shall be protected by an insulating covering or by other adequate means or shall be connected to earth by a conductor of adequate size.
(7) Adequate working space and means of access, free from danger. shall be provided for all apparatus which have to be worked or attended to by any person.
(8) Where one of the conductors of a system is connected to earth, no single pole switches other than a link for testing purposes, or switch for use in controlling a generator shall be placed in such conductor or any branch thereof
(9) Every fuse and every automatic circuit-breaker used instead thereof shall be so constructed and arranged as effectively to interrupt the current before it so exceeds the working rate as to involve danger. It shall be of such construction or be so guarded or placed as to prevent danger from overheating, or from arcing or the scattering of hot metal or other substance which it comes into operation. Every fuse shall be either of such construction or so protected by a switch that the fusible metal may be readily renewed without danger.
(10) Conductors which in accordance with the conditions of operation are required to be earthed shall, as a general rule not be protected by fuses.

1 (11) The general arrangement of switch-boards shall, so far as reasonably practicable be such that:
2 (a) all parts which may have to be adjusted or handled are readily accessible;
3 (b) the course of every conductor may, where necessary, he readily traced;
4 (c) conductors arranged for connection to the same system are kept well apart, and can, where necessary, be readily distinguished;
5 (d) all bare conductors are so placed or protected as to prevent danger from accidental short circuit.
6 (12) Every switch board having bare conductors normally so exposed that they may be touched, shall, if not located in any area or areas set apart for the purposes thereof, where necessary be suitably fenced or enclosed.

No person except an authorised person, or a person acting under his immediate supervision, shall, for the purpose of carrying out his duties, have access to any part of an area so set apart.
1 (13) Every motor shall be provided with an efficient switch or circuit breaker for starting and stopping the motor, so placed as to be easily and safety operated by the person controlling the motor. Such a switch or circuit breaker may be embodied the starting controlling device used with the motor.
2 (14) In every place in which machines are being driven by an electric motor, there shall be means at hand for either switching off the motor, or stopping machines if necessary to prevent danger.
3 (15) Every flexible wire for portable apparatus shall be connected to the system either by efficient permanent joints or connections, or by a properly constructed connector.

In all cases where the person handling portable apparatus or pendent lamps with switches, would be liable to get a shock through a conducting floor or conducting work or otherwise, if the metal work of the portable apparatus became charged, the metal work must be efficiently earthed: and any flexible metallic covering of the conductors shall be itself efficiently earthed and shall not itself be the only earth connection or the metal of the apparatus.
A lamp holder shall not be in metallic connection with the guard or other metal work of a portable lamp.
In such places the portable apparatus and its flexible wire shall be controlled by efficient means suitably located, and capable of cutting of the pressure, and the metal work shall be efficiently earthed independently of any flexible metallic cover of the conductors and any such flexible covering shall itself be independently earthed.
1 (16) In plug and socket connection for transportable apparatus the socket shall be connected to the conductor and the plug to the appliance.

1 (17) Plug for connecting moveable conductors shall be of such construction that they do not get in the socket connections meant for higher current. Plug and socket connection shall be of such construction that the plug cannot be inserted or withdrawn while the current is on.
2 (18) Efficient means, suitably located, shall be provided for cutting off all pressure from every part of a system as may be necessary to prevent danger.
3 (19) All conductors shall either be covered with insulating material and further efficiently protected where necessary to prevent danger or they shall be so placed and safeguarded as to prevent danger so far as is reasonably practicable.
4 (20) Knife switches shall be of such construction that the breaking area cannot reach the operating handle and they shall be so connected that when open the blades are dead.
5 (21) All conductors and apparatus exposed to the weather wet corrosion, inflammable surroundings or explosive atmosphere, or used in any process or for any special purpose other than for lighting or power, shall be so Constructed or protected, and such special precautions shall be taken as may be necessary to prevent danger in view of such exposure or use.
6 (22) In any place where inflammable substance or explosive dust or gas is liable to be present:
7 (a) No lamp except incandescent lamp with its holder completely enclosed in a fitting having thick glass glove and an adequate radiating surface shall be used.
8 (b) All generators, motors, plants and their tunnels and every electrical fitting shall be of gas tight construction.
9 (c) The cables for their entire length shall be enclosed in the gas tight conduits
10 (d) No portable apparatus shall be used unless such apparatus is approved by the Chief Inspector.
11 (e) Switches, cut outs and all other accessories liable to are shall where practicable be located outside such places, but where this is impracticable they shall be of flame-proof type.
12 (23) Adequate precautions shall be taken to prevent any conductor or apparatus from being accidentally or inadvertently electrically charged when persons are working thereon.
13 (24) Where necessary insulating stands or screens shall be provided adequately to prevent danger and kept permanently in position, and shall be maintained in sound condition.

14 (25) Portable insulating stands, screens, boots, or other suitable means shall be provided and used when necessary adequately to prevent danger, and shall be periodically examined by an authorised person. A record of such examinations shall be kept in suitable register which shall be readily available for perusal by an Inspector.

1 (26) No person except an authorised person or a competent person acting under his immediate supervision shall undertake any work where technical knowledge or experience is required in order adequately to avoid danger; and no person shall work alone in any case in which the Chief Inspector directs that he shall not. No person except an authorised person or a competent person over 21 years of age acting under his immediate supervision, shall undertake any repair, alteration, extension, cleaning or similar work where technical knowledge or experience is required in order to avoid danger, and no one shall do such work unaccompanied.
2 (27) When work is being carried on the power lines a notice board of a size not less than 1-0" x 0'-9" labelled in red "Caution, person working on line" and its equivalent in vernacular shall be placed on the switch board.
3 (28) Instructions, both in English and in the vernacular of the district as to the treatment of persons from electric shock, shall be affixed in all premises where electrical energy is generated, transformed, converted, switched, controlled, regulated, distributed or used.
4 (29) Exemptions:
5 (1) Nothing in this rule shall apply to any service lines or apparatus on the supply side of the consumer's terminal or to any chamber containing such service lines or apparatus where the supply is obtained from an outside authority. Provided always that no live metal is exposed so that it may be touched.
6 (2) This rule shall not apply to any installation generating, transforming, converting or using electrical energy at a voltage of 24 volts or less.
7 (3) The State Government may by order exempt from the operation of this rule either in whole or in part any premises to which any special rules or regulations under any other Act as to the generation, transformation, conversion, switching, controlling, distribution and use of electrical energy apply; and may revoke such order.
8 (4) If the occupier can show, with regard to any requirement of this rule, that the special conditions in his premises are such as adequately to prevent danger, that requirement shall be deemed to be satisfied and the Chief Inspector may by order in writing direct, that any class of special condition defined in the requirements of this rule adequately to prevent danger are satisfied, and may revoke such order. In particular, the following shall be deemed for all the purposes of this rule adequately to prevent danger

Room in which
(a) the floor is of wood or otherwise insulated;
(b) there is no machinery or other earthed metal with which a person handling any non-earthed lamp fittings or any portable lamp is liable to be in contact

(c) no process rendering the floor wet is carried on; and
(d) no live conductor is normally exposed so that it may be touched.

[104][61-C. Safety belts

Where any person is required or allowed to work at a place from which he may be liable to fall through a distance of more than [105][3 meters], he shall be provided with a safety belt with leather shoulder straps of not less than [106][Five Centimetres] in width and a 'D' ring at the back for fastening a rope, the other end of which shall be securely tied or hooked to some suitable rigid fixture. The safety belt so provided shall be tested and examined thoroughly by a competent person at least once in six months and a certificate with regard to its suitability obtained from the said competent person and entered in a register, which shall be produced before the Inspector on demand.

Provided that where Chief Inspector is satisfied that in respect of any particular work in a factory or any location thereof, wearing of safety belt is not convenient or is inappropriate or is not reasonably practicable and where alternate safety precautions have been taken and provided by the management for the safety of the workers, on the application of the manager of the factory' he may, by order in writing, exempt the factory or any part thereof or description of work, from the requirement of providing safety belts under the rule subject to such conditions as he may specify.

61-D. Fragile roofs, provision of crawling Boards etc.

In any factory, no person shall be required to stand or pass over or work on or near, any roof or ceiling covered with fragile material through which he is liable to fall, in case it breaks or gives way, a distance of more than three metres, unless

(a) suitable and sufficient ladders, duck ladders or crawling boards which shall be securely supported, are provided and used; and

(b) a permit to work on the fragile roof is issued to him each time he is required to work thereon by a responsible person of the factory concerned.

61-E

Save as otherwise expressly provided for in these rules, suitable personal protective equipment's and clothing, such as helmets, goggles, respirators, aprons, leggings, boots or other foot-wear, gloves, and clothing, as may be specified by the Inspector by an order in writing shall be supplied to workers engaged in any process which in the opinion of the Inspector, is likely to be injurious to the health and safety of the workers.

All such equipment's shall be maintained in good condition.

61-F

1 (1) Buildings and Structures: No building, wall, chimney bridge, tunnel, road, gallery, stair-way, ramp, floor, platform, staging, or other structure, whether of a permanent or temporary character, shall be, constructed or situated, maintained in any factory in such manner as to cause risk of bodily injury.

1 (2) Machinery and Plant: No machinery, plant or equipment shall he erected, situated, operated or maintained in any factory in such a manner as to cause risk of bodily injury.

2 (3) Methods of work: No process or work shall be carried on in any factory in such a manner as to cause risk of bodily injury.

3 (4) Stacking and storing of material etc.: No material or equipment shall be stacked or stored in such a manner as to cause risk of bodily injury.

61-G. Ship building and Ship-repairing

1 1. Application: These rules shall apply as respects of work carried out in any of the operations.

2 2. Definitions: In these rules unless there is anything repugnant in the subject or context

3 (a) “Certificate of entry” means a certificate which

4 (i) is given by a person who is a competent analyst and who is competent to give such certificates; and

5 (ii) certifies that he has in an adequate and suitable manner tested the atmosphere in the oil-tank or oil-tanks specified in the certificate and found that having regard to all the circumstances of the case, including the likelihood or otherwise of the atmosphere being or becoming dangerous, entry to the oil-tank or oil-tanks without wearing breathing apparatus may in his opinion, be permitted;

6 (b) “hot work” means any work which involves

7 (i) welding, burning, soldering, brazing, sand blasting or chipping by spark producing tools; or

8 (ii) use of non-flame proof electrical equipment or equipment with internal combustion engines; and includes any other work which is likely to produce sufficient heat capable of igniting flammable gases or vapours.

9 (c) “naked light certificate” means a certificate which

10 (i) is given by a person who is a competent analyst and who is competent to give such certificates; and

11 (ii) certifies that he has in an adequate and suitable manner tested for the presence of inflammable vapour the oil-tank, compartment, space or other part of the vessel specified in the certificate and found it to be free there from and that having regard to all the circumstances of the case, including the likelihood or otherwise of the atmosphere becoming inflammable, the use of naked lights, fires, lamps or heated rivets or any hot work to be carried out may in his opinion be permitted in the oil-tank, compartment, space or other part of the vessels specified in the certificate:

(d) “oil” means any liquid which has a flash point below 132 °C (270°F) and also includes lubricating oils, liquid methane, liquid butane and liquid propane:

Explanation: Flash point wherever it occurs in these rules, shall be flash point as determined by Abel Closed Cup or Pensky-Marten Closed Cup Procedures as described in I.S.1448-1960.

(e) “Oil-tank” means any tank or compartment in which oil is or has been carried;

(f) “the operations” means

(i) construction, reconstruction or breaking up of any ship or vessel, repairing, refitting, painting and finishing;

(ii) the sealing, surfing or cleaning of its boilers (including combustion chambers or smoke boxes); and

(iii) the cleaning of its bilges or oil-fuel tanks or any of its tanks last used for carrying oil. For the purpose of this definition the expression “Oil” means oil of any description whether or no oil within the meaning of foregoing definition of that expression:

(g) “Ship” and “vessel” shall have the same meanings as in the Merchant Shipping Act, 1958;
(h) “Shipyard” means any yard or dry dock (including the precincts thereof) in which ships or vessels are constructed, reconstructed, repaired, refitted or finished;
(i) “Stage” means any temporary platform on or from which persons employed perform work in connection with the operations, but does not include a boatswain’s chair;
(j) “Staging” includes any stage, and any upright, thwart, pin, wedge, distance piece, belt or other appliance or material not being part of the structure of the vessel, which is used in connection with the support of any stage, and any guard-rails connected with a stage;
(k) “Tanker” means a vessel constructed or adopted for carrying a cargo of oil in bulk.

ACCESS AND STAGING

1 3. General access to vessels in shipyard: All main gangways giving general access to a vessel in a shipyard, whether from the ground or from a wharf or quay, and all cross, gangways leading from such a main gangway on the vessel shall

2 (i) be at least 60 cm. wide

3 (ii) be securely protected on each side to a height of at least 90cm. by strongly constructed upper and lower hand-rails and by a secure to board projecting at least 15 cm. above the floor;

i (iii) be of good construction sound material and adequate strength; (iv) be stable and wherever practicable, of permanent construction; (v) be kept in position as long as required; and

ii (iv) maintained in good repairs.

iii 4. Access to dry dock:

iv (a) Every flight of steps giving access from ground level either to an altar or to the bottom of a dry dock shall be provided throughout on each side with a substantial hand-rail. In the case of an open side, secure fencing to a height of at least 90 cm. shall be provided by means of upper and lower rails, taut ropes or chains or by other equally safe means. For the purposes of this sub-rule a flight of steps which is divided into two by a chute for materials, with no space between either side of the chute and the steps shall be deemed to be one flight of steps.

v (b) Such hand-rails and fencings as aforesaid shall be kept in position save when and to the extent to which their absence is necessary (whether or not for the purposes of the operations) for the access of persons, or for the movement of materials or vessels or for traffic or working, for repair, butt hand-rails or fencing removed for any of those purposes shall be kept readily available and shall be replaced as soon as practicable

vi 5. Access to vessels in dry dock:

vii (a) If a ship is lying in a dry dock for the purpose of undergoing any of the operations, there shall be provided means of access for the use of workers at such times as they have to pass to, or from, the ship or dry dock

viii (i) Where reasonably practicable one more ships’ accommodation ladders; or

ix (ii) one or more soundly constructed gangways or similar constructions.

x (b) The means so provided shall not be less than 55 cm. wide properly secured and fenced throughout on each side to a clear height of 90 cm. by means of upper and lower rails,

taut ropes or chains or by any other safe means, except that in the case of the ships accommodation ladder, such fencing shall be necessary on one side only provided where the other side is properly protected by the ship's side.

xi (c) Where at any dry dock, there is a gangway giving access from an alter of the dock to vessel which is in the dock for the purpose of undergoing any of the operations, and the edge of the altar is unfenced, adequate hand-holds shall be available for any length of the altar which workers commonly use when passing between the gangway and the nearest flight of steps which gives access to ground level.

1 6. Access to and from bulwarks: Where there is a gangway leading on to a bulwark of a vessel there shall be provided.

2 (a) Wherever practicable, a platform at the in-board end of the gangway with safe means of access there from to the decks; or

3 (b) Where such a platform is not practicable, a second gangway or stairway leading from a bulwark on to the deck which are either attached to the first mentioned gangway or place continuous to it in which case means of access securely protected by fencing shall be provided from one to other.

4 7. Access to staging etc.:

5 (a) Where outside staging is erected on a shipyard, there shall be provided sufficient ladders giving direct access to the stages having regard to extent of the staging and to the work to be done.

6 (b) Where a vessel is under construction or reconstruction and workers are liable to go forward or aft or at warship across or along uncovered deck beams, or across or long floors, sufficient planks shall be provided on these' deck-beams r on these floors for the purpose of access to or from places of work, and sufficient and suitable portable ladders shall be provided so as to give access either from the ground or outer bottom plating to the top of the floor.

7 (c) Without prejudice to any other provision in these rules requiring a greater width, no footway or passageway constructed of planks shall be less than 45 cm. wide.

8 8. Ladders:

9 (a) Subject to clauses (b) and (c) of this rule, every ladder which affords a means of access, communication of support to a person shall

10 (i) be soundly constructed and properly maintained; and

11 (ii) be of adequate strength for the purpose of which it is used; and

12 (iii) be securely fixed either

13 (i) as near its upper resting place as possible; or

14 (ii) where this is impracticable at its base, or where such fixing is impracticable a person shall be stationed at the base of the ladder when in use to prevent it from Slipping; and

15 (iv) Unless there is other adequate hand-hold, extent to a height of at least 75 cm; above the place of landing or the highest of the right rung to be reached by the foot of any person working on the ladder, as the case may be, or, if this is impracticable, to the greatest practicable height.

16 (b) Requirements (iii) and (iv) of the preceding clause of this rule shall not apply to fixed ladders of ship or to rope ladders. Effective measures by means of roping

off or other similar means shall be taken to prevent the use of fixed ladders of a ship which do not comply with requirements (i) and (ii) of that sub-rule.
(c) Any worker who removes any ladder and sets it up in a new position shall, as regards that ladder, comply with requirements (c) of clause (a) of this rule.
(d) Rope ladders shall provide foot-hold of a depth including any space behind the ladder of not less than 12 cm. and so far as is reasonably practicable, suitable provision shall be made for preventing such ladders from twisting.
9. Lashing of Ladders:
(a) A fibre rope, or rope made with stands consisting of wire ropes covered with fibre, shall not be used to secure a ladder used for the purpose of the operation.
(b) A wire rope shall not be used to secure any such ladder unless its ends are furled, but this provision shall not apply in the case of an end which is so situated or protected that a person using the ladder is not liable to come into contact with it so as to suffer injury.
10. Material for staging:
(a) A sufficient supply of sound and substantial material and appliances shall be available in convenient place or places for the construction of staging.
(b) All planks and other materials and appliances intended to be used or re-used for staging shall be carefully examined, before being taken into use or re-use in any staging. Every examination required by this clause shall be carried out by a person competent for the purpose.
11. Staging, dry dock altars and shoring sills:
(a) All staging and every part thereof shall be of good construction, of suitable and sound material and of adequate strength for the purpose for which it is used and shall be properly maintained, and every upright and thwart shall be kept so fixed, secured or placed in position as to prevent, so far as is reasonably practicable, accidental displacement.
(b) All planks forming stages shall be securely fastened to prevent them from slipping unless they extend 45 cm. or more beyond the inside edge of the thwart or support on which they rest.
(c) All staging used in connection with the operations shall be inspected before use, and thereafter at regular and frequent intervals, by a responsible person.
(d) All dry dock altars and shoring sills on or from which persons perform work in connection with the operations shall be of sound construction and properly maintained.
(e) All parts of stages, all parts of footways or passageways constructed of planks, and all parts of dry dock altars or shoring connection with the operations, shall

so as far as is reasonably practicable, be kept clear of all substances likely to make foot-hold or hand-hold insecure.
12. Upright used for hosting block:
(a) If any upright forming part of staging is used as a fixing for a pulley for hosting materials,
(i) it shall be properly housed in the ground or shall otherwise be adequately secured so as to prevent it from rising; and
(ii) it shall be suitably protected against damage by the action of the chain or wire or other means of securing the pulley block to the upright.
(b) No upright forming part of staging shall be used as an anchorage for a load pulley block, unless the upright is not likely to be displaced by such use.

13. Support of stages on planks: Planks supported on the rungs of ladders shall not be used to support stages.
14. Suspended stages:
(a) Stages suspended by ropes or chains shall be secured as far as possible so as to prevent them swinging.
(b) A fibre rope, or a rope made of stands consisting of wire cores covered with fibre shall not be used for suspending a stage except that fibre ropes may be used in the case a stage of which the suspension ropes are received through blocks.
(c) Chains, ropes, blocks and other gear used for the suspension of stages shall be of sound material, adequate strength and suitable quality, and in good condition.
(d) Appropriate steps shall be taken to prevent ropes or chains used for supporting a stage from coming into contact with sharp edges of any part of vessel.

1 15. Boatswain ‘s Chains:
2 (a) Boatswains’ chains and chains, ropes or other gear used for their suspension shall be of sound material, adequate strength and suitable quality and the chains, ropes or other gear shall be securely attached.
3 (b) Suitable measures shall be taken to prevent where possible the spinning of a boatswain’s chair to prevent the tipping of a boatswain’s chair and to prevent any occupant falling thereon.
4 16. Rising stages: All planks forming a rising stage at the bow end of a vessel shall be securely fastened to prevent them from slipping.

1 17. Width of staging: Without prejudice to the other provisions of these Rules, all stages shall be of sufficient width as is reasonable in all the circumstances of the case to secure the safety of the persons working thereon.
2 18. Stages from which a person is liable to fall more than 2 in. or into water:
3 (a) This Rule applies to stages from which a person is liable to fall a distance of more than 2 m. or into water, in which there is a risk of drowning.
4 (b) Every stage to which this Rule applies
5 (i) shall so far as is reasonably practicable, be closely boarded, planked or plated;
6 (ii) shall be constructed or placed that a person is not liable to fall as aforesaid through gap in the staging not being a gap necessary and no larger than necessary having regard to the nature of the work being carried on;
7 (iii) shall be at least 45 cm. wide.
8 (c) Every side of a stage to which this rule applies shall
9 (i) if it is not a side immediately adjacent to any part of a vessel. be fenced (subject to the provisions of sub-rules (d) to (g) of this Rule) with a guard rail or guard rails to a height of at least I m. above the stage, which rail or rails shall be so placed as to prevent so far as practicable the fall of persons from the stage or from any standing raised place on the stage; or
10 (ii) if it is a side immediately adjacent to any part of a vessel, be placed as near as practicable to that part having regard to the nature of the work being carried on and to the nature of the structure of the vessel.

11 (d) In the case of stages which are suspended by ropes or chains and which are used solely for painting, the fencing required by clause (i) of the preceding sub-clause may be provided by means of taut guard rope or taut guard ropes.
12 (e) no side of a stage or as the case may be, no part of the side of a stage need be fenced in pursuance of sub-clause (c) (i) of this sub-rule in cases where, and so long as, the nature of the work being carried on makes the fencing of that side, or, as the case may be, that part impracticable.
13 (f) guard rails provided in pursuance of sub-clause (c) (i) of this sub- rule may be removed for the time and to the extent necessary for the access of persons or for the movement of materials; but guard rails removed for either of these purposes shall be replaced as soon as practicable.
14 (g) where it is not reasonably practicable to comply with the provisions of sub-clause (c) (i) of this sub-rule, workers shall be provided with suitable safety belts equipped with life lines which are secured with a minimum amount of slack to a fixed structure.

FURTHER PRECAUTIONS AGAINST FALL OF PERSONS, MATERIALS AND ARTICLES

1 19. Fencing of dry docks:
2 (a) Fencing shall be provided at or near the edges of a dock at a ground level, including edges above flights of steps and chutes for materials. The height of such fencing shall at no point be less than 1 m.
3 (b) Such fencing as aforesaid shall be kept in position save when and to the extent to which its absence is necessary (whether or not for the purposes of the operations) for the access of persons, or for movement of materials or vessels or for traffic or working, or for repair but fencing removed for any of those purposes shall be kept readily available and shall be replaced as soon as practicable.
4 20. Protection of openings.
5 (a) Every side or edge of an opening in a deck or tank top of a vessel, being a side or edge which may be a source of danger to workers shall, except where and while the opening is securely covered or where the side or edge is protected to a height of not less than 75 cm. by a earning or other part of the vessel, be provided with fencing to height of not less than 90 cm. above the edge or side and such fencing shall be kept in position save and when to the extent to which its absence is necessary (whether or not for the purposes of the operations) for the access of persons, or the movement of materials, or for traffic or working, or for repair, but fencing removed for any of these purposes shall be kept readily available and shall be replaced as soon as practicable.
6 (b) Sub-clause (a) of this sub-rule shall not apply
7 (i) to that part of an opening in a deck or tank top which is at the head of a stairway or ladder-way intended to be used while the operations are being carried on; or
8 (ii) to parts of a deck or tank to which are intended to be plated except such parts where plating has necessarily to be delayed so that the opening may be used for the purpose of the operation.
9 21. Fall of articles from stages: Where workers are at work outside a vessel on a stage adjacent to part of the structure of the vessel and other workers are at work directly beneath

that stage, the planks of the stage shall be in such a position that no article liable to cause injury to the workers can fall between the planks, and the inside plank of the stage shall be placed as near as practicable to the structure of the vessel having regard to the nature of the work being earned on.

10 22. Boxes for rivets etc.:

11 (a) Boxes or other suitable receptacles for rivets, nuts, bolts and welding rods shall be provided for the use of workers.

12 (b) It shall be the duty of the workers to use, as far as practicable, the boxes or other suitable receptacles so provided.

1 23. Throwing down materials and articles:

2 (a) Subject to the provisions of a sub-clause (b) of this sub-rule, parts of staging, tools and other articles and materials shall not be thrown down from a height where they are liable to cause injury to workers, but shall be properly lowered.

3 (b) When the work to be done necessarily involves the throwing down from a height of articles or materials, conspicuous notices shall be posted to warn persons from working or passing, underneath the place from which articles or materials may fall, or the work shall be done under the direct supervision of a competent person in authority.

4 (c) No person shall throw down any articles or materials from a height except in accordance with the requirement of this sub-rule.

5 24. Loose articles or materials: As far as practicable, steps shall be taken to minimise the risk arising from loose articles or materials being left lying about in any place from which they may fall on workers or persons passing underneath.

RAISING AND LOWERING

1 25. Secureness of loads:

2 (a) Loads shall be securely suspended or supported whilst being raised or lowered, and all reasonable precautions shall be taken to prevent danger from slipping or displacement.

3 (b) Where by reason of the nature or position of the operations load is liable, whilst being moved by a lifting machine or lifting tackle, to come into contact with any object so that the object may become displaced, special measures shall be adopted to prevent the danger as far as reasonably practicable.

4 26. Support of flung machines and lifting tackle: Every lifting machine and all lifting tackle shall be adequately and suitably supported or suspended having regard to the purpose for which it is used.

5 27. Wire ropes with broken wires: No wire rope shall be used if in any length often diameters the total number of visible broken wires exceeds five percent of the total number of wires, or if the rope shows signs of excessive wear of coercion or other serious defect.

6 28. Supplies in wire-ropes: A thimble or loop splice made in any wire rope shall have at least three tucks with a whole stand of the rope and two tucks with one half of the wires cut out of each stand. All tucks shall be against the lay of the rope:

Provided that this sub-rule shall not operate to prevent the use of another form of splice which can be shown to be as efficient as the form of splice specified in this sub-rule.

1 29. Knotted chains, etc.:
2 (a) No chain or wire rope shall be used when there is a knot tied in any part thereof.

(b) No chain which is shortened or joined to another chain by means of bolts and nuts shall be used Provided that this does not exclude the use of a chain bolted or joined to another chain by an approved and properly constructed attachment.
30. Precautions against damage to chains and ropes: Appropriate steps shall be taken to prevent, so far as practicable, the use of chains or ropes for raising or lowering in circumstances in which they are in or liable to come into contact with sharp edges of plant materials or loads or with sharp edges of any part of the vessel on which work is being carried out.
31. Loads on lifting appliances: No loads shall be left suspended from a lifting appliance other than a self-sustaining manually operated lifting appliance, unless there is a competent person in charge of the appliance while the load is so left.
32. Heavy loads: Where there is reason to believe that a load being lifted or lowered on a lifting appliance weights more than 20 tonnes, its height shall be ascertained by means of an accurate weighing machine or by the estimation of a person competent for the purpose, and shall be clearly marked on the load:

Provided that this sub-rule shall not apply to any load lifted or lowered by a crane which has either a fixed or a derricking jib and which is lifted with an approved type of indicator in good working order which,
i (i) indicates clearly to the driver or person operating the crane the load being carried approaches safe working load of the crane for the radius of the jib at which the load is carried; and
ii (ii) gives an efficient sound signal when the load moved is in excess of the safe working load of the crane at that radius.

PRECAUTIONS AGAINST ASPHYSIATION, INJURIOUS FUMES OR EXPLOSIONS
1 33. Certification for entry into confined spaces likely to contain dangerous fumes: A Space shall not be certified under Section 36(3)(a) of the Act unless
2 (i) effective steps have been taken to prevent any ingress of dangerous fumes;
3 (ii) any sludge or other deposit liable to give off dangerous fumes has been removed and the space contain no other material liable to give off dangerous fumes; and
4 (iii) the space has been adequately ventilated and tested for dangerous fumes and has a supply of air adequate for respiration, but no account shall be taken for the purposes of subparagraph (ii) of his paragraph of this sub-rule of any deposit or other material liable to give off dangerous fumes in insignificant quantities only.

1 34. Precautions against shortage of oxygen: No person shall enter or remain in any confined space in vessel, being a confined space in which there is reason to apprehend that the proportion of oxygen in the air is so low as to involve risk of persons being overcome, unless either
2 (i) the space has been and remains adequately ventilated and a responsible person has tested it and certified that it is safe for entry without breathing apparatus; or

3 (ii) he is wearing a suitable breathing apparatus and a safety belt securely attached to a rope, the free end of which is held by person standing outside the confined space.
4 35. Rivet fires.
5 (a) Rivet fires shall not be taken into or used in or remain in any confined space on board or in a vessel unless there is adequate ventilation to prevent the accumulation of fumes.
6 (b) No person employed shall move a rivet fire into any confined space on board or in a vessel he has been authorised by his employer to move the fire into that space.
7 36. Gas cylinders and acetylene generators:
8 (a) No cylinder which contains or has contained oxygen or any flammable gas or vapour at a pressure above atmospheric pressure and no acetylene generating plant, shall be installed or placed within 5 m. of any substantial source of heat (including any boiler or furnace when alight) other than the burner or blow pipe operated from the cylinder or plant.
9 (b) No such cylinder and no such plant shall be taken below the weather deck in the case of a vessel undergoing repair, or below the topmost completed deck in the case of a vessel under construction, unless it is installed or placed in a part of the vessel which is adequately ventilated to prevent any dangerous concentration of gas or fumes.
10 37. Further provision as to acetylene generators
11 (a) The following provisions shall be observed as respects any acetylene generating plant:
12 (i) no such plant shall be installed or placed in any confined space unless effective and suitable provision is made for securing and maintaining the adequate ventilation of that space so as to prevent, as far as practicable, any dangerous accumulation of gas;
13 (ii) any person attending or operating any such plant shall have been fully instructed in its working and a copy of the maker's instructions for that type of plant shall be constantly available for his use;

i (iii) the charging and cleaning of such plant shall so far as practicable be done during day light; and
ii (iv) partly spent calcium carbide shall not be recharged into an acetylene generator.
iii (b) No person shall smoke or strike a light or take a naked light or a lamp in or into any acetylene generator house or shed or in or into dangerous proximity to any acetylene generating plant in the open air or on board a vessel;

Provided that this sub-clause shall not apply as respects a generator in the open air or on hoard vessel which, since it was last charged, has been thoroughly cleaned and freed from any calcium carbide and acetylene gas.
(c) A prominent notice prohibiting smoking, naked lights and lamps shall be exhibited on or near every acetylene generating plant whilst it is charged or is being charged or is being cleaned.
38. Construction of plant for cutting, welding or heating metal:
(a) Pipes or hoses for the supply of oxygen or any flammable gas or vapour to any apparatus for cutting, welding or heating metal shall be of good construction and sound material and be properly maintained.

(b) Such pipes or hoses shall be securely attached to the apparatus and other connections by means of suitable clips or other equally effective appliances.
(c) Efficient reducing and regulating valves for reducing the pressure of the gases shall be provided and maintained in connection with all cylinders containing oxygen or any flammable gas or vapour at a pressure above atmospheric while the gases or vapour from such cylinders are being used in any process of cutting, welding or heating metal.

(d) Where acetylene gas is used for cutting, welding or heating metal
(i) a properly constructed and efficient back-pressure valve and flame arrestor shall be provided and maintained in the acetylene supply pipe between each burner or blow-pipe and the acetylene generator, cylinder or container from which it is supplied, and shall be placed as near as practicable to the burner or blowpipe, except that those requirements shall not apply where an acetylene cylinder serves only one burner or blow-pipe; and
(ii) any hydraulic valve provided in pursuance of the preceding clause shall be inspected on each day by every person who uses the burner or blow-pipe on that day and it shall be the duty of every worker who used the burner or blow-pipe to inspect the hydraulic valve accordingly.

(e) The operating valves of burners or blow-pipes to which oxygen or any flammable gas or vapour is supplied for the purposes of cutting, welding or heating metal shall be so constructed, or the operating mechanism shall be so protected that the valves cannot be opened accidentally.
39. Precautions after use of apparatus for cutting, welding or heating metal
(a) In the case of apparatus on board a vessel and used for cutting, welding, or heating metal with the aid of oxygen or any flammable gas or vapour supplied at a pressure above atmospheric pressure, the precautions specified in the following sub-clause of this sub-rule shall be taken when such use ceases for the day or a substantial period and the apparatus is to be left on board, but need not be taken when such use is discontinued merely during short interruptions of work. The requirements in sub-clauses (a) and (b) of this sub-rule shall not apply during a meal interval, provided that a responsible person is placed in charge of the plant and equipment referred to therein.
(b) Supply valves of cylinders, generators and gas mains shall be securely closed and the valve key shall be kept in the custody of a responsible person.
(c) Moveable pipes or houses used for conveying oxygen of flammable gas or vapour and welding cutting torches shall in the case of vessel undergoing construction, be brought to the topmost completed deck, or in the case of a vessel undergoing repair to a weather-deck, or in either case to some other place of safety which is adequately ventilated to prevent any dangerous concentration of gas or fumes: Provided that were owing to the nature of the work it is impracticable to comply with the foregoing requirements of this sub-rule, the pipes or noses shall be disconnected from cylinders, generators or gas mains as the case may be.
(d) When cylinders or acetylene generating plant have been taken below deck as permitted by sub-clause (b) of sub-rule (36) such cylinders or acetylene generating plant shall be brought to a weather deck; or, in the case of vessel undergoing construction to the topmost completed deck.
40. Naked light and hot work on oil-carrying vessels:

(a) Subject to the provisions of sub-clause(b) of this rule and to the provisions of sub-rule (48) and without prejudice to the provisions of Rules 46 and 47, no naked light, fire or lamp (other than a safety lamp of a type approved for the purpose of this sub-rule)
(i) shall be permitted to be applied to or to be in or any hot work permitted to be carried out in any part of the tanker, unless, since oil was last carried in that tanker, a naked light certificate has been obtained and is in force in respect of those part of the tanker for which in the opinion of a competent analyst, a naked light certificate is necessary: Provided that a naked light, fire or lamp of a kind specified in writing by a competent

i analyst may be applied to, or be in, or any hot work of a type specified by him carried on any part of the tanker so specified:
ii (ii) shall be permitted
iii (a) to be in any oil-tank on board or in a vessel in which oil tank the oil last carried was oil having a flash point of less than 23°C (73° F). or was liquid methane, liquid propane or liquid butane, or any hot work permitted to be carried out in any such oil- tank or vessel unless a naked light certificate has previously been obtained on the same day and is in force in respect of that oil tank and of any oil-tank, compartment or space adjacent thereto
iv (b) to be applied to the outer surface of any oil-tanker in board or in a vessel in which oil-tank the oil last carried was such oil as aforesaid or any work of such a nature which is likely to produce sufficient heat capable of igniting inflammable gas or vapours permitted to be carried out on the outer surface of such oil-tank or vessel, unless a naked light certificate has previously been obtained on the same day and is in force in respect of that oil-tank;
v (c) to be applied to the outer surface of, or to be in any compartment or space adjacent an oil tank on board or in a vessel in which oil-tank the oil last carried was such oil as aforesaid, or any hot work permitted to be carried out in such compartment or space as aforesaid or any work of such nature which is likely to produce sufficient heat capable of igniting inflammable gases or vapours, permitted to be carried out on the outer surface of such compartment or space, unless a naked light certificate has previously been obtained on the same day and is in force in respect of that compartment or space;

Provided that where in any such case referred to in sub-clause (i), (ii) or (iii) of this sub-rule a competent analyst has certified that daily naked light certificates are necessary or are necessary only to specified extent, such a daily certificate need not be obtained or, as the case may be, need only be obtained to the specified extent;
i (iii) shall be permitted to be applied to the outer surface, of, or to be in, any oil-tank on board or in a vessel or any hot work permitted to be carried out in any such oil-tank or vessel or any work of such nature which is likely to produce sufficient heat capable of igniting inflammable gases or vapours permitted to be carried out on the outer surface of the oil-tank or vessel, unless since oil was last carried in that oil-tank, a naked light certificate has been obtained and is in force in respect of that oil tank;
ii (iv)

(a) shall be permitted to be applied to the outer surface of, or to be in, any compartment or space adjacent to an oil-tank on board or in a vessel or any hot work permitted to be carried

out in any such compartment or space, or any work of such nature which is likely to produce sufficient heat capable of igniting inflammable gases or vapours, permitted to be carried out on the outer surface of any such compartment or space, unless since oil was last carried as cargo in that oil-tank, a naked light certificate has been obtained and is in force in respect of that compartment or space.
(b) Notwithstanding anything in clause (a) of this sub-rule, heated rivets may be permitted in any place without naked light certificate being in force in respect of that place if expressly so authorised by competent analyst who certified that after adequate and suitable testing, he is satisfied having regard to all the circumstances of the atmosphere becoming ease, including the likelihood or otherwise of the atmosphere becoming flammable, that the place is sufficiently free from flammable vapour, but such heated rivets shall, where practicable, be passed through tubes.
(c) No person shall introduce, have or apply naked light, fire or lamp (other than safety lamp of a type approved for the purpose of this sub-rule) into, in or to any place where they are prohibited by this sub-rule.
(d) No person shall carry out hot work or any work of such nature which is likely to produce sufficient heat capable of igniting inflammable gases or vapours, in any place or any surface where they are prohibited by this sub-rule.
(e) In this sub-rule the expression 'competent analyst' means an analyst who is competent to give a naked light certificate.

1 41. Entering oil-tanks:
2 (a) No person (other than an analyst entering with a view to issuing a certificate of entry) shall, unless he is wearing a breathing apparatus of a type approved for the purpose of this sub-rule, enter or remain in an oil-tank on in a vessel unless since the oil-tank last contained oil, a certificate of entry has been obtained and is in force in respect of the tank.
3 (b) Without prejudice to Clause (a) of this sub-rule, no person (other than an analyst entering as aforesaid) shall be allowed or required to enter or remain in an oil-tank on board or in a vessel in which oil tank, the oil last carried was oil having a flash point of less than 23 °C (730 F) unless since the oil-tank last contained

oil, an analyst has certified that the atmosphere is sufficiently free from inflammable mixture.
(c) The provisions of this sub-rule are without prejudice to the requirements of sub-rule (34).
42. Duration of certificates: Any naked light certificates or certificates of entry may be issued subject to a condition, that it shall not remain in force after a time specified in the certificate.
43. Posting of certificates: Every occupier for whom a naked light certificate or certificate of entry is obtained shall ensure that the certificate or a duplicate thereof is posted, as soon as may be, and remains posted in a position where it may be conveniently read by all persons, concerned.
44. Maintaining safe atmosphere:
(a) When conditions in an oil-tank are such in respect of which a naked light certificate has been issued that there is possibility of oil vapour being released from residues or other sources, test shall be carried out by a competent analyst at such intervals, as may be required so as to ensure that the condition in the tank are maintained safe.

(b) Whenever hot work carried on or a naked light, fire or lamp is allowed to be, on the weather deck over spaces, in respect of which a naked light certificate has not been issued all covers of man holes or openings on deck and all valves (except those which are connected to high vent pipes) connecting the weather deck with the said spaces, shall be closed.
(c) A record of all the tests carried out for the purpose of sub-rules (34), (40) and (41) shall be maintained in a register which should furnish the date, time location and results of the tests.
45. Cleaning of oil-tanks:
(a) Subject to the provisions of sub-rule (4), before a test for flammable vapour is carried out with a view to the issue of a naked light certificate for the purposes of sub-rule (40) in respect of an oil-tank on board or in a vessel, that oil-tank shall, since oil was last introduced into the tank, be cleaned and ventilated in accordance with clause (b) of this sub-rule.
(b) The said cleaning and ventilation shall be carried out by the following methods, namely
(i) the oil-tank shall be treated in such a manner and for such period as will ensure the vaporisation of all volatile oil;
(ii) all residual oil on any sludge or other deposition in the oil tank shall be removed therefrom;
(c) After the oil tank has been so cleaned —

i (i) All covers of man-holes and other openings therein shall be removed and it shall be thoroughly ventilated by mechanical or other efficiency means with a view to the removal of all oil vapour; and
ii (ii) The interior surfaces, if any deposit remains thereon, shall be washed or scrapped down.
iii 46. Invalidation of certificates
iv (a) If during the course of work in, or to the surface or, any part of tanker or aircraft carrier, any pipe or tank joint is opened or broken on any other event occurs so that there is a risk of oil vapour entering or arising in that part of the tanker or aircraft carrier, that work shall be suspended thereafter any certificates of entry previously issued in respect of any oil-tank, oil tank in that part and any naked light certificate previously issued in respect of that part shall be no longer in force.
v (b) If (in the case of vessel other than a tanker or an aircraft carrier) during the course of work in any oil-tank or any compartment or space adjacent thereto, any pipe or tank joint is opened or broken or any other event occurs so that, there is a risk of oil vapour entering or arising in the oil tank, or in any compartment or space adjacent thereto shall be suspended and thereafter any certificate of entry previously issued in respect of oil tank and any naked light certificate previously issued in respect of oil-tank or any compartment or space adjacent thereto shall be no longer in force.
vi 47. Provisions as to work in other compartment or spaces:
vii (a) Without prejudice to the other provisions of these rules, if the presence of oil in such quantity and in such position as to be likely to give rise to fire or explosion is detected in any part of a vessel, being a part to which this sub-rule applies and in which repairs of the following kind are to be or are being undertaken, that is to say repairs involving the use of a naked light, fire or lamp (other than a safety lamp of a type approved for the purpose of sub-rule (40), or involving hot work, such repairs shall not be started or continued until a naked light certificate has been issued or, as the case may be, reissued in respect of that part of the vessel).

viii (b) This sub-rule shall apply to bieges, shaft tunnels, pump rooms, lamp rooms, and to compartments and spaces other than those to which clause (a) (iv) of sub-rule (40) applies.

ix 48. Exemptions: If the Chief Inspector is satisfied, by reason of the nature of the work and the circumstances in which it is carried out, that any provisions of sub-rules (33) and (45) or part thereof can be suspended or relaxed without danger to the health or safety of any person, he may grant suspension or relaxation in writing specifying such conditions as he may consider fit. Any such suspension or relaxation may be revoked at any time.

PRECAUTIONS IN USE OF ELECTRICAL ENERGY

1 49. Earthing: Electric energy other than that generated by an independent generating unit on board shall not be taken for use, or used in, or in connection with any of the operations unless the body of the ship is securely earthed in such a manner as to ensure an immediate and safety discharge of energy to the earth. A ship or vessel shall not be considered as securely earthed for the purpose of this rule, only on account of its being partly submerged in water.

2 50. Arc welding:

3 (a) Electric arc welding shall not be carried on in connection with any of the operations unless separate and fully insulated welding return conductor or conductors, as the case may be, of adequate electrical capacity are provided for return of the current to the transformer or generator of the welding set.

4 (b) The return end of source of the welding current shall not be earthed.

5 (c) All work on which welding is carried on shall be securely earthed independently to an earth electrode by means of conductor or conductors, as the case may be, of adequate capacity, unless all such works are connected to any structure of the ship or vessel in such manner as to ensure adequate connection to earth as aforesaid.

6 51. Cutting of energy in certain cases: Electrical energy shall be cut off from all portable electric tools and manual electrode holders within any tank compartment or space referred to in sub-rules (34) and (40) or in any other confined space during all times when such tools or holders are not in operation:

Provided that for determining whether any such portable electric tool or electrode holder is not in operation no account shall be taken of brief interruptions of work occurring during normal working

Provided further that energy may not be cut off from any such equipment if a responsible person is left in charge of it in such tank, compartment or space concerned;

Provided further that cutting of all electrical energy by operation of any switch or control provided on the portable tool or electrodes holder itself should not be taken as fulfilling the requirements of this sub-rule.

MISCELLANEOUS SAFETY PROVISIONS

1 52. Lighting: All parts of a vessel and all other places where the operations are being carried on, and all approaches to such parts and to places to which a worker may be required to proceed in the course of his employment, shall be sufficiently and suitably lighted in providing such lighting, due regard shall be given to avoidance of glare and formation of shadows, to the safety of the vessel and cargo, of the navigation of other vessels, and to any local statutory requirements as to the lighting of the harbour or dock.

1 53. Work in boilers etc.:
2 (a) No work shall be permitted in any boiler, furnace or boiler flue until it has been sufficiently cooled to make work safe for the workers.
3 (b) Before any worker enters any steam boiler which is one of a range of two or more steam boilers,
4 (i) all inlets through which steam or hot water might otherwise enter the boiler from any other part of the range shall be disconnected from that part, or
5 (ii) all valves or taps controlling such entry shall be closed and securely locked.
6 (c) While workers remain in any steam boiler to which clause (b) of this sub-rule applies all such inlets as are referred to in that clause shall remain disconnected or all such valves or taps as are therein referred to shall remain closed and securely locked.
7 (d) No worker shall be allowed or required to enter or remain in, and no person shall enter or remain, in any steam boiler to which clause (b) of this sub-rule applies unless the provisions of that clause are being complied with.
8 54. Hatch beams: The hatch beams of any hatch in use for the options shall, if not removed be adequately secured to prevent their displacement.
9 55. Jumped-up bolts. Bolts which have been jumped-up and rescrewed shall not be used for securing plates on the sides of vessels, and no worker shall use such bolts for this purpose.
10 56. Work in or on life boats:
11 (a) Before workers are permitted to work in or on any life boat, either stowed or in suspended positions, precautions shall be taken to prevent the boat from falling due to accidental tripping of the releasing gear or movement of the davits and capsizing of the boat if in chocks.
12 (b) Workers shall not be permitted to remain in fire boats while the life boats are being hoisted into final stowed position.

PROTECTIVE WEAR

1 57. Hand protection: Adequate protection for the hands shall be available for all workers when using cutting or welding apparatus to which oxygen or any flammable gas vapour is supplied a pressure greater than atmospheric pressure or when engaged in machine caulking or machine riveting or on transporting or stackling plate or in handling plates at machines.
2 58. Protection in connection with cutting or welding
3 (a) Suitable goggles fitted with tinted eye-pieces shall be provided and maintained for all persons employed when using cutting or welding apparatus to which

oxygen or any flammable gas or vapour is supplied at a pressure above atmospheric pressure:
(b) There shall be provided and maintained for the use of all persons employed when engaged in the process of electric welding
(i) suitable helmets or suitable head shields or suitable hand shields to protect the eyes and face from hot metal and from rays likely to be injurious; and
(ii) suitable gauntlets to protect the hands fore-arms from hot metal and from rays likely to be injurious.

(c) When electric welding is in progress at any place and persons other than those engaged in that process are employed in a position where the rays are likely to be injurious to their eyes, screens shall, whenever practicable, be provided at that place for the protection of those persons. Where it is not practicable to provide effective protection of these persons by screening, suitable goggles shall be provided for their use.
59. Eye protection for other processes: Suitable goggles of effective screens shall be provided to protect the eyes of all workers in any of the following processes:
(a) the cutting out or cutting off of cold rivets bolts from boilers or other plant or form ships;
(b) the chipping, scaling or scurfing or boiler or ship's plates
(c) drilling by means of portable machine tools;
(d) dry grinding of metals.
60. Head Protection: When workers are employed in areas where there is danger of falling objects they shall be provided with suitable safety helmets.

1 61. Safety belts and life lines
2 (a) Whenever any worker is engaged on work at place from which he is liable to fall more than 2 m. he shall be provided with safety belts equipped with life lines which are secured with a minimum of slack, to a fixed structure unless any other effective means such as provision of guard rails or ropes are taken to prevent his falling.
3 (b) All safety belts and life lines shall be examined at frequent intervals by a competent person to ensure that no belt or life line which is not in good condition is used.

HEALTH AND WELFARE

1 62. Prohibition of employment of young persons in certain processes: Employment of young persons are prohibited in the following processes namely
2 (a) the application of asbestos by means of a spray; or
3 (b) the breaking down for removal of asbestos lagging; or
4 (c) the cleaning of socks or other container which have contained asbestos; or
5 (d) the cutting of material containing asbestos by means of portable power driven saws; or
6 (e) the scaling, surfing or cleaning of boilers, combustion chambers or smoke boxes where his work exposes him to dust of such a character and to such an extent as to be likely to be injurious or offensive to persons employed in such work.
7 63. Lead Processes:
8 (a) Lead paint shall not be applied in the form of a spray in the interior painting of any part of a ship or vessel.
9 (b) Wherever lead sheathing work is carried on for making cold storage chambers in the ships, efficient exhaust draughts with portable extractors should be provided to remove the lead fumes from the confined spaces.
10 64. Stretchers' ambulances and ambulances rooms etc.:
11 (a) In every shipyard there shall be provided and kept readily available
12 (i) a sufficient number of suitably constructed sling stretchers or other similar appliances for raising injured persons;

13 (ii) a sufficient number of carrying or wheel stretchers; and
14 (iii) a sufficient supply of suitable reviving apparatus and oxygen, and the stretchers and appliances and apparatus so provided shall be properly maintained.
15 (b) In every shipyard there shall always be readily available during working hours responsible person or responsible persons whose duty it is to summon an ambulance or other means of transport if needed in cases of accident or illness. Legible copies of a notice indicating that person or, as the case may be, those persons shall be affixed in prominent positions in every shipyard.
16 (c) In every shipyard other than a dry dock available for hire
17 (i) in which the number of persons employed normally exceeds five hundred; or
18 (ii) in which the number of persons employed normally exceeds one hundred and which is more than ten miles from a hospital;

there shall be provided and maintained in good order and in clean condition a properly constructed ambulance room containing at least the equipment prescribed by the rules framed under Section 45 of the Act.

The room shall be used only for the purpose of treatment and rest and shall be in the charge of a suitably qualified person who shall always be readily available during working hours, and record shall be kept of all cases of accident or sickness treated at the room.
1 65. Young persons:
2 (a) No young person shall, until he was employed in a shipyard or shipyards for at least six months be employed in connection with the operations in a shipyard on a stage from which, or in any part of a ship where he is liable to fall a distance of more than 2 m. or into water in which there is a risk of drowning.
3 (b) Any young person under the age of sixteen shall, when employed in the operations in shipyard, be placed under the charge of an experienced workman.
4 66. Safety supervision: In the case of every shipyard other than a dry dock available for hire being a shipyard where the number of workers regularly or from time to time, exceeds five hundred, a person experienced in the work of such yards shall be appointed and employed exclusively to exercise general supervision of the observance of these sub-rules and to promote the safe conduct of the work generally.

61-H
The occupier of a factory employing 100 or more workers shall plant and maintain trees within the precinct of the factory. The number, type and lay-out of trees should be approved by the District Forest Officer concerned or any qualified horticulturist].
61-I. Reaction Vessels and Kettles
1 (1) This rule applies to reaction vessels and kettles, hereinafter referred to as reaction vessels, which normally work at a pressure not above the atmospheric pressure but in which there is likelihood of pressure being created above the atmospheric pressure either due to reaction getting out of control or due to any other circumstances.
2 (2) In the event of the vessel being heated by electrical means, suitable thermostatic control devices shall be provided to prevent the temperature exceeding the safety limit.

3 (3) Where steam is used for heating purposes in a reaction vessel, it shall pass through a suitable pressure reducing valve or any other suitable automatic device to prevent escape of excessive steam into the vessel so that the maximum permissible pressure of steam only is allowed into the supply line itself.

4 (4) Suitable safety valve or rupture disc of adequate size and capacity shall be provided to effectively prevent the pressure being built up in the reaction vessel beyond the safety limit. Effective arrangements shall be made to ensure that the released gases, fumes, vapours, liquids or dust, as the case may be, are lead away and disposed of through suitable pipes without causing any hazard. Where flammable gases or vapours are likely to be vented out as discharge from the vessel, it shall be provided with a flame arrestor.

1 (5) Every reaction vessel shall be provided with a pressure gauge having the appropriated range.

2 (6) In addition to the devices as mentioned in the foregoing provisions there shall also be provided means or devices for automatically stopping the feed into the vessel as soon as process conditions excessively deviate from the normal limits and which deviation can be considered to be dangerous.

3 (7) Where necessary, an effective system for cooling, flooding or blanketing shall be provided, for the purpose of controlling the reaction and process conditions within the safe limits of temperature and pressure

4 (8) An automatic auditory and visual warning device, shall also be provided for clear warning whenever process conditions exceed the normal limits. This device, wherever possible, shall be integrated with automatic process correction systems.

5 (9) A notice pointing out the possible circumstances and conditions under which pressures above atmospheric pressure may be built up in the reaction vessel, the dangers involved and the precautions to be taken by the operators shall be displayed clearly at a conspicuous place near the vessel which always shall be in a visible condition.]

[107][61-J. Examination of eye sight of certain workers

1 (1) No person shall be employed to operate a crane, locomotive or work-lift truck, or to give signals to a crane or locomotive operator unless his eye sight and colour vision have been examined and declared fit by a qualified ophthalmologist to work whether with or without the use of corrective glasses.

2 (2) The eye sight and colour vision of the person employed as referred to in clause (i) shall be examined at least once in every period of 12 months up to the age of 45 years and once in every 6 months beyond that age.

3 (3) Any fee payable for an examination of a person under this sub-rule shall be paid by the occupier shall not be recoverable from that person.

4 (4) The record of examination or re-examination carried out as required under sub-rule (1) shall be maintained in Form No.8 C.

FORM NO. 8-C
RECORD OF EYE EXAMINATION

Serial Number	Department works	Name of Worker	Sex	Age (on last Birth day)
1	2	3	4	5

Occupation		Examination of eye sight	Signature of Ophthalmologist		Remarks
Nature		Date of employment	Date		Result
6	7	8	9	10	11

108[61-K. Railways in factories

1 (1) This rule shall apply to railways in the precincts of a factory which are not subject to Indian Railways Act, 1890.

2 (2) Gateways: A gateway through which a railway track passes shall not be used for the general passage of workers into or out of a factory.

3 (3) Barriers and Turngates:

4 (a) Where buildings or walls contain doors or gates which open to a railway tract, a barrier about 1-metre-high shall be fixed parallel to and about 60 cm. away from the building or wall outside the opening and extending several feet beyond it at other end, so that any person passing out may become aware of an approaching train when his pace is checked at the barrier.

If the traffic on the nearest track is all in one direction, the barrier shall be in the form of an" L" with end of the short leg abutting on to the wall and the other end opening towards the approaching train;

(b) If the distance between wall and track cannot be made to accommodate such a barrier, the barrier of a turn gate shall be placed at the inside of the opening; and

(c) Where a footway passes close to a building or other obstructions as it approaches a railway track, a barrier or a turn gate shall be fixed in such a manner that a person approaching the track is compelled to move away from the building or obstruction and thus obtain timely sight of an approaching locomotive or wagon.

(4) Crowds:

(a) Worker's pay-windows, first-aid stations and other points where a crowd may collect shall not be placed near a railway track; and

(b) At any time of the day when workers are starting or ending work all railway traffic shall cease for not less than five minutes.

(5) Locomotive:

(a) No locomotive shall be used in shunting operations unless it is in good working order;

(b) Every locomotive and tender shall be provided with efficient breaks, all of which shall be maintained in good working order. Brake shoes shall be examined at suitably fixed intervals and those that are worn out replaced at once;
(c) Water-gauge glasses or every locomotive whatever its boiler pressure, shall be protected with substantial glass or metal screens;
(d) Suitable steps and hand-holds shall be provided at the corners of the locomotive for the use of shunters;
(e) Every locomotive crane shall be provided with lifting and jacking pads at the four corners of the locomotive for assisting in re-railing operations; and
(f) It shall be clearly indicated on every locomotive crane in English and in language understood by the majority of the workers in the factory, for what weight of load and at what reading the crane is safe.
(6) Wagons:
(a) Every wagon (and passenger coach, if any) shall be provided either with self-acting brakes capable of being applied continuously or with efficient hand brakes which shall be maintained in good working order. The hand brakes shall be capable of being applied by co-person on the ground and fitted with a device for retaining them in the applied Position;
(b) No wagon shall be kept standing within three metres of any authorised crossing; and
(c) No wagon shall be removed with the help of crow bars or pinch bars.
(7) Riding on locomotive wagon or other rolling stock: No person shall be permitted to be upon (whether inside or outside) any locomotive wagon or after rolling stock except where secure foot-hold and handhold are provided.
(8) Attention to brakes and doors:
(a) No locomotive, wagon or other rolling stock shall be kept standing unless its brakes are firmly applied and, where it is on a gradient, without sufficient number of properly constructed scotches placed firmly in Position; and
(b) No train shall be set in motion until the shunting jamadar has satisfied himself that all wagon doors are securely fastened.
(9) Projecting loads and cranes:
(a) If the load on a wagon projects beyond its length, a guard or dummy- truck shall be used beneath the projection;
(b) No loco-crane shall travel without lead unless the jib is completely lowered and positioned in line with the track and;
(c) when it is necessary for a loco-crane to travel with a load, the jib shall not be swung until the loco-crane has come to rest.

1 (10) Loose shunting: Loose-shunting shall be permitted only when it cannot be avoided. It shall never be performed on a wagon not accompanied by a man capable of applying and pinning down the brakes. A wagon not provided with brakes in good working order and capable of being easily pinned down shall not be loose-shunted unless attached to it at least another wagon with such brakes. Loose-shunting shall not be performed with, or against a wagon containing passengers, live-stock or explosives.
2 (11) Fly-shunting: Fly-shunting shall not be permitted on any factory railway.
3 (12) The shunting Jamadar:

4 (a) Every locomotive or wagon in motion in a factory shall be kept under the control of a well-trained jamadar; and
5 (b) Before authorising a locomotive or wagon to be moved, the shunting jamadar shall satisfy himself that no person is under or in between or in front of the locomotive or wagon.
6 (13) Hand Signals: The hand signals used by the shunting jamadar in day and night shall be those prescribed by the shunting rules of railways, working under the Indian Railway Act 1890 (IX of 1890).
7 (14) Night work and fog:
8 (a) In factories, where persons work at night, no movement of locomotive, wagon or other rolling stock otherwise than by hand shall be permitted between sunset and sunrise unless the tracks and their vicinity are lighted on a scale of not less than 10 lux as measured at the horizontal plane at the ground level; and
9 (b) In no circumstances any locomotive or train shall be moved between sunset and sunrise or at any time when there is fog, unless it carries a white head light and a red rear light.
10 (15) Speed control:
11 (a) A locomotive or train shall not be permitted to move at a speed greater than seven kilometres per hour; and
12 (b) A train, locomotive, wagon or other rolling stock shall not be moved by mechanical or electrical power unless it is preceded at a distance of not less than 10 metres during the whole of its journey by shunting jamadar. He shall be provided with a signalling flags or lamp and whistle necessary for calling the attention of the driver.
13 (16) Tracks:
14 (a) The distance (i) between tracks and (ii) between tracks and buildings, blind walls or other structures and (iii) tracks and materials deposited on the ground shall be respectively not less than

(aa) from centre to centre of parallel tracks, the overall width of the widest wagon of that gauge plus twice the width of the door of such a wagon when opened directly outward plus 1 metre;
(bb) from a building or structure other than a loading platform to the centre of the nearest track, half the overall width of the widest wagon of that gauge, plus the width of its door when opened outward, plus 1.5 metres ; and
(cc) from material stacked or deposited alongside the track, on the ground or on a loading platform, to the centre of the nearest track, half the overall width of the widest wagon of that gauge, plus half the width of its door when opened directly outward, plus 1 metre.
(b) Sleepers of a track shall be in level with of the ground and at all crossings of the track with a road or walkway, the surface of the road or walkway shall be in level with the top of the rails
(c) All track ends shall be equipped with buffer stops of adequate strength;
(d) Barriers of substantial construction shall be securely and permanently fixed across any doorway or gateway in a building or in a wall which conceals an approaching trade from view, between the building and the track as prescribed in clause (a) of sub-rule (3).
(e) Where track is carried on a gantry or other elevation, a safe footway or footways with hand rails and toe-boards shall be provided at all positions where persons work or pass on foot, and where there is an opening in the stage of an elevated track for the dropping of materials to a

lower level, the position shall be adequately fenced or the opening itself provided with a grill through which a person cannot fall;
(f) All point levers shall have their movements parallel, to, not across, the direction of the track;
(g) All loading platforms which are more than 60 cms above the level of the ground on which the track is laid and more than 15 metres in length, shall be provided with stops at intervals not greater than 15 metres apart from to enable the platform to be easily mounted from the track;
(h) Turn tables on plant railways shall be provided with locking devices which will prevent the tables from turning while locomotives or wagon are being run on or off the tables; and
(i) workers shall be prohibited from passing under, between or above railway wagons.
(17) Crossings:
(a) At all crossings of a track with a road or walk way, danger or crossing signs and wherever reasonably practicable, blinking lights or alarm lights shall be provided, at all important crossings, gates or barriers manned by watchman

shall be provided. Swinging gate and barriers shall be secured against inadvertent opening or closing.]

[109]**[61-L. Quality of personal protective equipment**
All personal protective equipment provided to workers as required under any of the provisions of the Act or the Rule shall have certification of B.I.S. or any other national standard of Advanced countries in case B.I.S. has not standard.]
[110] **[61-M. Thermic Fluid Heaters**
1 (1) All heaters shall be on such construction that coils are removable for periodic cleaning, visual inspection and hydraulic test. FACTORIES RULES, 1950 [R—61M
2 (2) Suitable arrangement shall be made for cooling furnace effectively in case of failure.
3 (3) Before restarting the furnace, it shall be effectively purged.
4 (4) Velocity of flow of thermic fluid shall not be allowed to fall below the minimum recommended by the manufacturers while the heater is in operation.
5 (5) The thermic fluid shall be circulated in a closed circuit formation with an expansion cum deaerator tank. This tank shall be located outside the shed where the heater is installed.
6 (6) Every heater shall be provided with a photo-resister actuated audio- visual alarm indicate flame failure and automatic burner cut off.
7 (7) The stack temperature motor-cum-controller with audio visual alarm shall be provided so as to warn the operator in case the outlet temperature exceeds the specified mm.
8 (8) Where inspection doors are provided on the furnace they shall be interlocked with the burner itself so that they cannot be opened until burner is shut off and furnace is cooled sufficient.
9 (9) All heaters shall also be provided with the following safety devices:
10 (i) level control in the expansion tank;
11 (ii) temperature control of thermic fluid;
12 (iii) differential pressure switch on the out let line of the heater tubes and
13 (iv) temperature control device for the fuel oil supply the burner.

14 (10) All devices mentioned in paragraph 9 shall have interlocking arrangement with burner so that in case of any predetermined limits being crossed the supply of fuel and air to burner shall automatically be cut-off.
15 (11) All safety interlocks when operated shall be indicated on the control panel of the heater by a suitable audio-visual alarm.
16 (12) Every heater unit shall be provided as a standard necessary an arrangement for sniffing with low pressure steam or nitrogen for putting out the fire.

1 (13) Electric panel for the heater shall be located near the heater but not so close as to be exposed to spilling or leaking oil.
2 (14) The heater shall be located in a place partitioned off with fire proof material from other manufacturing activities.
3 (15) Explosion vent shall be so installed that release takes place at safe location.
4 (16) The heater coil shall be subjected to pressure test by competent person once at least in every 12 months. This test pressure shall not be less than twice the operating pressure.
5 (17) if repairs are carried out to the coil, it shall be tested before taking it into use.
6 (18) The thermic fluid shall confirm to the specifications prescribed by the manufacturers and shall be tested by competent person for suitability at least once in every three months' period. Such test shall include test for acidity, suspended matter, ash contents, viscosity and flash point.
7 (19) Cleaning of internal surface of the heater or soot and check-up of refractory surface on the inside shall be carried out every month or as often as required depending upon working conditions. The coils shall be removed and surface of the coils cleaned thoroughly once at least in a period of six months. The nozzles of filters and pumps shall be cleaned once a week during the period of use.
8 (20) A separate register containing the following information shall be maintained:
9 (i) Weekly checks carried out confirming the effectiveness of the interlock;
10 (ii) Weekly checks confirming that all accessories are in goof state of repairs; and
11 (iii) information regarding fuel oil temperature, pressure thermic fluid inlet/outlet pressure and temperature fuel gas temperature recorded at hourly interval.
12 (21) The heater when in operation shall always be kept in charge of a trained operator.

61-N. Protective equipment
The inspector may be having regard to the nature of the hazards involved in work and process being carried out, order the Occupier of the Manager in writing to supply to the workers exposed to particular hazard any personal protective equipment as may be found necessary.
61-O. Oven and Driers
1 (1) Application: This rule shall apply to ovens and driers, except those used in laboratories or kitchens of any establishment and those which has a capacity below 325 litres.
2 (2) Definitions: For the purpose of this rule, "oven or drier means any enclosed structure, receptacle, compartment or box which is used for baking, drying or otherwise processing of any article or substance at a temperature higher than the ambient temperature of the air in the room or space in which a flammable or explosive mixture of air and a flammable substance, is likely to be evolved within the enclosed structure

1 receptacle, compartment or box or part thereof on account of the article or substance which is baked, dried or otherwise processed within it:
2 (3) Separate electrical connection: Electrical power supplied to every oven or drier shall be by means of a separate circuit provided with an isolation switch.
3 (4) Design, construction, examination and testing:
4 (a) Every oven or drier shall be properly designed on sound engineering practice and be of good construction, sound materials and adequate strength, from any patent defects and safe if properly used.
5 (b) No oven or drier shall be taken into use in factory for the first time unless a competent person has thoroughly examined all its parts and carried out the tests as are required to establish that the necessary safe Systems and controls provided for safety in operation for the processes for which it is to be used and a certificate of such examination and tests signed by that competent person has been obtained and is kept available for inspection.
6 (c) All parts of an oven or drier which has undergone any alteration or repair which has to effect of modifying any of the design characteristics shall not be used unless a thorough examination and tests as have been mentioned in clause (1) has been carried out by a competent person and a certificate of such examination and tests signed by that competent person has been obtained and is kept available for inspection.
7 (5) Safety ventilation:
8 (a) Every oven or drier shall be provided with a positive and effective safety ventilation system using one or more motor-driven centrifugal fans so as to dilute any mixture of air and any flammable substance that may be formed within the oven or drier and maintain the concentration of the flammable substance in the air at a safe level of dilute.
9 (b) The safe level of dilution referred to in clause (a) shall be so as to achieve a concentration of the concerned flammable substance in air of not more than 25 per cent of its lower explosive limit:

Provided that a level of concentration in air up to 50 per cent of the lower explosive limit of the concerned flammable substance may be permitted to exist subject to installation and maintenance of an automatic device which
i (i) shows continuously the concentration of the flammable substance in air present in the oven or drier at any instant;
ii (ii) sounds an alarm when the concentration of the flammable substance in air in any part of the oven or drier reaches a level of 50 per cent of its lower explosive limit; and
iii (iii) Shuts down the heating system of the oven or drier automatically when the concentration in air of the flammable substance in any part of the

i oven or drier reaches a level of 60 per cent of its lower explosive limit, is provided to the oven or drier and maintained in efficient working condition.
ii (c) No oven or drier shall be operated without its safety ventilation system working in an efficient manner.
iii (d) No oven or drier shall be operated with a level of dilution less than what is referred to in clause (b).

iv (e) Exhaust ducts of safety ventilation systems should be so designed and placed that their ducts discharge the mixture of air and flammable substance away from the workrooms and not near windows or doors or other openings from where the mixture could re-enter the workrooms.

v (f) The fresh air admitted into the oven or drier by means of the safety ventilation system shall be circulated adequately by means of circulating fan or fans through all parts of the oven or drier so as to ensure that there are no locations where the flammable substance can accumulate in the air or become pocketed to any dangerous degree.

vi (g) Throttling dampers in any safety ventilation system should be so designed by cutting away a portion of the damper or otherwise, that the system will handle at least the minimum ventilation rate required for safety when they are set in their maximum throttling position.

vii (6) Explosion panels:

viii (a) Every oven or drier having an internal total space of not less than half cubic meter shall be provided with suitably designed explosion panels so as to allow release of the pressure of any possible explosion within the oven or drier through explosion vents. The area of openings to be provided by means of such vents together with area of openings of any access doors which are provided with suitable arrangements for their release in case of an explosion shall be not less than 2200 square centimetre for every one cubic meter of volume of the oven or drier. The design of the explosion panels and doors as above said shall be much as to secure the complete release under the internal pressure of 0.25 Kg. per square centimetre.

ix (b) The explosion releasing panels, shall as far as practicable, be situated at the roof of the oven or drier or at those portion of the walls where persons not remain in connection with operation of the oven or drier.

x (7) Interlocking arrangements:

xi (a) In each oven or drier efficient inter-locking arrangements shall be provided and maintained to ensure that

xii (i) all ventilating fans and circulating fans whose failure would adversely affect the ventilation rate or flow pattern are in operations before any

i mechanical conveyor that may be provided for feeding the articles to be processed in the oven or drier is put into operation.

ii (ii) failure of any of the ventilating or circulating fans will automatically stop any conveyor as referred to in clause (i) as may be provided, as well as stop the fuel supply by closing the shut off valve and shut off the ignition in the case of gas or oil fired oven and in the case of electrically heated ovens switch off the electrical supply to the heaters.

iii (iii) the above said mechanical conveyor is set in operation before the above said, shut off valve can be energized; and

iv (iv) the failure of the above said conveyor will automatically close and above said shut off value in the case of ovens and driers heated by gas, oil or steam and reactivate the ignition system, or cut off the electrical heaters in the case of electrically heated ovens or furnaces.

v (8) Automatic pre-ventilation: Every oven or drier heated by oil, steam, gas or electricity shall be provided with an efficient arrangement for automatic preventilation consisting of at least 3 volume changes with fresh air by operation of the safety ventilation fans and the circulating fans (if used) so as to effect purging of the oven or drier of any mixture of air and a

flammable substance before the heating system can be activated and before the conveyor can be placed in position.

vi (9) Temperature Control: Every oven or drier shall be provided with an automatic arrangement to ensure that the temperature within does not exceed a safe upper present limit to be decided in respect of the particular processing being carried on.

vii (10) Multistage processes: Wherever materials are to be processed in ovens or driers in successive operations, suitable arrangements should be provided to ensure that the operating temperatures necessary for safe operation at each stage are maintained within the design limits.

viii (11) Combustible substances not to drip on electrical heaters or burners flame: Effective arrangements shall be provided in every oven or drier to prevent dripping of combustible substances on electric heaters or burner flame used for heating.

ix (12) Periodical examination testing and maintenance:

x (a) All parts of every oven and drier shall be properly maintained and thoroughly examined and the various control as mentioned in this rule and the working of the oven or drier tested at frequent intervals to ensure its safe operation by a responsible person designated by the Occupier or manager, who by his experience and knowledge of necessary precautions against risks of explosion is fit to undertake such work.

xi (b) A register shall be maintained in which the details of the various tests carried out from time to time under clause (a) shall be entered and every entry made shall be signed by the person making the tests.

1 (13) Training of operators: No person shall be assigned any task connected with operation of any oven or drier unless he has completed 18 years of age and he is properly trained.

2 (14) Polymerising machines.

3 (a) Printed fabric shall be thoroughly dried by passing them over drying cans or through hot flue or other equally effective means, before the same is allowed to pass through polymerising machines.

4 (b) Infrared ray heaters of polymerising machines shall be cut off while running the prints

111[CHAPTER IV(A)

61(S.G) A. Safety Committee

1 (1) In every factory

2 (a) Working with the aid of power, wherein 100 or more workers are ordinarily employed;

3 (b) Which carries on any process or operation declared to be dangerous under Section 87 of the act; or

4 (c) Which carries on ‘hazardous process’ as defined under Section 2(cb) of the Act.

there shall be a safety committee.

1 (2) The representatives of the management on safety committee shall include-

2 (a) A senior official, who by his position in the organisation can contribute effectively to the functioning of the committee shall be the Chairman.
3 (b) A safety officer and a factory Medical Officer, wherever available and the safety officer in such a case shall be the Secretary of the Committee.
4 (c) A representative each from the production, maintenance and purchase departments.
5 (3) The worker's representatives on this committee shall be nominated from their worker members by the recognised or else trade union or where such Trade Union is not in existence, the representatives shall be elected by the workers directly.
6 (4) The tenure of the committee shall be co-terminus with the tenure of the Trade Union or two years where there is no Trade Union.
7 (5) Safety Committee shall meet as often as necessary but at least once in every quarter. The minutes of the meeting shall be recorded and produced to the Inspector on demand.
8 (6) Safety committee shall have the right to be adequately and suitably informed of
9 (a) Potential safety and health hazards to which the workers may be exposed at workplace.

(b) data on accidents as well as data resulting from surveillance of the working environment and of the health of workers exposed to hazardous substances so far as the factory is concerned

Provided that the committee undertakes to use the data on a confidential basis and solely to provide guidance and advice on measures to improve the working environment and the health and safety of the workers.
1 (7) Function and duties of the Safety committee shall include
2 (a) Assisting and co-operating with the management in achieving the aims and objectives outlined in the 'Health and Safety Policy' of the occupier;
3 (b) dealing with all matters concerning health; safety and environment and to arrive at practicable solutions to problems encountered;
4 (c) creating safety awareness amongst all workers
5 (d) undertaking educational, training and promotional activities;
6 (e) discussing reports on safety, environmental and occupational health surveys, safety audits, risk assessment, emergency and disaster management plans and implementation of the recommendations made in the reports
7 (f) carrying out health and safety surveys and identify' causes of accidents;
8 (g) looking into any complaint made on the likelihood of an imminent danger to the safety and health of the workers and suggest corrective measures; and
9 (h) reviewing the implementation of the recommendations made by it.
10 (8) Where owing to the size of the factory, or any other reasons the functions referred to in sub rule (7) cannot be effectively carried out by the Safety Committee, it may establish subcommittees as may be required to assist it.

61.(S.A) A: Site appraisal Committee
1 (1) Constitution: The following provisions shall govern the functioning of the Site appraisal committee, hereinafter, be referred to as the 'Committee' in these rules:

2 (a) The State Government may constitute a site Appraisal Committee and reconstitute the Committee as and when necessary;
3 (b) The State Government may appoint a senior official of the Factories Inspectorate, preferably with qualification in Chemical Engineering to be the Secretary of the Committee;
4 (c) The State Government may appoint the following as members of the Committee:
5 (i) a representative of the Fire Service Organisation of the State Government;
6 (ii) a representative of the State Department of Industries

i (iii) A representative of the Director General of Factory Advice Service and Labour Institutes, Bombay.
ii (2) No member, unless required to do so by a Court of Law, shall disclose otherwise than in connection with the purpose of the Act, at any time any information relating to manufacturing or commercial business or any working process which may come to his knowledge during the tenure as a Member on this Committee.
iii (3) Applications for appraisal of sites
iv (a) Application for appraisal of sites in respect of the factories covered under section 2 (cb) of the Act shall be submitted to the Chairman of the Site Appraisal Committee.
v (b) The application for site appraisal along with 15 copies thereof shall be submitted in the Form annexed to this Rule. The Committee may dispense with furnishing information on any particular item in the application form if it considers the same may not be relevant to the application under consideration.

1 (4) Function of the Committee
2 (a) The Secretary shall arrange to register the applications received for appraisal of site in a separate register and acknowledge the same within a period of 7 days.
3 (b) The Secretary shall fix up meeting in such a manner that all the applications received and registered and referred to the committee within a period of one month from that of their receipt.
4 (c) The committee may adopt a procedure for its working keeping in view of the need for expeditious disposal of application.
5 (d) The committee shall examine the application for appraisal of a site with reference to the prohibitions and restriction on the location of industry and the carrying on of process and operations in different areas as per the provisions of Rule 5 of the Environment (protection) Rules, 1986 framed under Environment Protection Act, 1986.
6 (e) The committee may call for documents, examine experts, inspect the site if necessary and take other steps for formulating its views in regard to the suitability of the site.
7 (f) Wherever the proposed site requires clearance by the Ministry of Industry or the Ministry of Environment and Forests, the application for site Appraisal will be considered by the Site appraisal committee only after such clearance has been received.

FORMAT OF APPLICATION TO THE SITE APPRAISAL COMMITTEE

1 1. Name and address of the applicant:
2 2. Site Ownership Data:

3 (1) Revenue details of site such as

Survey No.
Plot No. etc.
1 (2) Whether the site is classified as forest and if so, whether approval of the Central Govt., under section 5 of the Indian Forests Act, 1927 has been taken.
2 (3) Whether the proposed site attracts the provisions of section 3 (2) (v) of the E.P. Act, 1986, if so, the nature of the restrictions.
3 (4) Local authority under whose jurisdiction the site is located.
4 3. Site Plan:
5 (1) Site plan with clear identification of boundaries and total area proposed to be occupied and showing the following details nearby the proposed site.
6 (a) Historical monuments, if any, in the vicinity.
7 (b) Names of neighbouring manufacturing units and human habitats, educational and training institutions, petrol installations, storages of LPG and other hazardous substances in the vicinity and their distance from the proposed unit.
8 (c) Water sources (rivers, streams, canals, dams, water filtration plants, etc.) in the vicinity.
9 (d) Nearest hospitals, fire-stations, civil defence stations and police station and their distances.
10 (e) High tension electrical transmission lines, pipe lines for water, oil gas or sewerage, railway lines, roads, stations: jetties and other similar installations.
11 (2) Details of spill conditions and depth at which hard strata obtained.
12 (3) Contour map of the area showing nearby hillocks and difference in levels.
13 (4) Plot Plan of the factory showing the entry and exit points, reads within, water drains, etc.
14 4. Project Report:
15 (1) A summary of the salient features of the Project
16 (2) Status of the organisation (Govt. Semi-Govt.) Public or Private etc.).
17 (3) Maximum number of persons likely to be working in the factory
18 (4) Maximum amount of power and water requirements and source of their supply.

1 (5) Block diagram of the buildings and installations, in the proposed supply.
2 (6) Details of housing colony, hospital, school and other infrastructural facilities proposed.
3 5. Organisation structure of the proposed Manufacturing Unit! Factory
4 (1) Organisation diagrams of - proposed enterprise in general - Health, Safety and Environment protection departments and their linkage to operation and technical departments
5 (2) Proposed health and Safety Policy
6 (3) Area allocated for treatment of wastes and effluent.
7 (4) Percentage outlay on safety, health and environment protection measures.
8 6. Meteorological data relating to the site:
9 (1) Average, minimum and Maximum of - Temperature - Humidity - Wind velocities during the previous ten years. so far

10 (2) Seasonal variations of wind direction
11 (3) Highest water level reached during the floods in the area recorded so far
12 (4) Lightening and seismic data of the area
13 7. Communication link.
14 (1) Availability of Telephone/Telex] Wireless and other communication facilities for outside communication
15 (2) Internal communication facilities proposed.
16 8. Manufacturing Process Information
17 (1) Process flow diagram
18 (2) Brief write up on process and technology
19 (3) Critical process parameters such as pressure build-up temperature else and runaway reactions.
20 (4) Other external effects critical to the process having safety implications, such as ingress of moisture of water, contact with incompatible substances, sudden power failure.
21 (5) Highlights of the built in safety pollution control devices or measures! incorporated in the manufacturing technology.
22 9. Information of Hazardous Materials:
23 (1) Raw materials, intermediates, products and by-products and their quantities (Enclose Material Safety Data Sheet in respect of each hazardous substance).

1 (2) Main and intermediate storage proposed for raw materials / intermediates/products/by-products (Maximum quantities to be stored at any time).
2 (3) Transportation methods to be used for materials inflow and outflow, their quantities and likely routes to be followed.
3 (4) Safety measures proposed for:

- handling of materials
- internal and external transportation; and
- disposal (packing and forwarding of finished products)

1 10. Information on disposal/Disposal of wastes and Pollutants:
2 (1) Major pollutants (gas, liquid, solid) their characteristics arid quantities (average and at peak loads).
3 (2) Quality and quantity of solid wastes generated, method of their treatment and disposal.
4 (3) Air, Water and solid pollution problems anticipated and the proposed measures to control the same including treatment and disposal of effluents.
5 11. Process Hazards Information
6 (1) Enclose a copy of the report on environmental in space assessment.
7 (2) Enclosed a copy of the report on Risk Assessment Study.
8 (3) Published (open or classified) reports, if any, on accident situations! occupational health hazards or similar plants elsewhere (within or outside the country).
9 12. Information of proposed safety and occupational HEALTH Measures:
10 (1) Details of firefighting facilities and minimum quantity of Water, Co2 and or other firefighting measures needed to meet the emergencies.

11 (2) Details of in-house medical facilities proposed.
12 13. Information on Emergency Preparedness:
13 (1) On site emergency plan.
14 (2) Proposed arrangements, if any, for mutual aid scheme with the group of neighbouring factories.
15 14. Any other relevant information: I certify that the information furnished above is correct to best of my knowledge and nothing of importance has been concealed while furnishing it.

Name and signature of the Applicant

61 (SB) A. Health and Safety Policy

1 (1) Occupier of every factory, except as provided for in sub-rule (2) shall prepare a written statement of his policy in respect of health and safety of workers at work.
2 (2) All factories
3 (a) Covered under section 2(m) (i) but employing less than 100 workers
4 (b) and the following categories of factories;
5 (i) Khandasari Sugar factories
6 (ii) Cotton ginning and pressing factories;
7 (iii) Tobacco redrying factories
8 (iv) Fruit processing units;
9 (v) Salt factories are exempted from requirements of sub-rule (1)

Provided that they are not covered in the First Schedule under Section 2 (cb) or carrying out processes or operations declared to be dangerous under section 87 of the Act.
1 (3) Notwithstanding anything contained in Sub-rule (2) the Chief Inspector may require the occupiers of any, of the factories or class description of factories to comply with the requirements of sub-rule (1) if, in his opinion, it is expedient to do so.
2 (4) The Health and Safety Policy should contain or deal with;
3 (a) declared intention and commitment of the top management to health, safety and environment and compliance with their relevant statutory requirements;
4 (b) arrangements, for making the policy effective.
5 (5) In particular, the policy should specify the following
6 (a) arrangements for involving the workers;
7 (b) intentions of taking into account the health and safety performance of individuals at different levels while considering their career advancement;
8 (c) fixing the responsibility of the contractors, sub-contractors transporters and other agencies entering the premises;
9 (d) providing a resume of health and safety performance of the factory in its Annual Report;
10 (e) relevant techniques and methods, such as safety audits and risk assessment for periodical assessment of the status on health, safety and environment and taking all the remedial measures;

11 (f) stating its intentions to integrate health and safety in all decisions including those dealing with purchase of plant, equipment, machinery and material as well as selection and placement of personnel;

(g) arrangements for informing, educating and training and retraining its own employees at different levels and the public, wherever required.
(6) A copy of the declared Health and Safety policy signed by the occupier shall be made available to the Inspector having jurisdiction over the Factory and to the Chief Inspector.
(7) The policy shall be made widely known by
(a) making copies available to all workers including contract workers, apprentices, transport workers, suppliers, etc.;
(b) displaying copies of the policy at conspicuous places; and
(c) any other means of communication; in a language understood by majority of workers.
(8) The Occupier shall revive the safety policy as often as may be appropriate, but it shall necessarily be revised under the following circumstances:
(a) whenever any extension or modification having implications on safety and health of persons at work is made; or
(b) Whenever new substances or articles are introduced in the manufacturing process having implications on health and safety of persons exposed to such substances.

61(S.B) B. Collection and development and dissemination of information
1 (1) The occupier of every factory carrying on a 'hazardous process' shall arrange to obtain or develop information in the form of Material Safety DATA Sheet (MSDS) in respect of every hazardous substance or material handled in the manufacture, transportation and storage in the factory. It shall be accessible upon request to a worker for reference:
2 (a) Every such Material Safety Data Sheet shall include the following information:
3 (i) The identity used on the label;
4 (ii) Hazardous ingredients of the substance,
5 (iii) Physical and chemical characteristics of the hazardous substance
6 (iv) The physical hazards of the hazardous substance, including the potential for fire, explosion and reactivity;
7 (v) The health hazards of the hazardous substance, including signs and symptoms of exposure, and by medical conditions which are generally recognised as being aggravated by exposure to the substance;
8 (vi) The primary route (s) of entry;
9 (vii) The permissible limits of exposure prescribed in the Second Schedule under Section 41-F of the Act, and in respect of a Chemical not covered by

i the said Schedule, any exposure limit used or recommended by the manufacturer, importer or occupier;
ii (viii) Any generally applicable precautions for safe handling and use of the hazardous substance, which are known including appropriate hygienic practices, protective measures during repairs and maintenance of contaminated equipment, procedures for clean-up of spills and leaks;

iii (ix) Any generally applicable control measures, such as appropriate engineering, controls, work practices, or use of personal protective equipment;
iv (x) Emergency and first-aid procedures;
v (xi) The date of preparation of the Material Safety Data Sheet, or the last change to it; and
vi (xii) The name, address and telephone number of the manufacturer, importer, occupier or other responsible party preparing or distributing the Material Safety Data Sheet, who can provide additional information on the hazardous substances and appropriate emergency procedures, if necessary.
vii (b) The occupier while obtaining or developing a Material Safety Data Sheet in respect of a hazardous substance shall ensure that the information recorded accurately reflects the scientific evidence used in making the hazard determination. If he becomes newly aware of any significant information regarding the hazards of a substance, or ways to protect against the hazards, this new information shall be added to the Material Safety Data Sheet as soon as practicable.
viii (c) An example of such Material Safety Data Sheet is given in the schedule to this Rule—
Labelling:
ix (2)
x (A) Every container of a hazardous substance shall be clearly labelled or marked to identify:
xi (a) the contents of the container;
xii (b) The name and address of the manufacturer or importer of the hazardous substances;
xiii (c) the physical and health hazards; and
xiv (d) the recommended personal protective equipment needed to work safety with the hazardous substance.
xv (B) In case a container is required to be transported by road outside the factory premises it should in addition be labelled or marked in accordance with the requirements laid down under Rule 61 (SB)H.

SCHEDULE: (U/R. 61(SB)B)

<table>
<tr><td colspan="2">Chemical Name</td><td colspan="2">Chemical Classification</td></tr>
<tr><td colspan="4">Hazechem No</td></tr>
<tr><td>Regulated Identification</td><td colspan="2">Shipping Name Codes/Label Hazardous Waste</td><td>Hazechem No</td></tr>
<tr><td colspan="4">I.D. No.:</td></tr>
<tr><td>Hazardous Ingredients</td><td colspan="2">C.A S.No.</td><td>Hazardous Ingredients C.A.S.No.</td></tr>
<tr><td colspan="2">1.
2.</td><td colspan="2">3.
4.</td></tr>
</table>

2. PHYSICAL AND CHEMICAL DATA					
Boiling Range/Point	C. Physical State				Appearance
Melting/Freezing Point C	Vapour Pressure 35°C				Odour mmHg
Vapour Density (Air - 1)			Solubility in water at 300 C Others		
Specific Water 3. Fire and Explosion Hazard Data			PH		
Flammability	Yes/No	LEL		%Flash Point °C	Auto ignition Temperature
TDG Flammability			UEL		
Explosion Sensitivity to Impact	Explosion Sensitivity to Static Electricity				Hazardous combustion products
Hazardous Polymerisation					
Combustible Liquid	Explosive Material				Corrosive Material
Flammable Material	Oxidiser				Others
Pyrophoric Material			Organic Peroxide		

4. REACTIVITY DATA					
Chemical Stability					
Incompatibility with other Material					
Reactivity					
Hazardous Reaction Products					
5. HEALTH HAZARD DATA					
Routes of Entry					
Effects of Exposure/Symptoms					
Emergency Treatment					
TLV (ACGII-I)	Ppm	mg/m3	STEL	Ppm	mg/rn3

Permissible Exposure Limit LD	Ppm	mg/m3	Odour Threshold ppm mg/rn3 LD

NFPA Hazard signals	Health	Flammability	Stability	Special

6. PREVENTIVE MEASURES
Personal
Protective
Equipment
Handling and
Storage
Precautions
7. EMERGENCY AND FIRST AID MEASURE

FIRE	Special Procedures
Unusual Hazards	
EXPOSURE	First Aid Measures Antidotes/Dosages
SPILLS	Steps to be taken Waste Disposal Method

8. ADDITIONAL INFORMATION REFERENCES

9. MANUFACTURERJSUPPLIERS DATA	
Name of Firm Mailing Address Telephone/Telex Nos. Telegraphic Address	Contact person in Emergency
Local Bodies Involved	
Standard Packing	
Tremeard Details/Ref Others	
10. Disclaimer	

Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a

particular application or results to be obtained from them. It is up to the manufacturer/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured/handled or sold by him as the case may be. The Government makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

61(SB)C. Disclosure of information to workers

1 (1) The occupier of a factory carrying on a 'hazardous processes' shall supply to all workers the following information in relating to handling of hazardous materials or substances in the manufacturer, transportation, storage and other processes:

2 (a) Requirements of Section 41B, 41C, and 41H of the Act;

3 (b) A list of 'hazardous process' carried on in the factory;

4 (c) Location and availability of all Material Safety Data sheets as per Rule 61 (SB) B

5 (d) Physical and health hazards arising from the exposure to or handling of substances;

6 (e) Measures taken by the occupier to ensure safety and control of physical and health hazards;

7 (f) Measures to be taken by the workers to ensure safety handling, store and transportation of hazardous substances;

8 (g) Personal protective equipment required to be used by workers employed in 'hazardous process' or 'Dangerous' operations;

9 (h) Meaning of various label and markings used on the containers of hazardous substances as provided under Rule 61 SBB;

10 (i) Signs and symptoms like to be manifested on exposure to hazardous substances and to whom to report;

11 (j) Measures to be taken by the workers in case of any spillage or leakage of hazardous substance;

(k) Rule of worker's vis-a-vis the emergency plan of the factory in particular evacuation procedures;

(l) any other information considered necessary by the occupier to ensure safety and health of workers.

(2) the information required by sub-rule (1) shall be complied and made known to workers individually, through supply of booklets or leaflets and display of cautionary notices at the work places.

(3) The booklets, leaflets and the cautionary notices displayed in the factory shall be in the language understood by the majority of the workers, and also explain to them.

(4) The Chief Inspector may direct the occupier to supply further information to the workers deemed necessary.

112[61 (SB)D. Control of Industrial Major Accident Hazardous Rules, 1990

61 (SB)D1 - These Rules are supplement to the Rules already notified under Chapter TV-A of the Factories Act, 1948.

(SB) D2 - Definitions: In these Rules, unless the context otherwise requires

(a) Hazardous chemical" means

(i) any chemical which satisfies any of the criterial laid down in Part- I of Schedule I, and is listed in column (2) of Part-IT of this Schedule; or
(ii) any chemical listed in column (2) of Schedule 2; or
(iii) any chemical listed in column (2) of Schedule 3.
(b) “Industrial Activity” mean s:
(i) an operation or process carried out in an industrial installation referred to in Schedule 4, involving or likely to involve one or more hazardous chemicals and includes on-site storage or on-site transport which is associated with that operation or process as the case may be; or
(ii) isolated storage:
(c) “isolated storage” means storage where no other manufacturing process other than pumping of hazardous chemical is carried out and that storage involves at least a quantity of that chemical set out in Schedule 2, but does not include storage associated with an installation specified in Schedule 4 on the same site.
(d) “major accident” means an occurrence (including in particular, a major emission, fire or explosion) involving one or more hazardous chemicals and resulting from uncontrolled developments in the course of an industrial activity or owing to natural events, leading to a serious danger to persons, whether immediate or delayed, inside or outside the installation or damage to property or adverse effects on the environment;

(e) “pipeline” means a pipe (together with any apparatus and works associated therewith), or system of pipes (together with any apparatus and works associated therewith) for the conveyance of a hazardous chemical, other than a flammable gas as set out in column (2) of Part-II of Schedule 3 at a pressure of less than 8 bars absolute;
(f) “Schedule” means schedule appended to these Rules;
(g) ‘‘Site’’ means any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of occupier;
(h) Words and expressions not defined in these Rules but defined or used in the Factories Act, 1948 and the Rules made thereunder have the same meaning as assigned therein.

(SB) D 3- Collection, development and dissemination of information:
1 (1) This Rule shall apply to industrial activity in which a hazardous chemical which satisfies any of the criteria laid down in Part-I of Schedule I and is listed in column (2) of Part-II of this Schedule is or may be involved.
2 (2) An occupier who has control of an industrial activity in terms of sub- rule (1) of this rules, shall arrange to obtain or develop detailed information on hazardous chemical in the form of a material safety data sheet as indicated in Schedule 5. The information shall be accessible to workers upon request for reference.
3 (3) The occupier while obtaining or developing a material safety data sheet as indicated in Schedule 5 in respect of a hazardous chemical handled by him shall ensure that the information is recorded accurately and reflects the scientific evidence used in making the hazard determination. In case, any significant information regarding hazard of a chemical is available, it shall be added to the material safety data sheet as indicated in Schedule 5 as soon as practicable.

4 (4) Every container of a hazardous chemical shall be clearly labelled or marked to identify:
5 (a) the contents of the container;
6 (b) the name and address of the manufacturer; or importer of the hazardous chemical; and
7 (c) the physical, chemical and toxicological data of the hazardous chemical.
8 (5) In terms of sub-rule (4) where it is impractical to label a chemical in view of the size of the container of the nature of the package, provision should be made for other effective means like tagging or accompanying documents.

(SB) D 4.- General responsibility of the occupiers:
1 (1) This rule shall apply to:

(a) an industrial activity, other than isolated storage in which a hazardous chemical which satisfies any of the criterial laid in Part-I of Schedule-I is listed in column (2) of Part-H of this Schedule therein is or may be involved; and
(b) isolated storage in which there is involved a quantity of a hazardous chemical listed in column (2) of Schedule 2 which is equal to or more than the quantity specified in the schedule for that chemical in column (3) thereof.
(2) An occupier who has control of an industrial activity in terms of sub- rule (1) shall provide evidence to show that he has:
(a) Identified the major accident hazards; and
(b) taken adequate steps to
(i) Prevent such major accidents and to limit their consequences to persons and the environment and
(ii) Provide the persons working on the site with the information, training and equipment including antidotes necessary, to ensure their safety.

(SB) D 5.- Notification of major accidents:
1 (1) Where a major accident occurs on a site, the occupier shall forthwith notify the Inspector and the Chief Inspector of that accident, and furnish thereafter to the Chief Inspector a report relating to the accident in instalments, if necessary in Schedule 6.
(2) The Chief Inspector shall on receipt of the report in accordance with sub-rule (1) shall undertake a full analysis of the major accidents and send the requisite information to the Directorate General, Factory Advice Service and Labour Institutes (DGFASLI) and the Ministry of Labour through appropriate channel. (1)

(SB) D 6 - Industrial Activities to which Rule (SB) D (7) to SB (D) (15) Apply:
(a) Rules (SB) (D) 7 to (SB) D 9 and (SB) D 13 to (SB) D 15 shall apply to an industrial activity, other than isolated storage, in which there is involved a quantity of hazardous chemical listed in column (2) of Schedule (3) which is equal to or more than the quantity specified in the entry for that chemical in column (3).

(b) Rules (SB) D 10 to (SB) D 12 shall apply to an industrial activity, other than isolated storage in which there is involved a quantity of a hazardous chemical listed in column (2) of Schedule 3 which is equal to or more than the quantity specified in the entry for the chemical in column (4):

(c) Rules (SB) D 7 to (SB) D 9 shall apply to an industrial activity, other than isolated storage, in which there is involved a quantity of a hazardous chemical listed in Column (2) of Schedule 2 which is equal to or more than the quantity specified in the entry for that chemical in column (5); and
(d) Rules (SB) D 10 to (SB) D 15 shall apply to an isolated storage in which there is involved a quantity of hazardous chemical listed in column (2) of Schedule 2 which is equal to or more than the quantity specified in the entry for that chemical in column (4). (2) For the purposes of Rules (SB) D 7 to (SB) D 15.

(a) A "New industrial activity" means an industrial activity which
(i) was commenced after the date of coming into operation of these Rules; or,
(ii) If commenced before that date, is an industrial activity in which there has been since that date a modification which would be likely to have important implications for major accident hazards, and that activity shall be deemed to have been commenced on the date on which the modifications was made; and
(b) an "existing industrial activity" means an industrial activity which is not a new industrial activity.

(SB) D 7- Notification of Industrial activities:
1 (1) An occupier shall not undertake any industrial activity unless he has submitted a written report to the Chief Inspector containing the particulars specified in Schedule 7 at least 3 months before commencing that activity or before such shorter time as the Chief Inspector may agree and for the purposes of this sub-rule, an activity in which subsequently there is or is liable to be a quantity given in column (3) of Schedules 2 and 3 or more of an additional hazardous chemical shall be deemed to be a different activity and shall be notified accordingly.
2 (2) No report under sub-rule (1), need to be submitted by the occupier, if he submits a report under Rule 10(1).

(SB) D. 8 - Updating of the Notification under Rule 7:
Where an activity has been reported in accordance with Rule (SB) D 7(1) and the occupier makes a change in it (including an increase or decrease in the maximum quantity of a hazardous chemical to which this rule applies which is or is liable to be at the site or in the pipeline or the cessation of the activity) which affects the particulars specified in that report or any subsequent report made under this rule. The occupier shall forthwith furnish a further report to the Chief Inspector.
(SB) D. 9 - Transitional provision: Where,

(a) at the date of coming into operation of these Rules an occupier who is in control of an existing industrial activity which is required to be reported under Rule (SB) D 7;

(b) within 6 months after that date an occupier commences any such new industrial activity it shall be a sufficient compliance with that Rule, if he reports to the Chief Inspector as per particulars in Schedule 7 within 3 months after the date of coming into operation of these Rules or, within such longer time as the Chief Inspector may agree in writing.

(SB) D.10 - Safety reports:

1 (1) Subject to the following sub-rules of this Rule, an occupier shall not undertake any industrial activity to which this Rules applies, unless he has prepared a safety report on that industrial activity containing the information specified in Schedule 8 and has sent a copy of that report to the Chief Inspector at least 3 months before commencing that activity.

2 (2) In the case of a new industrial activity which an occupier commences, or by virtue of sub-rule (2)(a)(ii) of Rule (SB) (D) 6 is deemed to commence, within 6 months after coming into operation of these rules, it shall be a sufficient compliance with sub-rule (I), if the occupier sends to the Chief Inspector a copy of the report required in accordance with that sub-rule within 3 months after the date of coming into operation of these Rules.

3 (3) In the case of an existing industrial activity, until five years from the date of coming into operation of these rules, it shall be a sufficient compliance with sub-rule (1) if the occupier on or before 3 months from the date of the coming into the operation of these Rules, sends to the Chief Inspector the information specified in Schedule 7 relating to that activity.

(SB) D.11- Updating of reports under Rule (SB) D. 10:

1 (1) Where an occupier has made a safety report in accordance with sub-rule (I) of Rule SB (D) 10 he shall not make any modification to the industrial activity, to which that safety report relates, which could materially affect the particulars in that report, unless he has made a further report to take account of those modifications and has sent a copy of that report to the Chief Inspector at least 3 months before making those modifications.

2 (2) Where an occupier has made a report in accordance with Rule 10 and sub-rule (1) and that industrial activity is continuing, the occupier shall within three years of the date of the last such report, make a further report which shall have regard in particular to new technical knowledge, which has affected the particulars in the previous report relating to safety and hazard assessment, and shall within I month or in such longer time as the Chief Inspector may agree in writing send a copy of the report to the Chief Inspector.

(SB) D.12- Requirements for further information:

Where in accordance with Rules SB (D) 10(1), an occupier has sent a safety report relating to an industrial activity to the Chief Inspector, the Chief Inspector may, by a notice served on the occupier, require him to provide such additional information as is specified in the notice and the occupier shall send that information to the Chief Inspector within such time as is specified in the notice or within such extended time as the Chief Inspector may subsequently specify.

(SB) D.13 - Preparation of on-site emergency plans by the occupiers:

1 (1) An occupier who has control of an industrial activity to which this rule applies shall prepare in consultation with the Chief Inspector, keep up- to-date and furnish to the Chief Inspector and the Inspector on-site emergency plan detailing how accidents will be dealt with

on the site on which the industrial activity is carried on and that plan shall include the name of the person who is responsible for the safety on the site and the names of those, who are authorised to take action in accordance with the plan in case of an emergency.
2 (2) The occupier shall ensure that the emergency plan prepared in accordance with sub rule (1) takes into account any modification made in the industrial activity and that every person on the site, who is affected by the plan is informed of its relevant provisions.
3 (3) The occupier shall prepare the emergency plan required under sub- rule (1).
4 (a) in the case of new industrial activity, before that activity is commenced; except that, in the case of a new industrial activity is commenced or is deemed to have been commenced before a date 3 months after the coming into operation of these Rules by that date; or
5 (b) in the case of an existing industrial activity within 3 months of coming into operation of these Rules.

(SB) D.14 - Preparation of off-site emergency plans:
1 (1) It shall be the duty of the District Collector or the District Emergency Authority designated by the State Government in whose area there is a site on which an occupier carried on an industrial activity to which this Rule applies, to prepare and keep up-to-date on adequate off-site emergency plan detailing how emergencies relating to a possible major accident on that site will be dealt-with and while preparing that plan, the Authority shall consult the occupier, the Chief Inspector and such other persons as appear to the Authority to be appropriate.
2 (2) The occupier shall provide the District Collector or the District Emergency Authority with such information relating to the industrial activity under his control as may be necessary to enable the District Collector or the District Emergency Authority to prepare an off-site emergency plan under sub-rule (1) including the nature, extent and likely effects off-site of possible major accidents as well as any additional information as the District Collector or the District Emergency Authority may require in this regard.

1 (3) The District Collector or the District Emergency Authority shall provide the occupier with information from the off-site emergency plan which relates to his duties under Rule (SB) D. 13 of sub-rule (2).
2 (4) The District Collector or the District Emergency Authority shall prepare its emergency plan for any industrial activity, required under sub- rule (1).
3 (a) in the case of a new industrial activity before that activity is commenced.
4 (b) in the case of an existing industrial activity within 6 months of its being notified by the occupier of the industrial activity.

(SB) D.15-Information to be given to persons liable to be affected by a major accident:
1 (1) The occupier shall take appropriate steps to inform persons outside the site, who are likely to be in an area which might be affected by a major accident at any site on which an industrial activity under his control to which this Rule applies, is carried on either directly or through the District Emergency Authority, about
2 (a) the nature of the major accident hazard; and
3 (b) the safety measures and the correct behaviour which should be adopted in the event of a major accident:

4 (c) The occupier shall take steps required under sub-rule (1) to inform persons about an industrial activity, before that activity is commenced, except that, in the case of an existing industrial activity in which case of occupier shall comply with the requirements of sub-rule (1) within 3 months of coming into operation of these Rules.

(SB) D.16 - Disclosure of information notified under these rules:
Where for the purpose of evaluating information notified under Rule (SB) D (5) or Rules (SB) D (7) to (SB) D (15), the Inspector or the Chief Inspector, or the District Emergency Authority discloses, that information to some other person. Inspector or the Chief Inspector or the District Emergency Authority disclosing it, as the case may be, and before disclosing that information the Inspector or the Chief Inspector or the District Emergency Authority, as the case may be shall inform that other person of his obligations under these Rules.
(SB) D.17- Improvement Notice:
1 (1) If an Inspector is of the opinion that an occupier
2 (a) is contravening on or more of these Rules; and
3 (b) has contravened one or more of these Rules in circumstances that make it likely that the contravention will continue or be repeated he may serve on him, a notice referred to as "an improvement notice", stating that he is of that opinion specifying the Rule or Rules as to which he is of that opinion giving particulars of the reasons why he is of that opinion and

requiring that occupier to remedy the contravention or, as the case may be, the matters occasioning it within such period, as may be specified in the notice.
(2) A notice served under sub-rule (1) may (but need not) include directions to the matters to be taken by the occupier to remedy any contravention or matter to which the notice relates.

(SB) D.18- Power of the State Government to modify the Schedules:
The State Government may, at any time, by notification in the official Gazette, make suitable changes in the Schedules:
SCHEDULE–I
PART-I
(a) Toxic Chemicals

Chemicals having the following valves acute toxicity and which, owing to their physical and chemical properties are capable of producing major accident hazards.

SI. No.	Degree of Toxicity	LD50 absorbed orally in rat's mg/ kg. body weight	LD5O by cutaneous absorption in rats or Rabbits mg/ kg. body weight.	LD50 absorbed by inhalation (4 hrs.) in rat's mg/litre
1	2	3	4	5

1 1.	Extremely toxic	<=50	<=200	0.1 -0.5
1 2.	Highly toxic	51 – 500	201 – 2000	0.5 - 2.0

(b) Flammable Chemicals:
(i) Flammable gases: Chemicals which in the gaseous state at normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20-degree C or below.
(ii) Highly flammable liquid; Chemicals which have a flash point lower than 23-degree C and the boiling of which at normal pressure is above 20-degree C.
(iii) Flammable liquids; Chemicals which have a flash point lower than 65-degree C and which remain liquid under pressure. Where particular processing conditions, such as high pressure and high temperature, may create a major accident hazards.
(c) Explosives:

Chemicals which may explode under the effect of flame heat or photo- chemical condition, or which are more sensitive to shocks or friction than dinitrobenzene.

SCHEDULE -1

PAR- II LIST OF HAZARDOUS CHEMICALS

S. No	Name of the Chemical
1	Acetone
2	Acetone Cyanohydrine
3	Acetyl Chloride
4	Acetylene (Ethyne)
5	Acrolein (2-Propenal)
6	Acrylonitrile
7	Aldicarb
8	Aldrine
9	Alkyl Phthalate
10	Allyl Alcohol
11	Allylamifle
12	Alpha Naphthyl Thiourea (ANTU)
13	4-Amnodiphenyl

14	2-Aminopheflyl
15	Amiton
16	Ammonia
17	Ammonium Nitrate
18	Ammonium Nitrate in Fertilizers
19	Ammonium Sulfamate
20	Anabasine
21	Aniline
22	P-Anisidine
23	Antimony & Compounds
24	Antimony Hydride (Stibine)
25	Arsenic Hydride (Arsine)
26	Arsenic Pentoxide, Arsenic (V) Acid & Salts

27	Arsenic Trioxide, Arsenious (III) Acids and Salts
28	Asbestos
29	Azinphos-Ethyl
30	Azinphos-Methyl
31	Barium Azide
32	Benzene
33	Benzidine
34	Benzidine Salts
35	Benzoquiiione
36	Benzoyl Chloride
37	Benzoyl Peroxide
38	Benzyl Chloride
39	Benzyl Cyanide
40	Beryllium (Powders, Compounds)
41	Biphenyl
42	Bis (2-Chioromethyl) ketone
43	Bis (2, 4, 6 - Trinitrophenyl) Amine

44	Bis (2-Chioroethyl) Suiphide
45	Bis (Chloromethyl) Ether
46	2 Bis (Chloromethyl) Ether
47	1 Bis (Chloromethyl) Ether
48	Bis-l, 2 (Tribromophenoxy) - Ethene
49	Bisphenol
50	Boron & Compounds
51	Bromine
52	Bromine Pentafluoride
53	Bromoform
54	1 Bis (Chloromethyl) Ether
55	Butane
56	N-Butanethiol

57	2-Butanone
58	Butoxy Ethanol
59	Butyl Glycidal Ether
60	Tert-Butyl Peroxyacatate
61	Tert-Butyl Peroxyisobutyrate
62	Tert-Butyl Peroxyisopropyl Carbonate
63	Tert-Butyl Peroxymaleate
64	Tert-Butyl Peroxypivalate
65	Butyl Vinyl Ether
66	Butylamine
67	C9-Aromatic Hydrocarbon Fraction
68	Cadmium & Compounds
69	Cadmium Oxide (Fumes)
70	Calcium Cyanide
71	Captan
72	Captofol
73	Carbaryl (Sevin)

74	Cabofuran
75	Carbon Disuiphide
76	Carbon Monoxide
77	Carbon Tetrachioride
78	Carbophenothion
79	Cellulose Nitrate
80	Chlorates (Use in Explosives)
81	Chlordane
82	Chlorfenvinphos
83	Chlorinated Benzenes
84	Chlorine
85	Chlorine Dioxide
86	Chlorine Oxide

87	Chlorine Trifluoride
88	Chlormequate Chloride
89	Chioroacetal Chloride
90	Chioroacetaldehyde
91	2-Chloroanjljne
92	4-Chloroaniljne
93	Chlorobenzene
94	Chlorodipheeiyl
95	Ch loroepoxypropane
96	Chloroethanol
97	Chloroethyl Chioroformate
98	Chlorofluorocarbons
99	Chloroform
100	4-(Chloroformyl) Morpholine
101	Chloromethane
102	Chloromethyl Ether
103	Chloronitrobeuzene

104	Chloroprene
105	Chlorosuiphonic Acid
106	Chlorotrjnjtrobenzene
107	Chloroxuron
108	Chromium & Compounds
109	Cobolt & Compounds
110	Copper & Compounds
111	Coumafuryl
112	Coumaphos
113	Coumatetralyl
114	Cresols
11 5	Crimidine
116	Cumene

117	Cyanophos
118	Cyanothoate
119	Cyanuric Fluoride
120	Cyclohexane
121	Cyclohexanol
122	Cyclohexanone
123	Cyclohexamide
124	Cyclopentadiene
125	Cyclopentane
126	Cyclotetramethylenetetranitramine
127	Cyclotrimethylenetrinitramine
128	DDT
129	Decabrornodiphenyl Oxide
130	Demeton
131	DI-Isobutyryl Peroxide
132	DI-n-Propyl Peroxydicarbonate
133	DI-Sec'-Butyl Peroxydicarbonate

134	Dialifos
135	Diazodinitrophenol
136	Diazomethane
137	Dibenzyl Peroxydicarbonate
138	Dichloroacetylene
139	O-Dichlorobenzene
140	P-Dichlorobenzene
141	Dichloroethane
142	Dichloroethyl Ether
143	2, 4-Diehlorophenol
144	2, 6-Dichlorophenol
145	2, 4-Dichlorophenoxy Acetic Acid, (2,4-D)
146	1, 2-Dichloropropane

147	3, 5-Dichlorosalicylic Acid
148	Dichlorovos (DDVP)
149	Dicrotophos
150	Dieldrin
151	Diepoxybutane
152	Diethyl Peroxydicarbonate
153	Diethylene Glycol Dinitrate
154	Diethylene Triamine
155	Diethyleneglycol Butyl Ether/Diethyleneglycol Butyl Acetate
156	Diethyjenetrjamjne (Deta)
157	Diglycidyl Ether
158	2, 2Dihydroperoxyprop
159	Diisobuty1yj Peroxide
160	Dimefox
161	Dimethoate
162	Dimethyl Phosphoramidocyaflidic Acid
163	Dimethyl Phthalate

164	Dimethylcarbomoyl Chloride
165	Dimethylnitrosamine
166	Dinitrophenol Salts
167	Din itrotoluene
168	Din jtro-O
169	Dioxane
170	Dioxathion
171	Dioxofane
172	Diphacjnone
173	Diphosphoramide Octamethyl
174	Dipropylene GJycolmethylether
175	Disulfoton
176	Endosulfan

177	Endrjn
178	Epich1orohyde
179	EPN
180	1, 2-Epoxypropane
181	Ethion
182	Ethyl Carbamate
183	Ethyl Ether
184	2-Ethyl Hexanol
185	Ethyl Mercaptan
186	Ethyl Methacrylate
187	Ethyl Nitrate
188	Ethylamine
189	Ethylene
190	Ethylene Chiorohydrine
191	Ethylene Diamine
192	Ethylene Dibromide
193	Ethylene Dichioride

194	Ethylene Glycol
195	Ethylene Oxide
196	Ethylene Imine
197	Ethylthiocyanate
198	Fensu Iphoth ion
199	Fluenetil
200	4-Fluoro, 2-Hydroxybutyric Acid & Salts, Esters, Amides
201	Fluoroacetic Acid & Salts, Esters, Amides
202	4-Fluorobutyric Acid & Salts, Esters, Amicles
203	4-Fluorochrotonic Acid & Salts, Esters, Amides
204	Formaldehyde
205	Glyconitrile (Hydroxyacetonitrile)
206	1 -Guanyl-4-NitrosaminoguanyL- I -Tetrazene

207	Heptachlor
208	Hexachloro Cyclopentadiene
209	1-lexachlorocyclohexane
210	Hexachlorocyclomethane
211	1, 2, 3, 7, 8, 9-Hexacfilorociibenzo-D-Dioxine
212	Hexafluopropene
213	Hexamethylphosphoramide
214	3, 3, 6, 6, 9, 9-Hexamethyl - 1, 2, 4, 5-Tetroxacyclononane
215	Hexamethylenediamine
216	Hexane
217	2, 2’, 4, 4’, 6, 6’-HexanitrostIlbene
218	Hexavalent Chromium
219	Hydrazine
220	Hydrizine Nitrate
221	Hydrochloric Acid
222	Hydrogen
223	Hydrogen Bromide (Hydrobromic Acid)

224	Hydrogen Chloride (Liquefied Gas)
225	Hydrogen Cyanide
226	Hydrogen Fluoride
227	Hydrogen Selenide
228	Hydrogen Suiphide
229	Hydroquinone
230	Iodine
231	Isobenzan
232	Isodrin
233	Isophorone Diisocyanate
234	Isopropyl Ether
235	Juglone (5-Hydroxynaphthalene - 1,4 - Dione)
236	Lead (Inorganic Fumes & Dusts)

237	Lead 2, 4, 6-Trinitroresorcinoxide (Lead Styphnate)
238	Lead Azide
239	Leptophos
240	Lindane
241	Liquefied Petroleum Gas (LPG)
242	Maleic Anhydride
243	Manganese & Compounds
244	Mercapto Benzothiazole
245	Mercury Alkyl
246	Mercury Fulminate
247	Mercury Methyl
248	Methacrylic Anhydride
249	Methacrylonitrile
250	Methacryloyi Chloride
251	MethamidoPhos
252	MethaneSuphonyi Fluoride
253	Methanethiot

254	Methoxy Ethanol (2-Methyl Cellosolve)
255	Acetate
256	Methyl Acrylate
257	Methyl Alcohol
258	Methyl Amylketofle
259	Methyl Bromide (Bromofliethane)
260	Methyl Chloride
261	Methyl
262	Methyl Cyclohexefle
263	Methyl Ethyl Keton Peroxide
264	Methyl Hydrazifle
265	Methyl Isobutyl Ketone
266	Methyl Isobutyl Ketone peroxide

267	Methyl Isocyaflate
268	Methyl IsothiocYaflate
269	Methyl Mercaptafl
270	Methyl Methacrylate
271	Methyl Parathion
272	Methyl Phosphoflic Dichioride
273	N-Methyi, 2, 4, 6 - TetranitrOaflulifle
274	Methylefle Chloride
275	4, 4’ - Methyleflebis (2ChlOroat11ifle)
276	MethyltriChlorosa1ie
277	Mevinphos
278	Molybdenum & Compounds
279	N-Methyl-N, 2,4, 6NTetraflitrOanilu1ie
280	Naphtha (Coal Tar)
281	2NaphthYlam1ne
282	Nickel & Compounds
283	Nickel Tetracarbonyl

284	o-Nitroaniline
285	p-Nitroaniline
286	Nitrobenzene
287	p-Nitrochlorobenzene
288	Nitrocyclohexane
289	Nitroethane
290	Nitrogen Dioxide
291	Nitrogen Oxides
292	Nitrogen Trifluoride
293	Nitroglycerine
294	p-Nitrophenol
295	1 -Nitropropane
296	2-Nitropropane

297	Nitrosodirnethylamine
298	Nitrotolune
299	Octabromophenyl Oxide
300	Oleum
301	Oleylamine
302	OO-Diethyl S-Ethylsulphinylmethyl Phosphorothioate
303	OO-Diethyl S-Ethylsulphonylmethyl Phosphorothioate
304	OO-Diethyl S-Ethylthiomethyl Phosphorothioate
305	OO-Diethyl S-lsopropylthiomethyl Phosphorodithioate
306	OO-Diethyl S-Propylthiomethyl Phosphorodithioate
307	Oxyamyl
308	Oxydisulfoton
309	Oxygen (Liquid)
310	Oxygen Difluoride
311	Ozone
312	Paraoxon (Diethyl 4-Nitrophenyl Phosphate)
313	Paraquat

314	Parathion
315	Parathion Methyl
316	Paris Green (Bis Acto HexametaarsenitOtetra Copper)
317	Pentaborane
318	Pentabromodiphenyl Oxide
319	Pentabromophenol
320	Pentachloro Naphthalene
321	Pentachloroethane
322	Pentachlorophenol
323	Pentaerythritol Tetranitrate
324	Pentane
325	Peracetic Acid
326	Perchloroethylene

327	Perchloromethyl Mercaptan
328	2-Pentanone, 4-Methyl
329	Phenol
330	Phenyl Glycidal Ether
331	Phenylene P-Diamine
332	Phenylmercury Acetate
333	Phorate
334	Phosacetim
335	Phosalane
336	Phosfolan
337	Phosgene (Carbonyl Chloride)
338	Phosmet
339	Phosphamidon
340	Phosphine (Hydrogen Phosphide)
341	Phosphoric Acid and Esters
342	Phosphoric Acid, Bromoethyl Bromo (2, 2-Dimethylpropyl) Bromoethyl Ester
343	Phosphoric Acid, Bromoethyl Bromo (2, 2-Dimethylpropyl) Chioroethyl Ester

344	Phosphoric Acid, Chioroethyl Bromo (2, 2-Dimethoxylpropyl) Chioroethyl Ester
345	Phosphorous & Compounds
346	Phostalan
347	Picric Acid (2, 4, 6 - Trinitrophenol)
348	Polybrominated Biphenyls
349	Potassium Arsenite
350	Potassium Chlorate
351	Promurit [1- (3, 4-Dichlorophenyl)-3
352	1, 3-Propanesultone
353	1-Propen, - 2-Chloro
354	Propylene Dichioride
355	Propylene Oxide
356	Propyleneimine

357	Pyrazoxon
358	Selenium Hexafluoride
359	Semicarbazide Hydrochloride
360	Sodium Arsentic
361	Sodium Azide
362	Sodium Chlorate
363	Sodium Cyanide
364	Sodium Picramate
365	Sodium Selenite
366	Styrene, 1, 1, 2, 2-Tetrachloroethane
367	Sulfotep
368	Sulphur Dichioride
369	Sulphur Dioxide
370	Sulphur Trioxide
371	Sulphuric Acid
372	Sulphoxide, 3-Chioropropyloctyl

373	Tellurium
374	Tellurium Hexafluoride
375	Tepp
376	Terbufos
377	Alpha-Terabromobisphenol
378	2 2 5 6-Tetrachloro-2, 5-Cyclonexadiene- 1, 4-Dione
379	2 3 7 8-Tetrachlorodibenzo-P-Dioxin (TCDD)
380	Tetraethyl Lead
381	Tetrafluoroethane
382	Tetramethylenedisulphotetramine
383	Tetramethyl Lead
384	Tetranitromethane
385	Thallium & Compounds
386	Thionazin

387	Thionyl Chloride
388	Tirpate
389	Toluene
390	Toluene-2-4-Diisocyanate
391	O-Toluidine
392	Toluene 2, 6-Diisocyanate
393	Trans-I, 4-Chiorobutene
394	1-Tn, (Cyclohexyl) Stannyl-1H-1, 2, 4-Triazole
395	13 5-Triamino-2, 4, 6-trinitrobenzene
396	2 4 6-Tribromophenol
397	Trichloro Acetyl Chloride
398	Tnichloro Ethane
399	TrichloroNaphthalene
400	Trichlorochioromethylsilane
401	Trichlorodichlorophenylsilane
402	1, 1, 1-Trichloroethane

403	Trichloroehthyl Silane
404	Tnichloroethylene
405	Trichloromethanesuiphenyl Chloride
406	2,2, 6-Trichlorophenol
407	2,4, 5-TrichIoopheno1
408	Triethylamine
409	Triethylenemelamine
410	Trimethyl Chiorosilane
411	Trimethylolpropane Phosphite
412	Trinitroaniline
413	2,4, 6-Trinitroanisole
414	Trinitrobenzene
415	Trinitrobenzoic Acid
416	Trinitrocresol

417	2,4, 6-Trinitrophenetole
418	2,4, 6-Trinitroresorcinol (Styphnic Acid)
419	Trinitrotoluene
420	Triorthocresyl Phosphate
421	Triphenyltin Chloride
422	Terpentine
423	Uranium & Compounds
424	Vanadium & Compounds
425	Vinyl Chloride
426	Vinyl Fluoride
427	VinylToluene
428	Warfarin
429	Xylene
430	Xylidine
431	Zinc & Compounds
432	Zirconium & Compounds

SCHEDULE 2

Isolated storage of installation other than those covered by Schedule 4:

(a) The quantities set out below relate to each installation or group of installations belonging to the occupier where the distance between installations is not sufficient to avoid, in foreseeable circumstances, any aggravation of major accident hazards. These quantities apply in any case to each of the installations belonging to the same occupier where the distances between the installations is less than 500 metres.

(b) For the purpose of determining the quantity for a hazardous chemical at an isolated storage, account shall also be taken of any hazardous chemical which is

(i) in that part of any pipeline under the control of the occupier/having control of the site, which is within 500 metres of that site and connected to it;

(ii) at any other site under the control of the occupier any part of the boundary of which is 500metres of the said site; and

(iii) in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site or within 500 metres of it; but no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or hovercraft for transporting it.

Sl.No.	**Chemical or Groups of Chemicals.**		**Quantity .(Tonnes)**
For application of Rules 4, 5 and 7 to 9		**For application of Rules 10 to 15**	
1	**2**	**3**	**4**

1.	Acrylonitrile	350	5000
2.	Ammonia	60	600
3.	Ammonium Nitrate(a)	350 *	2500 *
4.	Ammonium Nitrate Fertilizers(b)	1250	10000
5.	Chlorine	10	25
6.	Flammable gases as defined in Schedule 1,	50	300
7.	Paragraph (b)(i)	10000	100000
8.	Highly flammable liquids as defined	200	2000
9.	in Schedule I Paragraph (b)(ii)	25	250
10.	Liquid Oxygen	20	500
11.	Sodium Chlorate	15	100
	Sulphur Dioxide		
	Sulphur Trioxide		

(a) * This applies to ammonium nitrates and mixtures of sodium nitrate where the nitrogen content derived from the ammonium nitrates is greater than 28 percent by weight and to aqueous solutions of ammonium nitrate where the concentration of ammonium nitrate is greater than 90 per cent by weight.
(b) This applies to straight ammonium nitrate fertilisers and to compound fertilisers where the nitrogen content derived from the ammonium nitrate is greater than 28 per cent by weight (a compound fertiliser contains ammonium nitrate together with phosphate and or potash).

SCHEDULE -3
LIST OF HAZARDOUS CHEMICALS FOR APPLICATION OF RULES OF 5 AND 7 TO 15.
(a) The quantities set out below relate to each installation or group of installations belonging to the same occupier where the distance between the installations is not sufficient to avoid in foreseeable circumstances, any of major accident hazards. These quantities apply in any case to each group of installations belonging to the same occupier where the distance between the installations is less than 500 metres.

(b) For the purpose of determining the quantity of a hazardous chemical man industrial installation, account shall also be taken of any hazardous chemical which is
(i) In that part of any pipeline under the control of the occupier having control of the site, which is within 500 metres of that site and connected to it;
(ii) at any other site under the control of the same occupier an' part of the boundary of which is within 500 metres of the said site; and
(iii) in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site or within500metres of it;

but no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or hovercraft used for transporting it.

PART-I NAMED CHEMICALS

Sl.No.	**Chemical**			**Quantity**
For application of Rules (SB) D (5), (SB) D 7 to (SB) D (9) and (SB) D (3) (SB) D 15.	**For application of rules of (SB) D 10 to (SB) D 12.**			**Gas Number**
1	**2**	**3**	**4**	**5**
Group-I-Toxic Chemicals:				
1. 2. 3. 4. 5. 6.	Aldicarb 4-Aminodiphenyl Amitone Anabasine Arsenic Pentoxide Arsenic (V) acid & Salts Arsenic Trioxide Arsenious (III) Acid and Salts	100 KG 1 KG 1 KG 100 KG 500 KG 100 KG		116-06-3 92-67-1 78-53-5 494-52-0

Group I Toxic Chemicals (Contd.)

7.	Arsine (Arsenic Hydride)	10 KG	7784-42-1
8.	Azinophos - Ethyl	100 KG	2642-71-9
9.	Azinophos - Methyl	100 KG	86-50-0
10.	Benzidine	1 KG	92-87-5
11.	BenzidineSalts	1 KG	505-60-2
12.	Benyllium (Powder Compnds)	10 KG	542-88-1
13.	Bis (2- Chloroethyl Sulphide)	1 KG	1563-66-2
14.	Bis (Chioroemethyl) Ether	1 KG	786-19-6
15.	Carbofuran	100 KG	470-90-6
16.	Carbophenothion	100 KG	15159-40-7
17.	Chlorfenvinphos	100 KG	107-30-2
18.	4- (Chloroformyl) Morpholine	1 KG	107-30-2
19.	Chioromethyl Methyl Ether	1 KG	535-89-7
20.	Cobalt Metal, Oxides,	1 KG	3734-95-0
21.	Carbonates Suiphides, as powders	100 KG	66-81-9
22.	Crimidine	100 KG	8065-48-3
23.	Cyenthoate	100 KG	10311-84-9
24.	Cycloheximide	100 KG	2588-05-8
25.	Demeton	100 KG	
26.	Dialifos	100 KG	
	OO-Diethyl, S-Ethylsulphinyl		
	Methyl Phosphorothioate		
Group I Toxic Chemicals (Contd.)			
27.	OO-Diethyl S-Ethyl Sulphonylmethyl Phosphorodithioate.	100 KG	2588-06-9
28.	OO-Diethyl S-Ethylthiomethyl	100 KG	2600-69-3
29.	Phosphorodithioate	100 KG	78-52-4
	OO-Diethyl S-isopropylthiomethyl		

30.	Phosphorodithioate.	100 KG	3309-68-0
31.	OO-Diethyl S-propylthiomethyl	100 KG	115-26-4
32.	Phosphorothioate	1 KG	79-44-7
33.	Dimefox	1 KG	62-75-9
34.	Dimethylcarbamoyl Chloride	1 T	62917-41-9
35.	Dimethyl Nitrosamine	100 KG	82-66-6
36.	Dimethyl Phosphoramdo-Cyanidic Acid	100 KG	298-04-4
37.	Diphacinone	100 KG	2104-64-5
38.	Disulfoton	100 KG	563-12-2
39.	EPN	100 KG	115-90-2
40.	Ethion	100 KG	430 1-50-2
41.	Fensulfothion	1 KG	144-49-0
42.	Fluenetil	1 KG	
43.	Fluroacetic Acid Fluroacetic Acid Fluroacetic Acid Esters	1 KG	

Group I Toxic Chemicals (Contd.)

44.	Fluroacetic Acid Amides	1 KG	3 7759-72-1	462-23-7
45.	4-Flurobutyric Acid	1 KG		3 7759-72-1
46.	4-Fluorobutyric Acid Salts	1 KG		
47.	4-Fluorobutyric Acid Salts	1 KG		
48.	4-Fluorobutyric Acid Amides	1 KG		
49.	4-Fluorocrotonic Acid	1 KG		
50.	4-Fluorocrotonic Acid Salts	1 KG		
51.	4-Fluorocrotonic Acid Esters	1 KG		
52.	4-Fluorocrotonic Acid Amides	1 KG		
53.	4-Fluoro 2 Hydroxy Butyric Acid.	1 KG		
54.		1 KG		

55. 56. 57. 58. 59. 60. 61. 62.	4-Fluoro 2 Hydroxy Butyric Acid, Salts. 4-Fluoro 2 Hydroxy Butyric Acid, Esters. 4-Fluoro 2 Hydroxy Butyric Acid, Amides Glycolonitri le Hydroxyacetonitrile) 1, 2, 3, 7, 8, 9 - 1-Iexachlorodibenzo-p-dioxin Hexamethyl phosphoramide Hydrogen Selenide Isobenzan Isodrin	1 KG 1 KG 100 KG 100 KG 1 KG 10 KG 100 KG 100 KG		107-16-4 19408-74-3 680-31-9 7783-07-5 297-78-9 465-73-6
Group I Toxic Chemicals (Contd.)				
63. 64. 65. 66. 67. 68. 69. 70. 71. 72.	Juglone [5-Hydroxy-napthalene-(1,4-Dione)] 4, 4-Methylene bis (2-ChioroAniline) Methyl Isocyanate Mevinphos 2-Napthyl Amine Nickel Metal Oxides Carbonates Sulphide (as powders) Nickel Tetracarbonyl Oxydisulfoton Oxygen Difluoride Paraoxon (Diethyl 4-Nitrophenyl	100 KG 10 KG 150 KG 100 KG 1 KG I T 10 KG 100 KG 10 KG 100 KG	150 KG	481-39-0 101-14-4 624-83-9 7786-34-7 91-59-8 13463-39-3 2497-07-6 7783-41-7 311-45-5

73.	Phosphate)	100 KG	56-38-2
74.	Parathion	100 KG	298-00-0
75.	Parathion - Methyl	100 KG	19264-22-7
76.	Pentaborane	100 KG	298-02-2
77.	Phorate	100 KG	4104-14-7
78.	Phosacetim	750 KG	75-44-5
79.	Phosgene (Carbonyl Chloride)	100 KG	13171-21-6
80.	Phosphamidon	100 KG	7803-51-3
	Phosphine (Hydrogen Phosphide)		
Group I Toxic Chemicals (Contd.)			

81.	Promurit (1 -3.4-Dichlorophenyl).	100 KG	5836-73-7
82.	(3- Triazenethic Carboxamide)	1 KG	1120-71-4
83.	1.3-Propanesultone	10KG	10118-72-6
84.	1-Propen-2 Chloro-1 3 Diol	100 KG	108-34-9
85.	Diacetate	10 KG	7783-79-1
86.	Pyrazoxon	100 KG	10102-18-8
87.	Selenium Hexafluoride	100 KG	7803-52-3
88.	Sodium Selenite	100 KG	3689-24-5
89.	Stibine (Antimony Hydride)	I T	10545-99-0
90.	Sulfotop	100 KG	7783-80-4
91.	Sulphur Dichioride	100 KG	107-49-3
92.	Tellurium Hexafluoride	1 KG	1746-01-6
93.	TEPP	1 KG	80-12-6
94.	2, 3, 7, 8 – Tetrachloro Dibenzop	100 KG	297-97-2
95.	Dioxin (TCDD) Tetramethylenedisul Potetramine Thionazin Tripate (2, 4-Dimethyl 1-3	100 KG	26419-73-8

96.	Dithdolane 2-Carboxaldehydex 0-Methylcarbomoyloxime) Trichioromethane Suiphenyl Chloride	100 KG	5 94-42-3
Group 2 Toxic Chemicals (Quantity> 1 Tonne)			

100.	Acetone Cyanohydrin	200 T	200 T	75-86-5
101.	(P-Cyanogro,en-2-0i)	20 T	500T	107-02-8
102.	Acrolein (2 Pyopenal)	20 T	200 T	107-13-i
103.	Acrylonitrile	200 T	25 T	107-1 1-9
104.	Allyl Alcohol (2-Propen-1-Oil)	200 T		107-1 1-9
105.	Allylamine	50 T		7664-41-7
106.	Ammonia	40 T		7726-95-6
107.	Bromine	20 T		75-15-0
108.	Carbon Disulphide	10 T		7782-50-5
109.	Chlorine	20 T		10 1-68-8
110.	Diphenyl Methane Di-Isocyanate	5 T		106-93-4
111.	(MDI)	50 T		151-56-4
	Ethylene Dibromide			
	(1, 2 Dibromomethane)			
	Ethyleneinine amine			

Group 2 Toxic Chemicals (Quantity >1 Tonne) - (Contd.)

112.	Formaldehyde (Concentration	5 T	2520 T
113.	>90%)	25 5	20 T
114.	Hydrogen Chloride (Liquified Gas)	5.T	50 T
115.	1-Lydrogen Cyanide	5.T	50 T
116.	Hydrogen Fluride	5.T	
117.	Hydrogen Sulphide	20.T	
118.	Methyl Bromide (bromomethane)	50.T	

119. 120. 121. 122. 123. 124..	Nitrogenoxides Propyleneimine Sulphur Dioxide Sulphur Trioxide Tetraethyl Lead Tetramethyl Lead Toluene Di-isocyanate (TDI)	50.T 220 T 15 T 5 T 5 T 10 T	250 T 75 T
Group 3 Highly Reactive Chemicals			
125. 126. **127.	Acetylene (Ethyle) (a) Ammonium Nitrate (1) (b) Ammonium Nitrate in the form of fertiliser(2). 2.2 Bis (Tert Butylperoxy) Butene (Concentration> = 70%)	5 T 350 T 1,250 T 5 T	2500 T
Group 3 Highly Reactive Chemicals (Contd.)			
**128 **129. **130. **131. **132 **133.	1.1 -Bis(TertButyl) (peroxy) Cyclohexaone (Concentration> = 80%) Tert-Butylperoxy Acetate (Concentration > = 70%) Tert-Butyl Peroxy iso butyrate (Concentration > = 80%) Tert Butyl Peroxy iso Propyl Carbonate (Concentration> = 80%) Tert Butyl Peroxy Meleate (Concentration> 80%) Tert-Butyl peroxypiva late (Concentration> = 70%)	5 T 5 T 5 T 5 T 5 T 50 T	3006-86-8 107-71-1 109-13-7 2732-21-6 1931-62-0 927-07-1

**134. **135. **136. **137.	Dibenzyl Peroxy Dicarbonate (Concentration> = 90%) Disec-Butylperoxydi-Carbonate (Concentration> = 80%) Diethyl Peroxy Dicarbonate (Concentration >30%) 2.2-Dihydroperoxy Propone (Concentration > = 30%)	5 T 50 T 50 T 5 T	2 144-45-8 199 10-65-7 14666-78-5 26 14-75-8
Group 3 Highly Reactive Chemicals (Contd.)			
**138. **139. **140. **141. **142. **143. **144. **145. **146. **147. **148. **149	Di-Isobutyryl Peroxide (Concentration> 50%) Di-n-propyl Peroxy Dicarbonate (Concentration> 80%) Ethylene Oxide Ethyl Nitrate 3, 3, 6, 6, 9, 9-Hexa Methyl 1, 2, 3,4, 5-Tetroxacyclonane (Concentration > = 75%) Hydrogen Liquid Oxygen Methyl Ethyl Ketone Peroxide (Concentration> 60%) Methyl Isobutyl Ketone Peroxide (Concentration > = 60%) Peracetic acid (Concentration> = 60%) Propylene Oxide Sodium Chlorate	50 T 5 T 5 T 50 T 50 T 2.T 200.T 5 T 50 T 50.T 5.T 25.T	50 T 50 T 75-21-8 625-58-1 2237-33-7 1333-74-0 7782-44-7 1338-23-4 3 7206-20-5 79-21-0 75-56-9 7775-09-9

Group 4ExPlosivem1th			
Group 4ExPlosivem1th			
150.	Barium Azide	50 T	188 10-58-7
151.	Bis (2,4, 6-TrintrO Phenyl) Amine	50 T	131-73-7
152.	Chlorotrinitro Benzene	50 T	28260-61-9
153.	Cellulose Nitrate (Containing>	50 T	9004-70-0
154.	12.6% Nitrogen)	50 T	2691-41-0
155.	Cyclotetramethye Tetranitramine	50.T	121-82-4
156.	Cyclotrimethnetri Nitroamine	10 T	7008-81-3
157.	Diazodinitriphenol	10 T	693-21-0
158.	Diethylene Glycol Dinitrate	50 T	628-96-6
159.	Dinitropheno, Salts	10 T	109-27-3
160.	Ethylene Glycol Dinitrate	10 T	20062-22-0
161.	l-Guanyl-	50 T	13464-97-6
162.	4- Nitrosaminoguany1-1-Tetrazene	50 T	13424-46-9
163.	2,2,4,4,6,6-1eXa Nitro Stilbene	50 T	15245-44-0
164.	Hydrazone Nitrate	50 T	628-86-4
165.	Lead Azide Lead Styphnate (Lead 2,4,6-TrinitrOre50rcmnoxid) Mercury Fluminate	50.T	

Group 4 Explosive Chemicals (Contd.)				
166.	N-Methyl-N, 2, 4, 6-Tetranitroaniline	5 T	10 T	479-45-8
167.	Nitro Glycerine	10 T		55-63-0
168.	Pentaerythritol Tetranitrate	50 T		78-11-5
169.		50 T		88-89-1

170.	Pricric Acid (2, 4, 6- Trinitrophenol) Sodium Picramate	50 T	831-52-7
171.	Styphnic Acid (2, 4, 6 – Trinitro	50 T	82-71-3
172.	Resorcinol)	50 T	3058-38-6
173.	1, 3, 5 – Triamino – 2,4,6 –	50 T	26952-42-1
174.	Trinitrobenzene	50 T	606-35-9
175.	Trinitroaniline	50. T	25377-32-6
176.	2,4,6 – Trinitroanisole	50 T	35860-50-5
177.	Trinitrobenzene	50 T	28905-71-7
178.	Trinitrobenzoic Acid	50 T	4732-14-3
179.	Trinitrocresol	50 T	118-96-7
	2,4,6 – Trinitrophenetole		
	2,4,6 – Trinitrotoluene		

Part II classes of chemicals not specifically named in Part I

Sl. No.	**Classes of Chemicals**	**Quantity**	***Gas Number**
For application of Rules (SB) D 5 (SB) D7 to (SB) D 9 and(SB)D5 to(SB)D 15		**For application of Rules of (SB) D 10 to(SB)D12**	
1	**2**	**3**	**4**
Group 5 Flammable Chemicals			
1 1.	Flammable Gases: Chemicals which gaseous State at normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20 degree C or below:	15 t	200 t

1	2.	Highly flammable liquids: Chemicals which have a flash point lower than 23 degree C and the boiling point of which at normal pressure is above 20 degree C.	1000 t	50,000 t
1	3.	Flammable Liquids: Chemicals which have a flash point lower than 65 degree C and which remain liquid under pressure, where particular processing conditions such as high Pressure and high temperature may create major accident hazards:	25 t	200 t

This applies to straight ammonium fertilisers and to compound fertilisers where the nitrogen content derived from the ammonium nitrate is greater than 28% by weight (a compound fertiliser contains ammonium nitrate together with phosphate and/or potash).

* GAS Number (Chemical Abstracts Service Number) means the number assigned to the chemical by the Chemical Abstracts Service.

Schedule-4

INDUSTRIAL INSTALLATION WITHIN THE MEANING OF RULES (SB) D (2) (B) (I).

1 1. Installations for the production, processing or treatment of organic or inorganic chemicals using for this purpose, among others:

2 (a) Alkylation

3 (b) Amination by Amonolysis

4 (c) Carbonylation

5 (d) Condensation

6 (e) Dehydrogenation

7 (f) Estefication

8 (g) Halogenation and manufacture of Halogens

9 (h) Hydrogenation

10 (i) Hydrolysis

11 (j) Oxidation

(k) Polymerization

(l) Sulphonation

(m) Desuiphurization, manufacture and transformation of Sulphur-containing compounds.

(n) Nitration and manufacture of Nitrogen-containing compounds.

(o) Manufacture of Phosphorous-containing compounds.

(p) Formulation of Pesticides and of Pharmaceutical products

(q) Distillation
(r) Extraction
(s) Solvation
(t) Mixing
2. Installations for distillations, refining or other processing of Petroleum or Petroleum products.
3. Installations for the total or partial disposal of solid or liquid chemicals by incineration or chemical decomposition.
4. Installation for the production, processing, or treatment of energy gases. for example, LPG,LNG, SNG
5. Installations for the dry destillation of coal or lignite.
6. Installation for the production of metals or non-metals by a wet process or by means of electrical energy

Schedule -5

This Schedule is same as that of Schedule under Rule 61 (SB) B.

Schedule – 6

Information to be furnished regarding notification of major accident

Report Number……of the Particular Accident.

1 1. General Data:
2 (a) Name of the site
3 (b) Name and Address of the Occupier (also state the Telephone! Telex Number)
4 (c)
5 (i) Registration Number

i (ii) Licence Number (As may have been allotted under any statute applicable to the site, e.g., the Factories Act).
ii (d)
iii (i) Nature of industrial activity (Mention what is actually manufactured, stored etc.).
iv (ii) National industrial Classification 1987 at the four digit level:
v 2. Type of Major Accident

Explosion
Fire
Emission of Hazardous Chemical

1 3. Description of the major accident:
2 (a) Date, shift and hour of the accident.
3 (b) Department sec 10 and exact place where the accident took place.
4 (c) The process/operation undertaken in the Department/Section where the accident took place (Attach a flow chart if necessary
5 (d) The circumstances of the accident and the hazardous chemical involved.
6 4. Emergency measures taken and measures envisaged to be taken to alleviate short-terms effects of the accidents.
7 5. Causes of the major accident known (to be specified)

Not known
Information will be supplied as soon as possible
1 6. Nature and extent of damage
2 (a) Within the establishment Causalities.

----------Killed
----------Injured
----------Poisoned.
- - Persons exposed to the major accident
- - Material damage
- - damage is still present
- - danger no longer exists
(b) Outside the establishment causalities

----------Killed

----------Injured
----------Poisoned.
- - Persons exposed to the major accident
-- Material Damage
-- Damage to environment
-- danger no longer exists
1 7. Data available for assessing the effects of the accident on persons and environment.
2 8. Steps already taken or envisaged:
3 (a) to alleviate medium or long-term effects of the accident.
4 (b) to prevent recurrence of similar major accident.
5 (c) any other relevant information

Schedule – 7
Information to be furnished for the notification of activities/sites
Particulars to be included in a notification of site:
1 1. The name and address of the occupier making the notification.
2 2. The full postal address of the site where the notifiable industrial activity will be carried on;
3 3. The area of the site covered by the notification and of any adjacent site which is required to be taken into account by virtue of Schedule 2(b) and Schedule 3(b).
4 4. The date on which it is anticipated that the notifiable industrial activity will commence or if it has already commenced statement to that effect.
5 5. The name and maximum quantity liable to be on the site of each hazardous chemical for which notification is being made.
6 6. Organisation structure, namely organisation diagram for the proposed industrial activity and set-up for ensuring safety and health.
7 7. Information relating to the potential for major accidents, namely

(a) Identification of major accident hazards;
(b) the condition of events which could be significant in bringing one about;
(c) a brief description of the measures taken.
8. Information relating to the site namely: --

(a) a map of the site and its surrounding area to a scale large enough to show any features that may be significant in the assessment of the hazard or risk associated with the site.
(i) area likely to be affected by the major accident.
(ii) population distribution in the vicinity.
(b) a scale-plan of the site showing the location and quantity of all significant inventories of the hazardous chemicals:
(c) a description of the processes or storages involving the hazardous chemicals, the maximum amount of such a hazardous chemical in the given process or storage and an indication of the conditions under which it is normally held.
(d) the maximum number of persons likely to be present on site.
9. The arrangement for training of workers and equipment necessary to ensure safety of such workers.

SCHEDULE-8
INFORMATION TO BE FURNISHED IN A SAFETY REPORT
1. The name and address of the person furnishing the information.
2. Description of the industrial activity, namely:
(a) Rite
(b) construction x design
(c) Protection zones (explosion, protection, separation distances).
(d) accessibility of plant
(e) maximum number of persons working on the site and particularly of those persons exposed to the hazard.
3. Description of the process, namely:
(a) technical purpose of the industrial activity
(b) basic principles of the technological process
(c) process and safety-related data for the individual process stages.
(d) process description.
(e) safety-related types of utilities.
4. Description of the hazards chemicals namely:
(a) Chemicals (quantities, substance data on physical and chemical properties, safety-related data on explosive limits, flash-point, thermal stability toxicological data and threshold limit values, lethal concentrations)

(b) the form in which the chemicals may occur or into which they may be transformed in the event of abnormal conditions
(c) the degree of purity of the hazardous chemical.
5. Information of the preliminary Hazard analysis, namely:
(a) type of accident

(b) system elements or foreseen events that can lead to a major accident.
(c) Hazards
(d) safety-relevant components
6. Description of safety-relevant units, among others:
(a) Special design criteria
(b) controls and alarms
(c) pressure relief, systems,
(d) quick acting valves,
(e) collecting tanks/dump tanks,
(f) sprinkler systems
(g) fire protection.
7. Information on the hazard assessment, namely:
(a) Identification of hazards,
(b) the causes of major accidents
(c) assessment of hazards according to their occurrence frequency
(d) assessment of accident consequences
(e) safety systems
(f) known accident history
8. Description of information on organisational systems used to carry on industrial activity safety namely
(a) maintain and inspection schedules,
(b) guidelines for the training of personnel,
(c) allocation and delegation of responsibility for plant safety,
(d) implementation of safety procedures.
9. Information on assessment of the consequences of major accidents, namely
(a) assessment of the possible release of hazardous chemicals or of energy.
(b) possible dispersion of released chemicals:

(c) assessment of the effects of the release (size of the affected area, health effects, property damaged.)
10. Information on the mitigation of major accidents, namely:
(a) fire brigade;
(b) alarm systems;
(c) emergency plan containing systems of organisation used to fight the emergency, the alarm and the communication routes, guidelines for fighting the emergency, examples of possible accident sequences.
(d) co-ordination with the District Collector or the District Emergency Authority and its off-site emergency plan;
(e) notification of the nature and scope of the hazard in the event of an accident.
(f) antidotes in the event of a release of a hazardous chemical.]

61 (SB)(E). Disclosure of information to the Chief Inspector

1 (1) The occupier of every factory carrying on 'hazardous process' shall furnish, in writing, to the Chief inspector a copy of all the information furnished to the workers.

2 (2) A copy of compilation of Material Safety Data Sheets in respect of hazardous substances used produced or stored in the factory shall be furnished to the Chief Inspector, and the local inspector

3 (3) The occupier shall also furnish any other information asked for by the Chief Inspector from time to time for the purpose of this Act and Rules made thereunder.

61(SB)(F). Information of industrial Wastes

1 (1) The information furnished under Rules 61 (SB)C. and (SB)G shall include the quantity of the solid and liquid wastes generated per day, their characteristics and method of treatment such as incineration of solid wastes, chemical and biological treatment of liquid wastes, and arrangements for their final disposal.

2 (2) It shall also include information on the quality and quantity of a gaseous waste discharged through the stacks or other openings and arrangements such as provision of scrubbers, cyclone separators, electrostatic precipitators or similar such arrangements made for controlling pollution of the environment

3 (3) The occupier shall also furnish the information prescribed in the sub- rules (I) and (2) to the State Pollution Control Board

61(SB)(G). Review of the information furnished to workers etc.

1 (1) The occupier shall review once in every calender year and modify, if necessary, the information furnished under Rule 61 (SB)C and 61 (SB)E to the workers and to the Chief inspector.

2 (2) In the event of any change in the process or operations or methods of work or when any new substance is introduced in the process or in the event of a serious accident

1 taking place, the information so furnished shall be reviewed and modified to the extent necessary

61(SB)(H). Confidentiality of information

1 (1) The Occupier of a factory carrying on hazardous process' shall disclose all information needed for protecting safety and health of the workers to

2 (a) his workers

3 (b) the Chief Inspector

as required under Rules 61 (SB) F and 61 (S13) G If the occupier is of the Opinion that the disclosure of details regarding the process and formulations will adversely affect his business interests, he may make a representation to the Chief Inspector stating the reasons for withholding such information The Chief Inspector shall give an opportunity to the occupier of being heard and pass an order on the representation.

An occupier aggrieved by an order of Chief Inspector may prefer an appeal before the State Government within a period of 30 days. The State Government shall give an opportunity to the occupier of being heard and pass an order. The order of the State Government shall be final

61(SC)A. Medical Examination

1 (1) Workers employed in a 'hazardous process' shall be medically examined by a qualified medical practitioner hereinafter referred to as Factory Medical Officer, in the following manner:

2 (a) Once before employment, to ascertain physical fitness of the person to do the particular job;

3 (b) Once in a period of 6 months, to ascertain the health status of all the workers in respect of occupational health hazards to which they are exposed; and in cases where in the opinion of the Factory Medical Officer it is necessary to do so at a shorter interval in respect of any worker.

4 (c) The details of pre-employment and periodical medical examinations carried out as aforesaid shall be received in the Health Register in Form 17.

5 (2) No person shall be employed for the first time without a certificate of fitness in Form 17A granted by the Factory Medical Officer. If the Factory Medical Officer declares a person unfit for being employed in any process covered under sub-rule (1), such a person shall have the right to appeal to the inspector who shall refer the matter to the certifying surgeon whose opinion shall be final in this regard. if the Inspector himself is also a certifying surgeon, he may dispose of the application himself.

6 (3) Any findings of the Factory Medical Officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the certifying surgeon who shall in turn, examine the concerned worker and communicate his findings to the occupier within 30 days. If the certifying surgeon is of the opinion that the worker so examined is required to be taken away from the process for health

1 protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process, However, the worker so taken away be provided with alternate placement unless he is fully incapacitated, in the opinion of the certifying surgeon, in which case the worker affected shall be suitably rehabilitated.

2 (4) A certifying surgeon on his own motion or on a reference from an Inspector may conduct medical examination of a worker to ascertain the suitability of his employment in a hazardous process or for ascertaining his health status. The Opinion of the Certifying Surgeon in such a case shall be final. The fee required for this medical examination shall be paid by the occupier.

3 (5) The worker taken away from employment in any process under sub- rule (2) may be employed again in the same process only after obtaining the fitness certificate from the certifying surgeon and after making entries to that effect in the Health Register

4 (6) The worker required to undergo medical examination under these rules and for any medical survey conducted by or on behalf of the Central or the State Government shall not refuse to undergo such medical examination.

61(SC)B. Occupational Health Centres

1 (1) In respect of any Factory carrying on 'hazardous process' there shall be provided and maintained in good order an Occupational Health Centre with the services and facilities as per scale laid down hereunder:

2 (a) For factories employing up to 50 workers-

3 (i) the services of a Factory Medical Officer on retainer ship basis, in his clinic to be notified by the occupier. He will carry out the pre-employment and periodical medical examination as stipulated in rules. 61 (SC) A and render medical assistance during any emergency;
4 (ii) a minimum of 5 persons trained in first-aid procedures amongst whom at least one shall be always available during the working period
5 (iii) a fully equipped first-aid box.
6 (b) For factories employing 51 to 200 workers
7 (i) An occupational Health Centre having a room with a minimum floor area of 15 sq. M. with floors and wall made of smooth and impervious surface and within adequate illumination and ventilation as well as equipment as per the schedule annexed to this Rule;
8 (ii) a part-time Factory Medical Officer shall be in overall charge of the Centre who shall visit the factory at least twice in a week and whose services shall be readily available during medical emergencies;
9 (iii) One qualified and trained dresser-cum-compounder on duty throughout the working period;
10 (iv) a filly equipped first aid box in all the department

(c) For factories employing above 200 workers
(i) one full time Factory Medical Officer for factories employing up to 500 workers and one more Medical Officer for every additional 1000 workers on part thereof;
(ii) An occupational Health Centre having at least 2 rooms each with a minimum floor area of 15 Sq.m. with floors and walls made of smooth and impervious surface and adequate illuminations and ventilation as well as equipment as per the schedule annexed to this Rule;
(iii) there shall be one nurse, and dresser-cum-compounder and one sweeper-cum-ward boy throughout the working period;
(iv) the Occupational Health Centre shall be suitably equipped to manage medical emergencies.
(2) The factory Medical Officer required to be appointed under sub-rule (1) shall have qualifications included in Schedules to the Indian Medical Degrees Act of 1916 or in the Schedules to the Indian Medical Council Act, 1956 and possess a Certificate of Training in Industrial Health of Minimum three months' duration recognised by the State Government.

Provided that
i (i) a person possessing a Diploma in Industrial Health or equivalent shall not be required to possess the certificate of training as aforesaid;
ii (ii) the Chief Inspector may, subject to such conditions as he may specify, grant exemption from the requirement of this sub-rule, if in his opinion a suitable person possessing the necessary qualification is not available for appointment;
iii (iii) in case of a person who has been working as a Factory Medical Officer for a period of not less than 3 years on the date of commencement of this rule, the Chief Inspector may, subject to the condition that the said person shall obtain the aforesaid certificate of training within, a period of three years, relax the qualification.

iv (3) the syllabus of the course leading to the above certificate, and the organisations conducting the State course shall be approved by the DG FASLI or the Government in accordance with the guidelines issued by the DG FASLI.

v (4) Within one month of the appointment of a Factory Medical Officer, the occupier of the factory shall furnish to the Chief Inspector the following particulars:

vi (a) Name and address of the Factory Medical Officer

vii (b) Qualifications;

viii (c) Experience, if any; and

ix (d) the sub-rule under which appointed.

Equipment for occupational Health Centre in Factories:

1 1. A glazed sink with hot and cold water always available.

2 2. A table with a smooth top at least 180 cm X 105 cm.

3 3. Means for sterilizing instruments.

4 4. A couch.

5 5. Two buckets or containers with close fitting lids.

6 6. A kettle and spirit stove or other suitable means of boiling water.

7 7. One bottle of spiritus ammonia aromatious (120m1.).

8 8. Two medium size sponges.

9 9. Two kidney' trays.

10 10. Four cakes of toilet, preferably antiseptic soap.

11 11. Two glass tumblers and two wine glasses.

12 12. Two clinical thermometers

13 13. Two tea spoons.

14 14. Two graduated (1 20ml) measuring glasses.

15 15. One wash bottle (I000cc) for washing eyes.

16 16. One bottle (one litre) carbolic lotion 1 in 20.

17 17. Three Chairs.

18 18. One Screen.

19 19. One electric hand torch.

20 20. An adequate supply of tetanus toxied.

21 21. Coramine liquid (60 ml)

22 22. Tablets - antihistaminic, antispasmodic (25 each).

23 23. Syringes with needles - 2cc, 5cc and 10cc.

24 24. Two needle holders, big and small.

25 25. Suturing needles and materials.

26 26. One dissecting forceps.

27 27. One dressing forceps.

28 28. One scapels.

29 29. One stethoscope.

30 30. Rubber bandage - pressure bandage.

1 31. Oxygen cylinder with necessary attachments.

2 32. One blood pressure apparatus

33. One patellar Hammer.
34. One peak-flow meter for lung function measurement.
35. One stomach wash set.
36. Any other equipment recommended by the Factory Medical Officer according to specific need relating to manufacturing process
37. In addition:
1. For factories employing 51 to 200 workers—
2. Four plain wooden splints 900mm X 100mm X 6mm.
3. Two plain wooden splints 250mm X 50mm X 12mm
4. One paid artery forceps
5. Injections - Morphia, Pethidine, atropine, adrenaline, coramine, Novocan (2 each)
6. One surgical scissors:

For factories employing above 200 workers
1. Eight Plain wooden splints 900mm x 100mm x 6mm
2. Eight Plain wooden splints 350mm x 75mm x 6mm
3. Four Plain wooden splints 250mm x 50mm x 12mm
4. Two pairs artery forceps
5. Injections – Morphia, pethadine, atropine, adrenaline ceramine, movacan (4 each)
6. Two surgical scissors.

61(SC)C. Ambulance Van

(1) In any factory carrying on 'hazardous process' there shall be provided and maintained in good condition, a suitably constructed ambulance van equipped with items as per sub-rule (2) and manned by a full time Driver - cum - Mechanic and Helper trained in first aid for the purpose of transportation of serious cases of accidents or sickness. The ambulance van shall not be used for any purpose other than the purpose stipulated herein and will normally be stationed at or near to the Occupational Health Centre:

Provided that a factory employing less than 200 workers, may make arrangements for procuring such facility at short notice from nearby hospital or other places, to meet any emergency.

(2) The Ambulance should have the following equipment's:
(a) General

-- A wheeled stretcher with folding and adjusting devices, with the head of the stretcher capable of being fitted upward—
-- Fixed Suction unit with equipment.
-- Fixed oxygen Supply with equipment
-- Pillow with case - Sheets - Blankets Towels
---Emesis bag; Bed pan; - Urinal – Glass
(b) Safety Equipment-- Flares with life of 30 minutes - Flood lights-- Flash lights - Fire extinguisher dry powder type-- Insulated gauntlets.

(c) Emergency care equipment's
(i) Resuscitation

-- portable suction unit; portable oxygen units;
-- Bag-valve hand operated artificial unit;
-- Airways Mouth gag - Trachoestomy adaptors;
-- Short spine board; T.V. Fluids with administration unit;
-- B.P. Manometer; Cugg; - Stethoscope
i (ii) Immobilization

-- Long & Short boards; - wire ladder splints;
-- Triangular bandage - Long and short spine boards
i (iii) Dressings

-- Gauge pads 4" x 4" - Universal dressing 19" x 36"
-- Roll of aluminium foils; soft rollar bandages 6" x 5 yards Adhesive tape in 3" roll -safety pins;
-- Bandage sheets; - Burn sheet
i (iv) Poisoning:

- Syrup of Ipecac - Activated charcoal pre-packet in doses snake bite kit- drinking water
– pre-packet in doses.
i (v) Emergency medicines

-- As per requirement (under the advice of medical officer only)

61(SC)D
Decontamination facilities - in every factory, carrying out 'hazardous process' ,the following provisions shall be made to meet emergency.
(a) full equipped first aid box;
(b) readily accessible means of drenching with water—Workers parts of body of workers and clothing of workers who have been contaminated with hazardous and corrosive substance; and such means shall be as per the scale shown in the Table below

TABLE

No. of persons employed at any time	No. of drenching showers
(i) Upto 50 workers	2
(ii) Between 51 to 200 workers	2 + 1 for every additional 50 or part thereafter
(iii) between 201 to 500 workers	5 + for every additional 100 or part thereafter
(iv) 501 workers and above	2 - 1 for every additional 200 or part thereafter

(c) a sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times

61(SC)E.

Making available Health Records to workers

1 (1) The occupier of every factory carrying out 'hazardous process' shall make accessible the health records including the record of worker's exposure to hazardous process or as the case may be, the medical records of any worker for his perusal under the following conditions

2 (a) Once in every six months or immediately after the medical examination whichever is earlier;

3 (b) If the factory Medical Officer or the Certifying Surgeon as the case may be, is of the opinion that the worker has manifested signs and symptoms of any notifiable disease as specified in the Third Schedule of the Act;

4 (c) If the worker leaves the employment;

5 (d) If any one of the following authorities so direct;

— the Chief Inspector of Factories;

— Health Authority of Central or State Government;
— Commissioner of Workmen's Compensation;
— The Director General, Employees State Insurance Corporation,
— The Director, Employees' State Insurance Corporation (Medical Benefits); and
— The Director General, Factory Advice Service and Labour Institutes

1 (2) A copy of the up to date health records including the record of worker's exposure to hazardous process or, as the case may be, the medical records shall be supplied to the worker on receipt of an application from him. X-ray plates and other medical diagnostic reports may also be made available for reference to his medical practitioner.

61(SC)F

Qualifications, etc. of Supervisors

1 (1) All persons who are required to supervise the handling or hazardous substances shall possess the following qualifications and experience

2 (a)

3 (i) A degree in Chemistry of Diploma in Chemical Engineering or Technology with 5years experience; or

4 (ii) A Master's Degree in Chemistry or a Degree in Chemical Engineering or Technology with 2 years' experience.

The experience stipulated above shall be in process operation and maintenance in the Chemical Industry

(b) The Chief Inspector may require the supervisor to undergo training in Health and Safety.

(2) The syllabus and duration of the above training the organisations conducting the training shall be approved by the DG FASLI or the State Government in accordance with guidelines issued by the DG FASLI.

61(SC)G

For the purpose of compliance with the requirements of sub- sections (1) and (4) and (7) of Section 41-B or 41-C the Chief Inspector may, if deemed necessary, issue guidelines from time to time to the occupiers of factories carrying on 'hazardous process'. Such guidelines may be based on National Standards, Codes of Practice, or recommendations of International Bodies such as ILO and WHO.

CHAPTER V

62. Washing facilities

1 (1) (Omitted by G.O.Ms. No. 978, dated 4-5-1960).

1 (2) There shall be provided and maintained in every factory for the use of employed persons adequate and suitable facilities for washing which shall include soap and nail brushes or other suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean orderly condition.

2 (3) Without prejudice to the generality of the foregoing provisions, washing facilities shall include

3 (a) trough with taps or jets at intervals of not less than two feet; or

4 (b) wash basins with taps attached thereto, or

5 (c) taps on stand-pipes; or

6 (d) showers controlled by taps; or

7 (e) circular troughs of the fountain type, provided that the Inspector may, having regard to the needs and habits of the workers, fix the proportion in which the aforementioned types of facilities shall be installed.

8 (4)

9 (a) Every trough and basin shall have a smooth, impervious surface and shall be fitted with a waste-pipe and plug.

10 (b) The floor or ground under and in the immediate vicinity of every trough, tap, jet, wash-basin, stand-pipe and shower shall be so laid or finished as to provide smooth impervious surface and shall be adequately drained.

11 (5) For persons whose 'work involves contact with any injurious or noxious substance there shall be at least one tap for every fifteen persons; and for persons whose work does not involve such contact the number of taps shall be as follows:

Number of workers	**Number of taps**
Up to 20	1
21 to 35	2
36 to 50	3

51 to 150	4
151 to 200	5
Exceeding 200 but not exceeding 500	5 +1 tap for every 50 or fraction of 50
Exceeding 500	11 +1 tap for every 100 or fraction of 100

1 (6) If female workers are employed, separate washing facilities shall be provided and so enclosed or screened that the interiors are not visible from any place where persons of the other sex work or pass. The entrance to such facilities shall bear conspicuous

1 notice in the language understood by the workers “For Women Only” and shall also be indicated pictorially.
2 (7) The water supply to the washing facilities shall be capable of yielding at least ten litres for each person employed and shall be from such source as yields clean water suitable for the purpose.

Provided that in the case of factories carrying on hazardous processes specified in the First Schedule to the Act, the quantity of water to be available for persons employed in such manufacturing process shall be at least thirty litres for each such person.
Provided further that the Chief inspector may, in the case of any particular factory having regard to the nature of the operations carried out therein and also the practicable availability of such quantity of water, permit a smaller quantity or require a larger quantity not exceeding thirty litres per person employed, to be made available.
Provided also that the Inspector may, by order in writing, require the occupier, at such time or at such intervals as he may direct, to have samples of water tested for fitness for washing purposes at any laboratory recognised by the Chief Inspector or Health Officer.]

62-A. Drying of wet clothing

In the classes of factories mentioned in the schedule annexed hereto, facilities for safe keeping of clothing not worn during working hours and for the drying of wet clothing used in the course of work shall be provided 70[xx x].

SCHEDULE

Glass Works	Chemical Works
Engineering Workshops	Automobile Workshops
Oil Mills	Dying Works
Iron and Steel Works	Leather Tanneries
Sugar Factories	Thermal Power
Generating Stations	

63. First-aid appliance

The First-aid boxes or cupboards shall be distinctly marked with a red cross on white back-ground and shall contain the following equipment

A. For factories in which the number of persons employed does not exceed ten or (in the case of factories in which mechanical power is not used) does not exceed fifty persons:

(i) Six small size sterilized dressings.

(ii) Three medium size sterilized dressings.

i (iii) Three large size sterilized dressings

ii (iv) Three large size sterilized burn dressings.

iii (v) One (60 ml.) bottle of cetrimide solution (1%) or a suitable antiseptic solution.

iv (vi) One (60 ml.) bottle of mercurochrome solution (2%) in water.

v (vii) One (30 ml.) bottle containing sal-volatile having the dose and mode of administration indicated on the label.

vi (viii) One pair scissors.

vii (ix) One roll of adhesive plaster (2cm X 1 metre).

viii (x) Six pieces of sterilized eye pads in separate sealed packets.

ix (xi) A bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic.

x (xii) Polythene Wash bottle (1/2 litre, i.e., 500 c.c) for washing eyes.

xi (xiii) A snake-bite lancet.

xii (xiv) One (30 ml.) bottle containing Potassium Permanganate Crystals.

xiii (xv) One copy of first-aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institutes, Government of India, Bombay.

xiv B. For Factories in which mechanical power is used and in which the number of persons employed exceeds ten but does not exceed fifty

xv (i) Twelve small size sterilised dressings.

xvi (ii) Six medium size sterilised dressings

xvii (iii) Six medium size sterilized dressings.

xviii (iv) Six large size sterilized burn dressings.

xix (v) Six (15 gm) packets of sterilized cotton wool

xx (vi) One (120 ml.) bottle of cetrimide solution (1%) or a suitable antiseptic solution.

xxi (vii) One (120 ml.) bottle of mercurochrome solution (2%) in water.

xxii (viii) One (60 ml.) bottle containing sal-volatile having the dose and mode of administration indicated on the label.

xxiii (ix) One pair scissors.

xxiv (x) Two rolls of adhesives plaster (2 cm X 1 metre).

xxv (xi) Eight pieces of sterilized eye pads in separate sealed packets.

xxvi (xii) One tourniquet.

xxvii (xiii) One dozen safety pins.

i (xiv) A bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic

ii (xv) One polythene wash bottle (1/2 litre i.e., 500 c.c.) for washing eyes.

iii (xvi) A snake-bite lancet.

iv (xvii) One (30 ml.) bottle containing potassium permanganate crystals.

v (xviii) One copy of the First-aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institutes, Government of India, Bombay.
vi C. For factories employing more than fifty persons.
vii (i) Twenty-four small sterilized dressings.
viii (ii) Twelve medium size sterilized dressings.
ix (iii) Twelve large size sterilized dressings.
x (iv) Twelve large size sterilized burn dressings.
xi (v) Twelve (15 gm.) packets of sterilized cotton wool.
xii (vi) One (200 ml.) bottle of mercurochrome (2%) solution in water.
xiii (vii) One (200 ml.) bottle of cetrimide solution (1%) or a suitable antiseptic solution.
xiv (viii) One (200 ml.) bottle of sal-volatile having the dose and mode of administration indicated on the label.
xv (ix) One pair scissors.
xvi (x) One roll of adhesive plaster (6 cms X 1 metre).
xvii (xi) Two rolls of adhesive plaster (2 cms. X 1 metre)
xviii (xii) Twelve pieces of sterilized eye pads in separate sealed packets.
xix (xiii) A bottle containing 100 tablets (each of 5 grains) of aspirin or any other analgesic.
xx (xiv) One polythene wash bottle (500 c.c) for washing eyes.
xxi (xv) Twelve roller bandages 10 cms. wide.
xxii (xvi) Twelve roller bandages 5 cms. wide.
xxiii (xvii) Six Triangular bandages.
xxiv (xviii) One tourniquet.
xxv (xix) A supply of suitable splints.
xxvi (xx) Two packets of safety pins.
xxvii (xxi) Kidney tray.
xxviii (xxii) A snake-bite lancet

i (xxiii) One 30 ml bottle containing Potassium Permanganate crystals.
ii (xxiv) First-aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institutes, Bombay

Provided that items (xiv) to (xxi) need not be maintained in the standard first-aid box or cup-board
(a) where is a properly equipped ambulance room, or
(b) if at least one box containing such items and placed and maintained in accordance with the requirements of Section 45 is separately provided
D. The dressing required under items (i) and (ii), may be substituted by adhesive wound dressings approved by the Chief Inspector of Factories and other equipment or medicines that may be considered essential and recommended by the Chief-Inspector of Factories from time to time.

63-A. Notice regarding first-aid
1 (1) A notice containing the names of the persons working within the precincts of the Factory who are trained in first aid treatment and who are in charge of the First-aid boxes or

cup-boards shall be posted in every factory at a conspicuous place and near each such box or cup-board. The notice shall also indicate the work-room where the said person shall be available. The name of the nearest hospital and its telephone number shall also be mentioned prominently in the said notice.

2 (2) Without prejudice to the generality of the provisions of sub-section (3) of section 45, every first-aid treatment and the certificate of proficiency in the said treatment granted by any of the following authorities or persons namely:

3 (a) St. John's Ambulance Association

Or

(b) Civil Surgeon

Or

(c) Certifying Surgeon appointed under provisions of the Factories Act.

Or

(d) Medical Officer in charge of the ambulance room of the factory in which the said person is for the time being employed.

Or

(e) Medical Inspector of Factories/Inspector of Factories appointed under the provisions of the Factories Act.

Provided that the Chief Inspector of Factories may by an order in writing authorize any other registered medical practitioner to grant the said certificate in respect of persons employed in any particular factory.

Provided further that the Chief Inspector of Factories may at any time withdraw and revoke the said order.

Provided also that the Medical Inspector of Factories/Inspector of Factories may as and when he may so desire of consider necessary or as directed by the Chief Inspector of Factories, carry out such test or examinations of any person under whose charge any first-aid box of cupboard has been kept, he may deem necessary to assess his proficiency in first-aid treatment and may, by a written order cancel and nullify the certificate already granted to him by any other authority in which case the said person shall be deemed not to have any certificate of training in first-aid treatment."

64. Ambulance room

1 (1) Every ambulance room shall be under the charge of at least one whole-time qualified medical officer assisted by at least one qualified nurse or dresser cum-compo under, subject to condition that the Medical Officer is readily available on call during the working hours of the factory.)

2 (2) There shall be displayed in the ambulance room [113][x x x] a notice giving the name, address and telephone number of the Medical Practitioner in charge. The name of the nearest hospital and its telephone number shall also be mentioned prominently in the said notice.

3 (3) The ambulance room [114][x x x] shall be separate from the rest of the factory and shall be used only for the purpose of first-aid treatment and rest. It shall have a floor area of at least 24 sq. metres with smooth, hard and impervious walls and shall be adequately ventilated and lighted by both natural and artificial means [115][There shall be attached to it at least one latrine and urinal of sanitary type] An adequate supply of whole-some drinking water shall be provided and the following articles shall always be kept in the ambulance room or dispensary:

4 (i) A glazed sink with hot and cold water.

5 (ii) A table with a smooth top of at least 180 cms x 105 cms. dimensions.

6 (iii) Means for sterilizing instruments.

7 (iv) A couch.

8 (v) Two stretchers.

9 (vi) Two buckets or containers with close fitting lids.

10 (vii) Two rubber hot water bags.

11 (viii) A kettle and a spirit stove or other suitable means of boiling water.

12 (ix) Twelve plain wooden splints 90 mm x 100 mm. x 6 mm.

13 (x) Twelve plain wooden splints 350 mm. x 75 mm. x 6 mm.

14 (xi) Six plain wooden splints 250 mm. x 50 mm. x 12 mm.

i (xii) Six woollen blankets.

ii (xiii) Three pairs of artery forceps.

iii (xiv) One bottle of spiritus Ammonia Aromatics (120 ml.)

iv (xv) Smelling salts (60 gms).

v (xvi) Two medium size sponges.

vi (xvii) Six hand towels.

vii (xviii) “Four kidney” trays.

viii (xix) Four cakes of toilet, preferably antiseptic soap.

ix (xx) Two glass tumblers and two wine glasses.

x (xxi) Two clinical thermometers.

xi (xxii) Tea spoons-two.

xii (xxiii) Graduated (120 ml.) measuring glass-two.

xiii (xxiv) Minimum Measuring glass-two.

xiv (xxv) One wash bottle (100 cc.) for washing eyes.

xv (xxvi) One bottle (one litre) carbolic lotion 1 in 20.

xvi (xxvii) Three chairs.

xvii (xxviii) One screen.

xviii (xxix) One electric hand torch.

xix (xxx) Four first-aid boxes or cup-boards stocked to standards prescribed under clause of Rule 63.

xx (xxxi) An adequate supply of anit-tetanus toxoid

xxi (xxxii) Injections-Morphia, Pethiadine, Atropine, Adrenaline, Coramine, Novocam-6 each.

xxii (xxxiii) Coramine liquid (60 ml.).

xxiii (xxxiv) Tablets-antihistaminics, antispansmodic (25 each).

xxiv (xxxv) Syringes with needles-2 cc, 10 cc., 50 cc.

xxv (xxxvi) Surgical scissors-three.
xxvi (xxxvii) Needle holder.
xxvii (xxxviii) Suturing needles and materials.
xxviii (xxxix) Dissecting forceps-three.
xxix (xl) Dressing forceps-three.
xxx (xli) Scalpels-three.

i (xlii) Stethoscope-one.
ii (xliii) Rubber bandage pressure bandage.
iii (xliv) Oxygen cylinder with necessary attachments
iv (4) The occupier of every factory to which these rules apply, shall for the purpose of removing serious cases of accident sickness, provide in the premises and maintain in good condition a suitable conveyance unless he has made arrangements of or obtaining such a conveyance from a hospital.

Explanation: For the purposes of this rule, "qualified medical practitioner" means a person holding a qualification granted by an Authority specified in the Schedule to the Indian Medical Degree Act, 1916, or in the Schedules to the Indian Medical Council Act, 1956.
1 (5) The Chief Inspector of factories may, by an order in writing, exempt any factory from the requirements of this rule, subject to such conditions as he may specify in that order, if a hospital, ambulance room or dispensary is maintained at or within two kilometres of the precincts of the factory and such arrangements are made so as to ensure the immediate treatment of all injuries sustained by workers within the factory and for providing rest to the workers so injured.

FIRST AID LEAFLET
Shock:
1 1. Lay the patient on his back.
2 2. Stop bleeding if any.
3 3. Relieve pain by supporting injured part.
4 4. Keep the patient comfortable, but not hot. Do not cause Sweating.
5 5. Fluids maybe given in small amounts unless the patient is nauseated, unconscious, likely to be operated on, or has an abdominal wound.
6 6. Reassure and cheer up the patient.

Wounds:
1 1. Stop the bleeding, by. any of the following methods –
2 (a) Direct pressure
3 (b) Direct finger pressure into the wound in cases of large bleeding wounds
4 (c) Tourniquet (seldom needed) use only as a last resort.
5 2. Avoid touching the wound with hands or unsterile material.
6 3. Clear the wound with running water and surrounding area with soap or spirit with clean gauze washing away from the wound. Apply ready-made adhesive gauze bandage or sterile gauze and roller bandage as needed.

1 4. Keep the patient quiet: raising the extremity if it is the bleeding part, give no stimulants.
2 5. Never apply anti-septic ointment, lotion or iodine or germicide to the wound.

Abdominal wounds:
1 1. No time must be lost in sending the patient to the hospital.
2 2. Keep the patient flat.
3 3. Give nothing by mouth.
4 4. Maintain warmth.
5 5. If intestines protrude from the wound, do not attempt to touch or replace them.
6 6. Apply sterile dressing and binder as for wounds.
7 7. Provide careful, immediate transportation to the hospital.

Eye-wounds:
1 1. Removal may be attempted, if foreign body is not embedded.
2 2. Do not apply oil or ointment.
3 3. If there is a foreign body embedded in the eye ball, send the worker immediately to the doctor after applying pad and loose bandage.

Chemical Burns of the Eyes:
1 1. Immediate washing of the eye at least for fifteen minutes is of great importance.
2 2. Apply sterile bandage and send the worker immediately to the doctor.
3 3. Neutralizing agents or ointments should be used.

Suffocation:
1 1. Remove the patient from the source of danger
2 2. Make a rapid examination to ensure that the air passages are free and clean them, if necessary.
3 3. Restore natural breathing by artificial respiration, if breathing has ceased.

Electric Shock:
1 1. Remove the patient from the source of danger.
2 2. Make a rapid examination to ensure that the air passages are free and clean them, if necessary.
3 3. Restore natural breathing by artificial respiration, if breathing has ceased.

Insensibility:
1 1. Send for doctor if possible;

Pending his arrival-
1 2. Where the patient's face is pale, lay him flat and face downwards with his head turned to one side. If his face blushed or blue, raise and support the head and shoulders.
2 3. Control any serious bleeding

3 4. Loosen any tight clothing and let him have plenty of air.
4 5. Do not give anything by mouth.
5 6. If doctor is not available send the casualty to hospital.

Backbone (Spinal) Fracture:
1 1. Transport on a rigid frame. This frame may be improvised by using available board or a door.
2 2. The rigid frame may be placed on a stretcher for transportation.
3 3. If a frame cannot be improvised, transport patient on abdomen on stretcher made of canvas or blanket.
4 4. In neck fracture cases it is much better to get a doctor to the scene for danger to life is great.

Bruises:
1 1. Cold applications at first 24 - 48 hours.
2 2. Later heat - after 24 - 48 hours.

Burns:
1 1. Act quickly
2 2. Put the affected part in cold water.
3 3. Pour water over bums that cannot be immersed (cold water relieves pain, reduces fluid loss).
4 4. Cover affected area with a sterilized dressing.

Snake bite:
Calm and reassure the patient, immobilise the bitten limb by splinting it. Wash and cool the wound with soap water. Do not cut, rub, or suck the bite. Take a doctor. Press hard over wound for 15 minutes. Do not remove cloth if it has been placed.

65. Canteens

1 (1) Rules 65 to 71 shall come into force in respect of any factory or factories on such dates as the State Government may, by notification in the official Gazette, appoint in this behalf.

1 (2) The occupier of every factory notified by the State Government, and wherein more than two hundred and fifty workers are ordinarily employed shall provide in or near the factory an adequate canteen according to the standards prescribed in these rules.
2 (3) The occupier of factory notified by the State Government under Section 46 shall submit for the approval of the Chief Inspector, plans and site plan in triplicate, of the building to be constructed or adopted for use as a canteen and such a building shall be in accordance with the plans approved by the Chief Inspector and shall satisfy such condition or conditions as may be imposed, if any, by the Chief Inspector.[116][to ensure conformity with these rules or the Act.]
3 (4) The canteen building shall be situated not less than fifty feet from any latrine, urinal, boiler house, coal stocks, ash pumps and any other source of dust, smoke or obnoxious fumes:

Provided that the Chief Inspector may in any particular factory relax the provisions of this sub-rule such extent as may be reasonable in the circumstances and may require measures to be adopted to secure the essential purposes of this sub-rule.

1 (5) The canteen building shall be constructed in accordance, with the plans approved by the Chief Inspector and shall accommodate at least a dining hail, kitchen, store room, pantry and washing place separately for workers and for utensils. The minimum height of the building shall be not less than 12 feet and all the walls and roof shall be of suitable heat resisting materials and shall be waterproof.

2 (6) In a canteen the floor and inside walls up to a height of four feet from the floor shall be made of smooth and impervious material; the remaining portion of the inside walls shall be made smooth by cement plaster or in any other manner approved by the Chief Inspector.

3 (7) The doors and windows of a canteen building shall be of fly-proof construction and shall allow adequate ventilation.

4 (8) The canteen shall be sufficiently lighted at all times when any person has access to it.

5 (9)

6 (a) In every canteen

7 (i) all inside walls of rooms and all ceilings and passages and staircases shall be lime washed or colour washed at least once in every year or painted once in three years dating from the period when last lime washed or painted as the case may be;

8 (ii) all wood work shall be varnished or painted once in three years dating from the period 1hen last varnished or paints;

9 (iii) all internal structural iron or steel work be varnished or painted once in three years dating from the period when last varnished or paints;

Provided that inside walls of the kitchen shall be lime washed once in every four months.

117[x x]

1 (10) The precincts of the canteen shall be maintained in a clean and sanitary condition. Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance. Suitable arrangements shall be made for the collection and disposal of garbage.

66. Dining hall

1 (1) The dining hail shall accommodate at a time at least 30 per cent of the workers working at a time:

Provided that, in any particular factory or in any particular class of factories, 118[the Inspector of Factories may by an order in writing in this behalf] alter the percentage of workers to be accommodated.

1 (2) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs, shall be not less than 10 square feet per diner to be accommodated as prescribed in sub- rule (1).

2 (3) A portion of the dining hail and service counter shall be partitioned of and reserved for women workers in proportion to their number. Washing places for women shall be separated and screened to secure privacy.
3 (4) Sufficient tables, chairs, or benches shall be available for the number of diners to be accommodated as prescribed in sub-rule (1):

Provided that where the Chief Inspector is satisfied that satisfactory alternate arrangements are made; he may exempt any particular factory or class of factories from the provisions of this sub-rule.
1 (5) Soaps and towels should be provided at the washing places in the canteen for the use of the workers.

67. Equipment
1 (1) There shall be provided and maintained sufficient utensils, crockery, cutlery, furniture and any other equipment necessary for the efficient running of the canteen. Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.
2 (2) The furniture, utensils and other equipment shall be maintained in a clean and hygienic condition. A service counter, if provided, shall have a top of smooth and impervious material. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipment.
3 (3) Food and food materials should be stored in fly-proof safes and handled with the help of wooden ladles or suitable metal forceps whichever is convenient. Vessels once used should be scaled before being used again.

68. Prices to be charged

1 (1) Food, drinks and other items served in the canteen shall be served on a non-profit basis and the prices charged shall be subject to the approval of the Canteen Managing Committee.[119][x x x].

Provided that, where the canteen is managed by a Worker's Co-operative Society in accordance with the provisions of sub-rule (6) of Rule 70, such society may be allowed to include in the working charges to be incurred for the food, the food stuff served, a profit up to five per cent on its working capital employed in running the canteen.
1 (2) In computing the prices referred to in sub-rule (1) the following items of expenditure shall not be taken into consideration, but will be borne by the occupier
2 (a) the rent for the land and building;
3 (b) the depreciation and maintenance charges of the, building and equipment provided for the canteen;
4 (c) the cost of purchase, repairs and replacement of equipment including furniture. crockery, cutlery, and utensils;
5 (d) the water charges and expenses for providing lighting and ventilation
6 (e) the interest for the amount spent on the provision and maintenance of the building, furniture and equipment provided for the canteen;

7 (f) the cost of fuel required for cooking or for heating stuffs or water; and
8 (g) the wages to the employees servicing of the canteen and the cost of uniforms, if any provided to them.
9 (3) The charges per quantity of foods stuffs, beverages and any other item served in the canteen shall be conspicuously displayed in the language understood by the majority of workers.

69. Accounts

1 (1) All books of accounts, registers and any other documents used in connection with the running of the canteen shall be produced on demand to an inspector of Factories.
2 (2) The accounts pertaining to the canteen shall be audited, once in every twelve months, by registered accountants and auditors. The balance sheet prepared by the said auditors shall be submitted to the canteen managing committee not later than two months after the closing of the audited accounts:

Provided that the accounts pertaining to the canteen in a Government Factory having its own accounts Department may be audited by such Department.

70. Managing Committee

1 (1) The manager shall appoint a Canteen Managing Committee which shall be consulted, from time to time as to
2 (a) the quality and quantity of food stuffs to be served in the canteen
3 (b) the arrangement of the menus;

(c) times of meals in the canteen; and
(d) any other matter as may be directed by the committee.
(2) The Canteen Managing Committee shall consist of an equal number of persons nominated by the occupier and elected by the workers. The number of elected workers shall be in the proportion of one for every 1,000 workers employed in the factory, provided that in no case shall there be more than five or less than two workers on the committee and in case where the workers refuse to elect their representatives, the occupier shall himself nominate the workers' representatives.
(3) The occupier shall appoint from among the persons nominated by him, a Chairman to the Canteen Managing Committee.
(4) The manager shall determine and supervise the procedure for elections to the Canteen Managing Committee.
(5) A Canteen Managing Committee shall be dissolved by the manager two years after the election, no account being taken of a by-election or its constitution, as the case may be.
(6) Where the workers of a factory in which a canteen has been provided by the occupier in accordance with Rules 65 to 67 for the use of the workers, desire to run the canteen by themselves, on a co-operative basis with share capital contributed by themselves, the management may permit them to run the canteen in accordance with the bye-laws of the cooperative canteen, the Madras Co-operative Societies Act, 1932, or the Hyderabad Cooperative Societies Act, 1952 and the rules framed thereunder, subject to such conditions as

the Chief Inspectors may, in consultation with the Registrar of Co-operative Societies, Telangana, impose.
(7) The provisions of sub-rule (1) of Rule 68, sub-rule (2) of Rule 69 and sub-rules (1) to (5) of Rule 70 shall not apply to canteens which are run on co-operative basis by the workers themselves and which are recognized by the Chief Inspector.

71.
Annual medical examination of fitness of each member of the Canteen staff who handles food stuffs shall be carried out by the factory medical officer or the certifying surgeon which should include the following:
i (i) routine blood examination;
ii (ii) routine and bacteriological testing of faeces and urine for germs, dysentery and typhoid fever;
iii (iii) any other examination including chest X-Ray that may be considered necessary by the factory medical officer or the Certifying Surgeon. Any person who, in the opinion of the Factory Medical Officer or Certifying Surgeon, is unsuitable for employment on account of possible risk to the Health of other shall not be employed as canteen staff.

71-A.
The provisions of Rules 65 to 70 may be relaxed by the Chief Inspector, subject to such conditions as he may deem fit in the case of factories belonging to the same business group as amalgamation where centralized cooking in an approved industrial canteen is arranged for. Adequate arrangements to the satisfaction of the Chief Inspector shall, however, be made in such cases for the conveyance and proper distribution of the food so cooked to the workers concerned as if separate canteens had actually been provided at site, in the factories covered by this relaxation.
72. Shelters, rest rooms and lunch rooms
1 (1) Omitted by G.O, Ms. No. 978, dated 4-5-1960].
2 (2) The occupier of factory who is required to provide shelters, rest rooms and lunch rooms shall submit, for the approval of the Chief Inspector, detailed plans in triplicate of the building to be constructed or adapted. Such buildings shall be in accordance with the plans approved by the Chief Inspector and shall satisfy such condition or conditions as may be imposed by the Chief inspector [120][to ensure conformity with this rule or the Act.]
3 (a) The building shall be soundly constructed and all the walls and roof shall be of suitable heat-resisting materials and shall be water-proof. The floor and walls to a height of 90 cms shall be so laid or finished as to provide a smooth, hard and impervious surface.
4 (b) The height of every room in the building shall be not less than 3.65 metres from floor level to the lowest part of the roof and there shall be at least 12 square feet of floor area for every person employed. Provided that (i) workers who habitually go home for their meals during the rest periods may be excluded in calculating the number of workers to be accommodated and (ii) in the case of factories in existence at the date of commencement of the Act. Where it is impracticable, owing to lack of space to provide 1/2 sq. metre of floor area for each person, such reduced floor area per person shall be provided as may be approved in writing by the Chief Inspector.

5 (c) Effective and suitable provision shall be made in every room for securing and maintaining adequate ventilation by the circulation of fresh air and there shall also be provided and maintained sufficient and suitable natural or artificial lighting.
6 (d) Every room shall be adequately furnished with chairs or benches with back-rests.
7 (e) Sweepers shall be employed whose primary duty it is to keep the rooms, building and precincts thereof in a clean and tidy condition.

(ee) [121][Suitable provision shall be made in every room for supply of drinking water and facilities for washing;]

(f) The chief Inspector may, for reasons to be recorded in writing, relax the provisions of this rule subject to such conditions as he may deem fit to impose.
(3) [122][The lunch rooms shall
(a) comply with the requirements laid down in clauses (a) to (f) of sub- rule (2); and
(b) be provided with adequate number of tables with impervious tops for the use of workers for taking food.

73. Crèches
1 (1) The occupier of a factory who is required to provide a crèche under Section 48 shall submit for the approval of the Chief Inspector, detailed plans in triplicate of the crèche building to be constructed and such a building shall be in accordance with the plans approved by the Chief Inspector and satisfy such condition or conditions as may be imposed by the Chief Inspector.
2 (2) The crèche shall be conveniently accessible to the mothers of the children accommodated therein and so far as is reasonably practicable it shall not be situated in close proximity to any part of the factory where obnoxious fumes, dust or odours are given off or in which excessively noisy processes are carried on.
3 (3) The building in which the crèche is situated shall be soundly constructed and all the walls and roof shall be of suitable heat-resisting materials and shall be water-proof. The floor and internal walls of the crèche to a height of 1.20 metres around shall be so laid or finished as to provide a smooth impervious surface.
4 (4) The height of the rooms in the building shall be not less than 3.65 metres from the floor to the lowest part of the roof and there shall be not less than 1.86 metres of floor area for each child to be accommodated.
5 (5) Effective and suitable provision shall be made in every part of the crèche for securing and maintaining adequate ventilation by the circulation of fresh air.
6 (6) The crèche shall be adequately furnished and equipped and in particular there shall be one suitable cot or cradle with the necessary bedding for each child (provided that for children over two years of age it will be sufficient if suitable bedding is made available) at least one chair or equivalent seating accommodation for the use of each mother while she is feeding or attending to her child and a sufficient supply of suitable toys for the older children.
7 (7) [123][The crèche shall be ordinarily provided with one cradle for every 30 women workers [124][x x] employed in the factory subject to a minimum number of six cradles.]

8 (8) A suitably fenced and shady open air playground shall be provided for the old children:

Provided that the Chief Inspector may by order in writing exempt any factory from compliance with this sub-rule if he is satisfied that there is not sufficient space available for the provision of such playground.

74. Wash room

There shall be in or adjoining the crèche a suitable wash room for the washing and their clothing. The wash room shall conform to the following standards:

(a) The floor and internal walls of the room to a height of 3 feet shall be so laid or finished as to provide a smooth impervious surface. The room shall be adequately lighted and ventilated and the floor shall be effectively drained and maintained in a clean and tidy condition.

(b) There shall be at least one basin or similar vessel for every four children accommodated in the crèche at any one time together with supply of water provided, if practicable, through taps from a source approved by the Health Officer. Such source shall be capable of yielding for each child a supply of at least five gallons of water a day.

(c) An adequate supply of clean clothes, soap and clean towels shall be made available for each child while it is in the crèche.

(d) Adjoining the washing room referred to above, a septic type latrine shall be provided for the sole use of the children in the crèche. The design of this latrine and the scale of accommodation to be provided shall be determined by the Health Officer. The crèche latrine shall always be kept clean and in a sanitary condition by a sweeper specially employed for the purpose.

75. Supply of milk and refreshment

At least half a pint of clean pure milk shall be available for each child on every day it is accommodated in the crèche and the mother of such a child shall be allowed in the course of her daily work-intervals of at least 15 minutes to feed the child. For children above two years of age there shall be provided in addition an adequate supply of wholesome refreshment.

76. Clothes for crèche staff

The crèche staff be provided with suitable clean clothes for use while on duty in the crèche.

76-A. [125][Exemption from the provisions of crèche

1 (1) In factories where the number of married 84[women] workers or widows employed does not exceed 15 or where the factory works for less than 180 days in a calendar year, the Chief Inspector may exempt such factories from the provisions of Section 48 and Rules 73 to 76 if he is satisfied that alternate arrangements as stipulated under sub-rule (2) are provided by the Factory.

2 (2)

3 (a) The alternate arrangements required in sub-rule (1) shall include a crèche building which has a minimum accommodation at the rate of 2 sq.m. per child and constructed in accordance with the plan approved by the Chief Inspector.

(b) The crèche building shall have

(i) a suitable wash room for washing of the children and their clothing;

(ii) adequate supply of and soap clean clothes and towels; and
(iii) adequate number of female attendants who are provided with suitable clean clothes for use while on duty to look after the children in the crèche.
(3) The exemption granted under sub-rule (1) may at any time be withdrawn by the Chief Inspector if he finds, after such enquiry as he may deem fit, that the factory has committed a breach of this rule.

76-B. Welfare Officers

1 (1) Number of Welfare Officers: The occupier of every factory where 500 or more workers, are employed, shall appoint at least one Welfare Officer:

Provided that where a group of factories in close proximity belong to the same management, the Chief Inspector may exempt the said factories from this rule in so far as it requires the appointment of a separate Welfare Officer in respect of each such factory subject to such conditions as he may impose:
Provided further that where the number of workers exceeds, 2,000 one additional Welfare Officer shall be appointed for every additional 2,000 workers or fraction thereof over 500; and where there are more than one Welfare Officer, one of them shall be called the Chief Welfare Officer and the others Assistant Welfare Officers. 85

1 (2) Qualifications: A person shall not be eligible for appointment as Welfare Officer unless he possesses

2 (a) a Degree in Arts/Science/Commerce or in Law of any University;

3 (b) [126][A Post Graduate Degree or Diploma covering Labour Legislations with case law, Industrial relations, Personnel Management, Human Resource Management and other allied subjects with Labour Welfare as a Special subject, of not less than two years' duration conducted by a University of the State of Telangana or recognised by the Government of Telangana.]

[127]
[Provided that the one-year Post Graduate Diploma Course in Industrial Relations and Personnel Management awarded by the Osmania University, Hyderabad up to the academic year 1991-92 shall be treated as recognised and equivalent qualification to the Diploma in Industrial Relations and Personnel Management covering Labour Welfare.] And
(c) adequate knowledge of Telugu Language. Provided that the State Government may grant exemption in suitable cases from the condition of possessing the qualification of a Degree or a Diploma in Social Science from a recognised Institution.
(3) Recruitment of Welfare Officers

i (i) The post of Welfare Officer shall be advertised in two newspapers having a wide circulation in the State, one of which should be an English newspaper.
ii (ii) Selection for appointment of the post of Welfare Officer shall be made from among the candidates applying for the post by a committee appointed by the occupier of the factory.

iii (iii) The appointment when made shall be notified by the occupier to [128] [x x x] the Chief Inspector giving the details of the qualifications, age, pay, previous experience and other relevant particulars of the Officer appointed and the terms and conditions of his service.
iv (iv) The required number of Welfare Officers shall be appointed within 120 days from the date on which such appointments are due to be made under sub-rule (1) of Rule 76-B or from the date of resignation dismissal/termination of services of any Welfare Officer.
v (4) Conditions of service of Welfare Officers:
vi (i) [129][Welfare Officers shall be given appropriate status corresponding to the status of a member of the Executive Staff of the Factory and shall be fixed in a scale of pay which shall not be less than
vii (a) Rs. 4400-8700—Revised Scale of 1993 (Plus such allowances as applicable to similar pay scale) obtaining in the concerned factory establishment in the case of Chief Welfare Officer; and
viii (b) Rs.3 11 0—63 80—Revised scale of 1993 (Plus such allowances as applicable to similar pay scale) obtaining in the concerned factory establishment in the case of Welfare Officer].
ix (ii) The Conditions of service of Welfare Officer shall be the same as those of the other members of the executive staff of corresponding status in the factory.
x (iii) The services of a Welfare Officer shall not be dispensed with, nor he shall be reverted, without the written concurrence of the [130][Director of Factories], Hyderabad who shall record reasons therefor.
xi (iv) No punishment such as withholding of increments including stoppage at any efficiency bar, reduction to a lower stage in the time scale, suspension dismissal or termination of service, except censure, shall be imposed by the management on a Welfare Officer, except with the previous concurrence of the 90[Director of Factories].
xii (v) A Welfare Officer, who has been dismissed from service or whose services have been terminated in any other manner than as provided in clause (iv) above may within 30 days from the date of receipt of the order by him, appeal to the State Government against the order of punishment made by the management with the concurrence of the 90[Director of Factories] and the decision of the State Government thereon shall be final:

Provided that when the management terminates the service or probation of a Welfare Officer the reasons for such a termination of service or probation shall be reported to the State Government or such authority, as may be, empowered by them in this behalf.
1 (5) Duties of Welfare Officers: The duties of a Welfare Officer shall be
2 (i) to establish contacts and hold consultations with a view to maintaining harmonious relations between the factory management and workers
3 (ii) to bring to the notice of factory management, the grievances of workers, individual as well as collective, with a view to securing their expeditious redress and to act as a Liaison Officer between the management and labour;
4 (iii) to study and understand the point of view of labour in order to help the factory management to shape and formulate labour policies and to interpret these policies to the workers in language they can understand;

5 (iv) to advise on the fulfilment by the concerned departments of the factory management of obligations statutory or otherwise concerning the application of the provisions of the Factories Act, 1948 and the rules made thereunder and to establish liaison with the Inspector of Factories, and the medical services concerning medical examination of employees, health records, supervision of hazardous jobs, sick visiting and convalescence, accident prevention and supervision of safety committees, systematic plant inspection, safety education, investigation of accidents, maternity benefits and workmen's compensation;

6 (v) to advise on fulfilment by the management and the concerned departments of the factory of their obligations, statutory or otherwise, concerning regulation of working hours, maternity benefit, compensation for injuries and sickness and other welfare and social benefit measures;

7 (vi) to advise and assist the management in the fulfilment of its obligations, statutory or otherwise concerning prevention of personal injuries and maintaining a safe work environment, in such factories where a Safety Officer is not required to be appointed under the enabling provisions under Section 40-B;

8 (vii) to encourage the formation of works and joint production committees, co-operative societies, and welfare committees and to supervise their work;

9 (viii) to encourage provision of amenities such as canteens, shelters for rest, creches, adequate latrine facilities, drinking water, sickness and benevolent scheme payments, pension and superannuation funds, gratuity, payments, granting of loans and legal advice to workers;

10 (ix) to help the factory management in regulating the grant of leave with wages and explain to workers the provisions relating to leave with wages and other leave privileges and to guide the workers in the matter of submission of applications for regulating authorised absence;

i (x) to advise on provision of welfare facilities such as housing facilities, food-stuffs, social and recreational facilities and sanitation and on individual personal problems and on the education of children;

ii (xi) to advise the factory management on questions relating to training of new starters, apprentices, workers on transfer and promotion, instructors and supervisors; supervision and control of notice board and information bulletins; to further the education of workers and encourage their attendance at technical institutes;

iii (xii) to suggest measures which will serve to raise the standard of living of workers and in general, promote their wellbeing;

iv (xiii) Welfare Officers not to deal with disciplinary cases or appear on behalf of the management against workers: No Welfare Officer shall deal with any disciplinary case against a worker or appear before a conciliation office, or in a Court or Tribunal on behalf of the Factory management against any worker or workers.

v (6) Powers of exemption: The State Government may by notification in the Official Gazette exempt any factory or class or description of factories from the operation of all or any of the provisions of this Rule subject to compliance with such alternative arrangements, as may be approved by the State Government.

CHAPTER VI

WORKING HOURS OF ADULTS

77. Compensatory holidays

1 (1) Except in the case of workers engaged in any work which for technical reasons must be carried on continuously throughout the day, the compensatory holidays to be allowed under sub-section (1) of Section 52 of the Act, shall be so spaced that not more than two holidays are given in one week.

2 (2) The manager of the factory shall display, on or before the end of the month in which holidays are lost, a notice in respect of workers allowed compensatory holidays during the following month and of the dates thereof, at the place at which the Notice of Periods of Work prescribed under Section 61 is displayed. Any subsequent change in the notice in respect of any compensatory holiday shall be made not less than three days in advance of the date of holiday.

3 (3) Any compensatory holiday or holidays to which a worker is entitled shall be given to him before he is discharged or dismissed and shall not be reckoned as part of any period of notice required to be given before discharge or dismissal.

4 (4) 131[The manager shall, in any prescribed muster roll or record of attendance, indicates the days on which the worker was required to work and the days on which he was allowed compensatory holidays.]

77-A.

Adult workers engaged in factories specified in the Schedule annexed hereto shall be exempted from the provisions of Section 58.

SCHEDULE

1 (1) All workers in Newspaper Presses.

2 (2) All workers in Iron and Steel, Aluminium, Copper and Brass Rolling Mills.

3 (3) All workers in Hotels and Restaurants.

4 (4) All workers in Tea Factories.

5 (5) Workers in public utility transport workshops (where this exemption is considered necessary by the Chief Inspector).

6 (6) Any other classes of workers in the auxiliary sections of large factories where steam or electricity is generated or transformed for use in the factory, who may be declared to be so exempted in writing by the Chief Inspector on application by the Manager, in consideration of the essential or continuous nature of the duties involved.

7 (7) Any special class of workers in any other factory where overlapping shifts are considered necessary by the Chief Inspector.

8 (8) 132[All workers in all factories to the extent of thirty minutes where the overlapping of shifts is intended to facilitate the smooth change-over of shifts without interruption of work provided that both the groups of workers do not carry out the same work at the same time and subject to provisions of Section 54.]

78. 133[x x x]

78-A.

The cash equivalent of the advantage accruing through the concessional sale to a worker of food grains and other articles shall be computed at the end of every wage period fixed under

provisions of the Payment of Wages Act, 1936 (Central Act No. IV of 1936). For the purpose of computing the cash equivalent of the advantage accruing through the concessional sale to a worker of food grains and other articles, the difference between the value of food grains and other articles at the average market rates prevailing during the wage period in which there was overtime work, and the value of food grains and other articles supplied at concessional rates shall be calculated and allowed for the overtime hours worked; Provided that, in the case of factories which are already following a different procedure for calculating the cash equivalent of the advantage accruing through the concessional sale of food grains and other articles at the time of commencement of this rule the Chief Inspector may by order in writing permit them to adopt such different procedure if it is not less favourable than the one prescribed in this Rule.

[134][78-B. Exemption for Double Employment

An adult worker may be employed in more than one factory on the same day if

(a) he is employed or engaged on a part-time basis to do any work; or

(b) he is employed or engaged to carry out any particular work of an occasional nature otherwise than as a full-time employee; or

(c) the occupier or owner is unaware that the worker is employed on a full-time basis in any other factory.]

78-C.

Period of overtime work shall be entered in overtime slips in duplicate, a copy of which duly signed by the manager or by a person duly authorised by him shall be given to the worker immediately after completion of the overtime work.

79. Notice of periods of work

The notice of periods of work for adults required by Sec.6 1 (1) and the notices of periods of work for the children required by Sec.72 (1) shall be in Form No.11 and shall be exhibited in a prominent place at or near the entrance to the factory both in English and Telugu.

[135][Provided that in case of factories working only in a single shift, the said notice may be in such other form as is sufficient to clearly set out the particulars required by the said sections.]

80. 136 [Register of Adult workers

Every factory shall maintain a muster roll in such form and in such manner as is convenient for the factory so that the name of the adult worker, the nature of his work, the group (if any) in which he is included and the relay to which he is assigned where his group works in shifts shall be contained in the muster roll together with any other particulars that the manager may include and such record shall be preserved for a period of three years after last entry.]

81. [137][Persons defined to hold positions of supervision or management and confidential positions

The following persons, by whatever designation called, are defined for the purposes of Section 64(1) exempting them from the provisions of Chapter VI of the Act, namely

(a) Managers and persons of managerial cadre, secretaries, administrative officers, accountants, personnel officers;

(b) Engineers, Technologists, Chemists, Metallurgists;

(c) Technical and Scientific personnel engaged in design, research or development;

(d) Stenographers, personnel clerks, private secretaries, cashiers or persons discharging similar functions;
(e) Any other person declared by the Chief Inspector, upon an application by the occupier or manager, to be holding a position of supervision or management or confidential positions, provided that the person shall be deemed to have been so declared if the Chief Inspector has not communicated a refusal to the applicant within thirty days of the application being sent.]

82. 138[x x x]
83. [x x x]
84. 139[Exemption of certain adult workers
(a) All adult workers engaged in the factories specified in Column (1) of the Schedule hereunder on the work specified in Column (3) shall be exempted from the provisions of Sections specified in Column (4) subject to the special conditions, if any, specified in Column (5) thereof.
(b) Except in the case of urgent repairs, the exemptions shall be subject to the following general conditions, namely:
(i) the total number of hours of work in any day, shall not exceed ten;
(ii) the spread over, inclusive of intervals for rest, shall not exceed twelve hours in any one day;
(iii) the total number of hours of work in a week including over-time, shall not exceed sixty;
(iv) the total number of hours of over-time shall not exceed fifty in any one quarter of a calendar year;
(v) the total number of hours of work without an interval does not exceed six;
(vi) In case of exemption from Sec.55, sufficient time, though not a fixed period to the satisfaction of the Inspector shall be allowed to enable the workers to have their meals;
(vii) Exemption from Sec.6 1 wherever specified, shall apply in so far as it relates to the specification of the periods of rest-interval in Form II of the Telangana Factories Rules, 1960.

84.A. Savings
Nothing in these rules shall render any person liable to any punishment or penalty whatsoever, by reason of anything done or omitted to be done by him contrary to the provisions of these rules between the 15th March, 1984 and the date of publication of the rules in the Telangana Gazette.

THE SCHEDULE PRESCRIBED UNDER RULE 84

Class of Factories	Section of the Acts empowering the grant of exemption	Nature of Work	Extent of Exemption	Conditions
1	2	3	4	5

1. All Factories	64(2)(a) & 64(3)	URGENT REPAIRS: The following shall be considered to be urgent repairs: (a) Repairs to any part of the machinery, plant or structure of factory which are of such a nature that delay in their execution could involve danger to human life or safety or stoppage of manufacturing process. (b) Breakdown repairs to motive power, transmission or other essential plant or machinery of other factories, collieries railways, dockyards and harbours, motor transport, gas, electrical generating & transmission, pumping or similar essential or public utility services carried out in general engineering works and foundries and which are necessary to such concerns to maintain their main manufacturing	Sections 51, 52, 54, 55, 56 & 61	i) No worker shall be employed on such repairs for more than 12 hours on any one day: or 3 hours during any three consecutive days or 66 hours during each period of seven consecutive days commencing from his first employment on such repairs. (ii) Notices shall, be sent to the Inspector within 24 hours of the commencement of the work describing the nature of the urgent repairs stating the name of persons employed and the exact time of commencement of work and the probable period required for its completion. A copy of this above notice shall be displayed at a conspicuous place in the factory within an hour after the workers are engaged on urgent repairs. (iii) Exemption from the provisions of section 54 of the Act, shall apply only in the case of male adult workers.

process, production or service during working hours, or according to Schedule. (c) Repairs to Deep Sea Ships, Ferries, Dredgers, Commercial Aircraft & such other like public utility service done in the factory which are essential to enable such Ships, Dredgers, Ferries or Air Crafts to leave port at proper time or continue their normal operations in set or air worthy Conditions, as the case may be. (d) Repairs in connection with a change of1 motive power, for example, from steam to electricity or vice versa when such work cannot possibly be done without stoppage of the normal manufacturing process. Explanation: periodical cleaning or repairs to any machinery shall not be deemed to be urgent repairs				(iv) A running record of work done such repairs shall be maintained in muster roll. (v) No worker shall be employed, for more than 14 consecutive days (vi) he total number of hours of work without interval does not exceed six
2. All Factories	64(2)(b) & 64(3)	(i) Work in the machine shops, the smithy or the foundry or in connection with the mill gearing the electric driving or lighting apparatus, the mechanical or electrical lifts of the	Sections 51, 54, 55, 56 & 61	The exemptions shall be granted only in respect of a limited number of persons to be given by the Chief Inspector on application by the manager through the inspector concerned.

steam or water pipes or pumps of a factory.

(ii) Work of examining or repairing any machinery or other part of the plant which is necessary for carrying on the work in the factory.	Sections 51, 54, 55, 56 & 61			The exemptions shall be granted only in respect of a limited number of persons to be given by the Chief Inspector on application by the manager through the inspector concerned.
iii) Work in boiler houses and engine rooms such as lighting fires in order to raise steam or generate gas preparatory to the commencement of regular work in the factory.	-do-			-do-
(iv) Clerks engaged in the preparation of pay	-do-			The Exemptions shall be only for the preparation of pay rolls
2. All Factories	64(2)(b) & 64(3)	(i) Work on lighting, ventilating and humidifying apparatus.	-do-	-do-
ii) Work performed by fire service personnel.	-do-			-do-
(iii) Work of persons engaged in loading or unloading or transporting raw materials or products of manufacture, where such	Sections 51, 54, 55, 56 & 61			
iv) Work of persons engaged in packing, dispatch or raw materials or products of manufacture where such work is intermittent	-do-			

4. All Factories	64(2)(d) & 64(3)	Work on automatic equipment engaged in galvanising and anodising and enamelling.	Sections 51,52 54, 5, 56 &58	(1) The limits of work inclusive of overtime shall not exceed those mentioned in sub-sect Ion (4) of Section 64. (2) The exemptions shall be granted only in respect of

				adult male workers by the Chief Inspector
5. All Factories	64(2)(d) proviso to clauses (i) &(ii) of sub-sec. (4) of Section 64	Shift workers engaged in any work which for technical or other compelling reasons must be carried on continuously, shall be allowed to work the whole or a part of a subsequent shift as substitutes in the absence of workers who have failed to report for duty.	Sections 51, 52,54,55 & 56	(1) No worker shall be employed on two consecutive 8 hours shifts for more than twice in 7 days' period subject to a limit of 6 in a calendar month. (2) The next shift worker shall not commence unless a period of 8 hours has elapsed. (3) The spread over, shall not exceed 16 hours on such days. (4) The total weekly hours ordinarily provided for such worker in the notice of periods of work shall not be exceeded by 8 hours due to employment. (5) Notices shall be sent to the Inspector within 24 hours of the commencement of the subsequent shifts describing the circumstances under which the worker was required to work in the subsequent shifts. (6) The exemption shall be granted to a limited number or male adult workers by

the Chief Inspector on an application made by the manager in advance.				
6. All Factories	64(2)(h)	Work in engine room or boiler houses or in attending to power plant or transmission machinery.	Sections 51 &52	Workers engaged shall not lose more than 2 weekly holidays in a calender month.
7. All Factories	64(2)(i) & 64(3)	Loading and unloading of railway wagons, lorries or trucks at siding and loading and unloading road trucks and other vehicles in the premises of the factory.	Sections 51, 52, 54, 55, 56 & 61	
8. Asbestos Factories	64(2)(d) & 64(3)	Asbestos cement pipes and allied products manufacturing.	Sections 52, 55 & 61	
9. Boiled Rice Mills	64(2)(b) & 64(3)	Paddy soaking, boiling, drying, lifting and storing	Sections 51, 54, 55, 56 & 61	
10. Breweries, wineries, distilleries	64(2)(d) & 64(3)	All continuous process work.	Sections 52, 55 & 61	Exemptions from the provisions of Section 52 of the Act, shall apply in so far as it relates to the requiring of workers to work on first day of the week.
11. Bricks, tiles & potteries and lime kilns	64(2)(d) & 64(3)	Kiln firing.	Sections 55 & 61	-do-
12. Canning industry & perfumeries	64(2)(f)	All works	Sections 51, 52 & 54	Such workers shall not lose more than 2 weekly holidays in calendar month.
13. Card board factories	64(2)(d) & 64(3)	All continuous process work.	Sections 52, 55 & 61	Exemptions from the provisions of Section 52 of the Act, shall apply in so far

as it relates to the requiring of workers to work on the first day of the week				
14. Cashew Nut factories	64(2)(b) & 64(3)	Work of persons engaged in roasting process in Cashew nut industry.		Sections 55 & 56
15. Chemical factories	64(2)(b) & 64(3)	All Continuous process work	Sections 52, 55 & 61	Exemptions from provisions of Section 52 of the Act, shall apply in so far as it relates to the requiring of workers to work on first day of the week.
16. Cinema Studios	64(2)(b) & 64(3)	Workers, reflectors, shifting furniture on set, clap boys, cameramen and sound department in the process of shooting of Films.		Sections 51,54,55, 56 & 61
17. Coffee & Cashew nut factories	64(2)(g) & 64(3)	Receiving, drying, lifting and storing unshelled coffee and cashew nut.	Sections 52 & 55	Such workers shall not lose more than 2 weekly holidays in calendar month.
18. Cotton ginning & pressing factories	64(2)(f)	Fitters, Oilmen, belt and Cope men, turners and Blacksmiths.	Sections 51, 52 & 54	-do-
19. Dali Mills	64(2)(b) & 64(3)	Drying and peeling skins of broken Dali		Sections 55, 56 & 61
20. Distilling sandal-wood& other essential oils	64(2)(d) & 64(3)	Distilling and condensing process	Sections 55 & 61	Exemptions from provisions of Section 52 of the Act, shall apply in so far as it relates to the requiring of workers to work on first day of the week.
21.Dry tobacco returning, wetted tobacco	64(2)(d) & 64(3)	All continuous process work.	Sections 52, 55, 56 & 61	Exemptions from provisions of Section 52 of the Act, shall apply in so far as it

processing, stripping, butting and dry tobacco unloading			relates to the requiring of workers to work on first day of the week.	
22. Electric generating and transforming stations	64(2)(d) & 64(3)	Continuous work in generating steam, electricity, gas and transforming electricity.	Sections 52, 55 & 61	Exemptions from provisions of Section 52 of the Act, shall apply in so far as it relates to the requiring of workers to work on first day of the week.
23. Enamel works	64(2)(d) & 64(3)	Kiln firing & enamelling.	Sections 55 & 61	-do-
24. Factories engaged in processing milk and manufacturing milk products	64(2)(e)	All works in processing milk and manufacture of milk products other than printing and manufacturing of container of milk creams, cheese and butter.	Sections 51 & 52	-do-
25. Factories manufacturing cement & cement products	64(2)(d) & 64(3)	All Continuous process work	Sections 52, 55 & 61	-do-
26. Factories manufacturing explosives	64(2)(d) & 64(3)	Manufacturing of slurry explosives.	Sections 52, 55 & 61	Exemptions from 52 of the Act, it relates to the work on first provisions of Section shall apply in so far as requiring of workers to day of the week.
27. Factories manufacturing laminated sheets	64(2)(d) & 64(3)	Work in impregnating and pressing plants and on varnish and resin manufacture.	Sections 55 & 61	-do-
28. Ferrous & non-ferrous factories	64(2)(d) & 64 (3)	Smelting, tapping and pouring metal.	Sections 51, 54, 55, 56 &	-do-

			61	
29. Glass factories	64(2)(d) & 64 (3)	All continuous process work	Sections 52, 55 & 61	-do-
30. Ice factories	64(2)(d) & 64 (3)	All continuous process work	55 Sections &61	-do-
31. Iron & Steel Brass & Copper rolling milk	64(2)(d) & 64 (3)	Roll changing	Sections 51, 54, 55, 56 & 61.	Exemptions from provisions of Section 52 of the Act, shall apply in so far as it relates to the requiring of workers to work on first day of the week.
32. Iron, steel brass, copper & aluminium rolling mills including cold rolling of steel strips	64(2)(d) & 64 (3)	Annealing Rolling mills, pickling gas plant and Auxiliary services like compressors, Pump House and cranes.	Sections 51, 52, 55, 56 & 61.	-do-
33. Jute & Twine Mills	64(2)(e)	To work all 7 days in a week.	Sections 52 &56	-do-
34. Khandasari sugar factories	64(2)(b) & 64(3)	Drying finishing sugar in yards, lifting and storing sugar manually.	Sections 55, 56 & 61	-do-
35.Manufacture of starch & starch products from maize or other vegetable sources	64(2)(d) & 64 (3)	All continuous process work.	Sections 52, 55 & 61	Exemptions from the provisions of Section 52 of the Act shall apply in so far as it relates to the requiring or workers to work on the first day of the week.
36. Match and wood working factories	64(2)(g) & 64 (3)	Drying of splints and veneers in match or wood working factories.	Sections 52 & 55	Such workers shall not lose more than 2 weekly holidays in a

				calendar month.
37.Newspaper& Printing Presses	64 (2) (i)	Breakdown of machinery	Sections 51, 54, 56 & 61	Notice shall be given to the Inspector concerned within 48 hours of the occurrence, whenever this exemption is availed of in any emergency.
38. Newspaper presses	64(2)(b) & 64 (3)	Work on rotary machines, stereos and in binding and process departments	Sections 51, 54 & 56	-do
39. Oil expellers	64(2)(b) & 64 (3)	All work connected with the manufacturing process	Sections 56	Notice shall be given to the Inspector concerned within 48 hours of the occurrence, whenever this exemption is availed of in any emergency.
40. Oil Tank installations	64(2)(d) & 64(3)	Pumping operations in connection with the pumping of oil out of or into a Ship or with bulk transfers of oil from, or into storage tanks.	Sections 51, 52, 54, 55, 56 & 61	-do-
41. Paper Factories	64(2)(d) &64(3)	All Continuous process work	Sections 52, 55 & 61	Exemptions from the provisions of Section 52 of the Act shall apply so far as it relates to the requiring of workers to work on the first day of the week.
42. Passenger transport workshops and service stations	64(2)(e)	All works	Sections 51 &52	-do-

43. Petroleum refineries	64(2)(d) & 64 (3)	AU continuous process work.	Sections 52. 55 & 61	Exemption from the provisions of Section 52 of the Act shall apply so far as it relates to the requiring of workers to work on the first day of the week.
44.Pharmaceutical industry	64(2)(b) & 64 (3)	Completing the manufacturing process of pharmaceutical in Pipe line which are held up because of breakdown of power supply.	Sections 51, 54, 55, 56 & 61	-do
45. Preparation packing & despatch of serum and vaccine	64(2)(e)	Preparation, Packing and dispatch of serum and vaccine.	Sections 51 & 52	-do-
46. Rayon silk	64(2)(d) 64 (3) &	(i) Manufacture of cellulose acetate, producer gas acetic acid, aldehyde cellulose acetate recovery and spinning. (ii) Manufacture of producer gas and Rayon spinning.	Sections 52, 55 & 61	-do-
47. Roller flour Mills	64(2)(d) & 64(3)	All work	Sections 55 & 61	Exemptions from the provisions of Section 52 of the Act shall apply in so far as it relates to the requiring of the workers to work on the first day of the week
48. Rubber tyre factories	64(2)(d) & 64(3)	All continuous process work.	Sections 55 &61	-do-
49. Sago Factories	64(2)(d) & 64 (3)	Drying finished sago in yards, lifting and storing sago manually.	Sections 55, 56 & 61	-do-

50. Salt Factories	64(2)(d) & 64(3)	All works	Sections 52, 55, 56 & 61	-do-

51. Smelting & refining Factories	64(2)(d) & 64 (3)	Work on the reducing furnace.	Sections 55 & 61	-do-
52. Soap Factories	64(2)(d) & 64 (3)	Soap boiling, Soap drying pans.	Sections 55 & 61	-do-
53. Sugar Factories	64(2)(d) & 64 (3)	64(2)(d) & 64 (3)	Sections 52, 55 & 61	Exemptions from the provisions of Section 52 of the Act shall apply in so far as it relates to the requiring of workers to work on the first clay of the week.
54. Tanneries	64(2)(d) & 64 (3)	Country and Chrome tanning excluding the finishing process.	Sections 55 & 61	-do-
55. Textile dyeing factories	64(2)(d) & 64 (3)	All work in the dyeing, bleaching, finishing, raising and mercerizing department.	Sections 55 & 61	-do-
56. Textile Milks	64(2)(e)	To work all 7 clays in a week.	Sections 52	(1) Exemption (2) Notice shall be sent to the Inspector whenever there is a change in a weekly holiday.
57. Tobacco redrying factories	64(2)(d) & 64 (3)	All continuous process work.	Sections 55 & 61	Exemptions from the provisions of Section 52 of the Act shall apply in so far as it relates to the requiring of workers to work on the first day of the week.

58. Vegetable oil factories, refineries and hydrogenation solvent extraction plants.	64(2)(d) & 64(3)	All Continuous process work.	Sections 52, 55 & 61	Exemptions from the provisions of Section 52 of the Act shall apply in so far as it relates to the requiring or workers to work on the first day of the week.

59. Work notified by the state Government as a work of National Importance	64(2)(k) & 64 (3)	Workers engaged in any work notified as a work of National Importance.	Sections 51,52,54,55 & 56	Subject to conditions prescribed under Rule 84 (b).

CHAPTER – VII

EMPLOYMENT OF YOUNG PERSONS

85. Notice of periods of work for children

[Omitted by G.O. MS. No. 978, dated 4-5-1960].

86. Register of child workers

The register of child workers shall be in Form No.14.

CHAPTER: VIII

LEAVE WITH WAGES

87. 140[Record of leave with wages

The manager of every factory shall maintain such muster roll or other record showing the particular of the leave with wages allowed to the worker and such record shall be preserved for a period of three years after last entry.]

88. 141 [Account of leave with wages

The manager shall on a request from any worker, forthwith provide him with an abstract of his account of leave earned, leave allowed and the balance of leave standing to his credit for the period not exceeding one-year period to the date of such request.]

89. Medical Certificate

If any worker is absent from work due to his illness and he wants to avail himself of the leave with wages due to him to cover the period of illness as far as possible under the provisions of subsection (7) of Sec. 76 of the Act, he shall, if so required by his manager by a notice in writing, submit' a medical certificate signed by a registered Medical practitioner, or by a registered or recognised Vaid or Hakim stating the cause of the absence and the period for which the worker is in the opinion of such medical practitioner, Vaid or Hakim, unable to attend to his work or other reliable evidence to prove that, he was actually sick during the period for which the leave is to be availed of.

90. Notice to Inspector of involuntary unemployment:

[Omitted by G.O.Ms.No.978, dated 4-5-1960].

91. Notice by worker:

Before or at the end of the calendar year, a worker may give notice to the Manager of his intention not to avail himself of the leave with wages falling due during the following calendar year. The manager shall make an entry to that effect in the Leave with Wages Register and in the leave book of the worker concerned.

92. Grant of leave with wages

1 (1) Whenever leave with wages is given to any worker, necessary entries shall be made in the leave with wages register and the Leave Book of the worker concerned.

1 (2) As far as circumstances permit, members of the same family shall be allowed leave at the same time.

2 (3) A worker may exchange the period of his leave with another worker subject to the approval of the Manager.

92-A. Mode of computation of cash value of wages

1 (1) The cash equivalent of the advantage accruing through the concessional sale of food grains and other articles payable to workers proceeding on leave shall be the difference between the value of the average market rate prevailing, during the month immediately preceding his leave and the value at the concessional rates allowed of food grains and other article, he is entitled to.

2 (2) For purpose of the cash equivalent, monthly average market rate of food grains and other articles shall be computed at the end of every month.

Note: This rule shall not apply to any Federal Railway Factory whose alternative method of computation has been approved by the State Government.

93. Payment of wages if the worker dies

If a worker dies before he resumes work, the balance of his pay, due for the period of leave, shall be paid to his nominee within one week of the receipt of intimation of death of the worker.

142[x x x]

94. Factories exempted under Section 84

1 (1) Where an exemption is granted to any factory under Section 84, the manager, shall display at the main entrance of the factory a notice, giving full details of the system established in the factory for leave with wages and shall send a copy of it to the Inspector.

2 (2) No alteration, shall be made in the scheme approved by the State Government at the time of granting exemption under Section 84 without their previous sanction.

94-A. Exemption of certain factories

The Chief Inspector may grant exemption from all or any of the provisions of Rules 87 to 93 in respect of all or any of the workers in any factory subject to such conditions as he may impose.

CHAPTER IX

SPECIAL PROVISIONS

95. Dangerous operations

1 (1) The following operations when carried on in any factory are declared to be dangerous operations under Section 87.

2 1. Manufacture of aerated water and processes incidental thereto.

1 2. Electrolytic plating or oxidation of metal articles by use of an electrolyte containing chronic acid or other chromium compounds.
2 3. Manufacture and repair of electric accumulators.
3 4. Glass manufacture.
4 5. Grinding or glazing of metals.
5 6. Manufacture and treatment of lead and certain compounds of lead.
6 7. Generation of gas from the dangerous petroleum.
7 8. Cleaning or smoothing of articles by a jet of stand, metals hot or grit or other abrasive propelled by a blast of compressed air or steam.
8 9. Liming and tanning of raw hides and skins and process incidental thereto.
9 10. Cellulose spraying.
10 11. Graphite powdering and incidental processes.
11 12. Certain lead process carried on in printing presses and type foundries.
12 13. Cashew nut manufacturing operations.
13 14. Manufacture of Pottery.
14 15. Chemical Works.
15 16. Compression of Oxygen and Hydrogen produced by the electrolysis of water.
16 17. Manufacture of articles from refractory materials including manufacture of refractory bricks.
17 18. Handling and processing of asbestos, manufacture of any article of asbestos and any other process manufacture or otherwise in which asbestos is used in any form.
18 19. Cleaning or smoothing, roughening etc., of articles by a jet of sand, metal short or grit or other propelled by a blast of compressed air or steam.
19 20. Handling and manipulation of corrosive substances.
20 21. Manufacture or manipulation of Carcinogenic Dye Intermediates.
21 22. Process of extracting vegetable oil from oil cakes in solvent extraction plant.
22 23. Carbon Disulphide Plants.
23 24. Manufacture and Manipulation of dangerous pesticides.
24 25. Manufacture, handling and use of Benzene.
25 26. Manufacture or manipulation of manganese and its compounds.
26 27. Operations involving High Noise Levels.
27 28. Manufacture of Rayon Viscose Process.

1 29. Highly Flammable Liquids and Flammable Compressed Gases.
2 30. Operations in Foundries.

[143][(1-A) First employment means employment for the first time in a hazardous process or operation so notified under Section 87 or re-employment therein after cessation of employment in such process or operation for a period exceeding three calendar months.]
1 (2) The provisions specified in the schedules annexed hereto shall apply to any class or description of factories wherein dangerous operations specified in each schedule are carried out.

2 (3) [Omitted by G.O.Ms.No.978, dated 4-5-1960].
3 (4) Notwithstanding the provisions specified in the schedules annexed to this rule, the Inspector may issue of orders in writing to the manager or occupier or both, direct them to carry out such measures, within such time as may be specified in such order with a view to removing conditions dangerous to the health of the workers, or to suspend any process, where such process constitutes, in the opinion of the Inspector, imminent danger of poisoning or toxicity.
4 (5) Any register or record of medical examinations and texts connected therewith required to be carried out under any of the schedules annexed thereto in respect of any worker shall be kept readily available to the Inspector and shall be preserved till the expiry of one year after the worker ceases to be in employment of the factory]

SCHEDULE I
MANUFACTURE OF WATERS AND PROCESSES INCIDENTAL THERETO
1 1. Fencing of Machines: All machines for filling bottles or syphons shall be so constructed, placed or fenced as to prevent, as far as may be practicable, a fragment of a bursting bottle or syphon from striking any person employed in the factory.
2 2. Face-guards and gauntlets:
3 (1) The occupier shall provide and maintain in good condition for the use of all persons engaged in filling bottles or syphons
4 (a) suitable face guards to protect the face, neck and throat; and
5 (b) suitable guantlets for both arms to protect the whole hand and arms;

Provided that
i (i) paragraph 2(1) shall not apply where bottles are filled by means of an automatic machine so constructed that no fragment of a bursting bottle can escape; and

i (ii) where a machine is so constructed that only one arm of the bottler at work upon it is exposed to danger, a gauntlet need not be provided for the arm which is not exposed to danger.
ii (2) The occupier shall provide and maintain in good condition for the use of all persons engaged in corking, croning, screwing, wiring, foiling, capsuling, sighting, or labelling bottles or syphons
iii (a) suitable face-guards to protect the face, neck and throat; and
iv (b) suitable gauntlets for both arms to protect the arm and at least half of the palm and space between the thumb and fore finger.
v 3. Wearing of face-guards and guantlets: All persons engaged in any of the processes specified in paragraph (2) shall while at work in such processes, wear the face-guards and guantlets provided under the provisions of the said paragraph.

[SCHEDULE – II]
Electrolytic plating or oxidation of metal articles by use of an electrolyte containing acids, bases or salts or metals such as chromium, nickel, cadmium, zinc, copper, silver, gold etc.
1 1. Definitions: For the purposes of this Schedule:

2 (a) “Electrolytic process” means the electrolytic plating or oxidation of metal articles by the use of an electrolytic containing acids, bases or salts of metals such as chromium, nickel, cadmium, zinc, copper, silver, gold, etc.
3 (b) “bath” means any vessel used for an electrolytic process or any subsequent process; and
4 (c) “employed” means employed in any process involving contact with liquid from a bath.
5 2. Exhaust draught: An efficient exhaust draught shall be applied to every vessel in which an electrolytic process is carried on. Such draught shall be provided by mechanical means and shall operate on the vapour or spray given off in the process as near as may be at the point of origin. The exhaust draught appliance shall be so constructed, arranged and maintained as to prevent the vapour or spray entering into any room or place in which work is carried on.
6 3. Prohibition relating to women and young persons: No woman adolescent or child shall be employed or permitted to work at a bath.
7 4. Floor of work-rooms: The floor of every work-room containing a bath shall be impervious to water. The floor shall be maintained in good and level conditions and shall be washed down at least once a day.

1 5. Protective devices:
2 (1) The occupier shall provide and maintain in good and clean condition the following articles of protective devices for the use of all persons employed on any process at which they are liable to come in contact with liquid from a bath and such devices shall be worn by the persons concerned
3 (a) waterproof aprons and bibs; and
4 (b) for persons actually working at a bath, loose fitting rubber gloves and rubber boots or other waterproof foot wear, and chemical goggles.
5 (2) The Occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and drying of protective devices.
6 6. Water facilities.
7 (1) There shall be provided and maintained in good repairs for the use of all persons employed in electrolytic process and processes incidental to it.
8 (a) a wash place under cover, with either
9 (i) a trough with a smooth impervious surface filled with a waste pipe, and of sufficient length to allow at least 60 cms for every 5 persons employed at any one time, and having a constant supply of water from taps or jets above the trough the intervals of not more than 60 cms.; or
10 (ii) at least one wash basin or every five such persons employed at any one time, fitted with a waste pipe and having a constant supply of water laid on.
11 (b) a sufficient supply of clean towels renewed daily, and soap or other suitable cleaning material.
12 (2) In addition to the facility in sub-paragraph 1, an approved type of emergency shower with eye fountain shall be provided and maintained in good working order whenever necessary, in order to ensure continuous water supply, storage tank of 1500 litres capacity shall be provided as a source of clean water for emergency use.

13 7. Cautionary placard A cautionary placard in the form specified below and printed in the language of the majority of the workers employed shall be affixed in a prominent place in the factory where it can be easily and conveniently read by the workers.

CAUTIONARY NOTICE
(Electrolytic plating)

1 1. Chemicals handled in this plant are corrosive and poisonous.
2 2. Smoking, chewing tobacco, eating food or drinking in this area is prohibited. No food stuff or drink shall be brought in this area.

1 3. Some of these chemicals may be absorbed through the skin and may cause Poisoning.
2 4. A good wash shall be taken before meals.
3 5. Protective devices supplied shall be used while working in this area.
4 6. Spillage of the chemicals on any part of the body or on the floor shall be immediately washed away with water.
5 7. All workers shall report for the prescribed medical tests regularly to protect their own health.
6 8. Medical facilities and records of examinations and tests:
7 (1) The occupier of every factory in which electrolytic processes are carried on shall
8 (a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector of Factories
9 (b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a), and
10 (c) maintain a sufficient supply of suitable barrier cream, ointment and impermeable water proof plaster in a separate box readily accessible to the workers and used solely for the purpose of keeping these substances in case cyanides are used in the bath, the box shall also contain as emergency cyanide kit.
11 (2) The medical practitioner shall examine all workers before they are employed in electrolytic processes. Such examination in case of chrome plating shall include inspection of hands, forearms and nose and will be carried out once at least in every fortnight.
12 (3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in a separate register approved by the Chief Inspector of Factories which shall be kept readily available for inspection by the Inspector.
13 9. Medical examination by the Certifying Surgeon.
14 (1) Every worker employed in the electrolytic process shall be examined by a certifying Surgeon before his first employment. Such examination shall include X-ray of the Chest; and
15 (a) in case of chromium plating include examination for nasal septum perforation and test for chromium in urine;
16 (b) in case of nickel plating, test for nickel in urine; and
17 (c) in case of cadmium plating, test for cadmium in urine and 2 macroglobulin in urine.
18 (2) No worker shall be employed in any electrolytic process unless certified fit for such employment by the Certifying Surgeon.

1 (3) Every worker employed in the electrolytic processes shall be reexamined by a Certifying Surgeon at least once in every year, except in case of the workers employed in cadmium, chromium and nickel plating processes or whom this examination shall be carried out once in every six months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests as specified under sub-paragraph (1) excluding the X-ray of the Chest which shall not be required normally to be carried out earlier than once in three years.
2 (4) The Certifying Surgeon after examining a worker, shall issue a Certificate of fitness in Form 2. The record of examination and re-examination carried out shall be kept in the custody of the Manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 29.
3 (5) The Certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.
4 (6) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the electrolytic processes on the ground that continuance therein would involve danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register.

The entry of his findings, in those documents should also include the period for which he considers that the said person is unfit in such circumstances shall be provided with alternate placement facility unless he is fully incapacited in the opinion of the certifying surgeon in which case the person affected shall be suitably rehabilitated.
1 (7) No person who has been found unfit to work as said in sub-paragraph (6) shall be reemployed or permitted to work in the said processes unless the certifying surgeon, after further examination, again certifies him fit for employment in those process.

SCHEDULE III
MANUFACTURE AND REPAIR OF ELECTRIC ACCUMULATORS
1 1. Savings: This schedule shall not apply to the manufacture or repair of electric accumulators or parts thereof not containing lead or any compound of lead; or to the repair on the premises, of any accumulator forming part of a stationary battery.

1 2. Definitions: For the purpose of this schedule:
2 (a) “Lead Process” means the melting of lead or any materials containing lead, casting, pasting, lead burning or any other work, including trimming, or any other abrading or cutting of pasted plates, involving the use, movement or manipulation of, or contact with any oxide of lead.

(b) “Manipulation of raw oxide of lead” means any lead process involving any manipulation or movement of raw oxides of lead other than its conveyance in a receptacle or by means of an implement from one operation to another.
(c) 144[x x x]

3. Prohibition relating to women and young persons: No woman or young person shall be employed or permitted to work in any lead processes or in any room in which the manipulation of raw oxide leads or pasting is carried on.
4. Separation of certain processes: Each of the following processes shall be carried on in such a manner under such conditions as to secure affectual separation from any other process:
(a) Manipulation of raw oxide of lead;
(b) Pasting;
(c) Drying of pasted plates;
(d) Formation with lead burning ('tacking') necessarily carried on in connection therewith;
(e) Melting down of pasted plates.
5. Air space: In every room in which a lead process is carried on there shall be at least 500 cubic feet of air space for each person employed therein, and in computing this air space no height over 12 feet shall be taken into account.
6. Ventilation: Every work-room shall be provided with inlets and outlets of adequate size as to secure and maintain efficient ventilation in all of the rooms.
7. Distance between workers in pasting room: In every pasting room the distance between the centre of the working position as any paster and that of the paster working nearest to him shall not be less than five feet.
8. Floor of work-rooms:
(1) The floor of every room in which a lead process is carried on shall be
(a) of cement or similar material so as to be smooth and impervious to water;
(b) maintained in sound condition;
(c) kept free from material, plant, or other obstruction not required for, or produced in, the process carried on in the room.
(2) In all such rooms other than grid casting shop the floor shall be cleaned daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room.
(3) In grid casting shops the floor shall be cleaned daily.
(4) Without prejudice to the requirements of sub-paragraphs (1), (2) and (3) where manipulation of raw oxide of lead or pasting is carried on, the floor shall also be

(a) kept constantly moist while work is being done;
(b) provided with suitable and adequate arrangements for drainage;
(c) thoroughly washed daily by means of a hose pipe.
9. Work-benches: The work-benches at which any lead process is carried on shall
(a) have a smooth surface and be maintained in sound condition;
(b) be kept free from all materials or plant not required for or produced in, the process carried on thereat; and all such work-benches other than those in grid casting shops shall
(c) be cleaned daily either after being thoroughly damped or by means of a suction cleaning apparatus as a time when no other work is being carried on thereat; and, all such workbenches in grid casting shops, shall
(d) be cleaned daily; and every work-bench used for pasting shall
(e) be covered throughout with sheet lead other impervious material;
(f) be provided with raised edges;
(g) be kept constantly moist while pasting is being carried on

10. Exhaust draught: The following processes shall not be carried on without use of an efficient exhaust draught;
(a) melting of lead or materials containing lead.
(b) manipulation of raw oxide of lead, unless done in an enclosed apparatus so as to prevent the escape of dust in to the work-room.
(c) pasting.
(d) trimming, brushing, filling or any other abrading or cutting of pasted plates giving rise to dust.
(e) lead burning, other than
(i) "tacking" in the formation room;
(ii) chemical burning for the marking of lead linings for cell cases necessarily carried on in such a manner, that the application of efficient exhaust in impracticable.

Such exhaust draught shall be effected by mechanical means and shall operate on the dust or fume given off as nearly as may be at its point of origin, so as to prevent it entering the air of any room in which persons work.

1 11. Fumes and gases from melting pots: The products of combustion produced in the heating of any melting pot shall not be allowed to escape into a room in which persons work.

1 12. Container for dross: A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptacle shall be kept covered while in the work-room, except when dross is being deposited therein.

2 13. Container for load waste: A suitable receptacle shall be provided in every workroom in which, old plates and waste material which may give rise to dust shall be deposited.

3 14. Racks and shelves in drying room: The racks or shelves provided in any drying room shall not be more than 8 feet from the floor not more than 2 feet in width; provided that as regards racks or shelves set or drawn from both the sides that total width shall not exceed 4 feet. Such racks or shelves shall be cleaned only after being thoroughly damped unless an efficient suction cleaning apparatus is used for this purpose.

4 15. Medical facilities and records of examination and tests:

5 (1) The occupier of every factory in which manufacture and repair of electric accumulators is carried on shall

6 (a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

7 (b) provide to the said medical practitioner shall all the necessary facilities for the purpose referred to in clause (a).

8 (2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspector by the Inspector.

15-A: Medical examination by Certifying Surgeon

1 (1) Every worker employed in lead processes shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include tests for lead in urine

and blood. A LA in urine, hemoglobin content, stippling of coils and steadiness test. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

2 (2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every three calendar months. Such re-examination shall, wherever the Certifying Surgeon considers appropriate, include tests specified in sub-paragraph (1).

3 (3) The certifying surgeon after examining a worker, shall issue a certificate of Fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2) including the nature and the results of the tests, shall also be entered by the Certifying Surgeon in a health register in Form 29.

1 (4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

2 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his finding in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said persons is unfit for work in the said processes.

3 (6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the certifying surgeon, after further examination, again certifies him fit for employment in those processes. 15-B. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion in of the certifying surgeon, in which case the person affected shall be suitably rehabilitated.]

4 16. Protective clothing: Protective clothing shall be provided and maintained in good repair for all persons employed in

5 (a) manipulation of raw oxide of lead;

6 (b) pasting;

7 (c) the formation room; and such clothing shall be worn by the persons concerned The protective clothing shall consist of a water proof apron and waterproof foot-wear; and, also as regards persons employed in the manipulation of raw oxide of lead or pasting, head coverings. The head covering shall be washed daily.

8 17. Mess-room: There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable mess-room which shall be furnished with (a) sufficient tables and benches, and (b) adequate means for warming food. The mess-room shall be placed under the charge of a responsible person, and shall be kept clean.

9 18. Cloak-room: There shall be provided and maintained for the use of all persons employed in a lead process

10 (a) A cloak-room for clothing put off during working hours with adequate arrangements for drying the clothing if wet. Such accommodation shall be separate from any mess-room.

11 (b) Separate and suitable arrangements for the storage of protective clothing provided under paragraph 16.
12 19. Washing Facilities: There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in a lead process
13 (a) A wash place under, cover with either

i (i) a trough with a smooth impervious surface fitted with a waste pipe, without plug, and of sufficient length to allow of at least 2 feet for every five such persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than 2 feet; or
ii (ii) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water laid on;
iii (iii) a sufficient supply of clean towels made of suitable materials renewed daily, which supply, in the case of pasters and persons employed in the manipulation of raw oxide of lead, shall include a separate marked towel, for each worker; and
iv (iv) a sufficient supply of soap or other suitable cleaning material and of nail brushes.
v (b) There shall in addition be provided means of washing close proximity to the rooms in which manipulation of raw oxide of lead or pasting is carried on if required by notice in writing from the Chief Inspector
vi 20. Time to be allowed for washing: Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular mean times, shall be allowed for washing to each person who has been employed in the manipulation of raw oxide of lead or in pasting;

Provided that if there be one basin or 2 feet of trough for each such person this rule shall not apply.
1 21. Facilities for bathing: Sufficient bath accommodation to the satisfaction of the Chief Inspector shall be provided for all persons engaged in the manipulation of raw oxide of lead on in pasting, and a sufficient supply of soap and clean towels.
2 22. Foods, drinks, etc., prohibited in work rooms: No food, drink, pan and supari or tobacco shall be Consumed or brought by any worker into any work-room in which any lead process is carried on.

SCHEDULE IV
GLASS MANUFACTURE
1 1. Exemption: If the Chief Inspector is satisfied in respect of any factory or any class of process that, owning to the special methods of work or the special conditions in a factory or otherwise, any of the requirements of this schedule can be suspended or relaxed without or any part thereof is for any reason impracticable, he may by certificate in writing authorize such suspension or relaxation as may be indicated in the certificate for such period and on such conditions as he may think fit.
2 2. Definitions: For the purpose of this schedule:

(a) "Efficient exhaust draught" means localized ventilation effected by mechanical means, for the removal of gas, vapour, dust or fumes so as to prevent them (as far as practicable under the

atmospheric conditions usually prevailing) from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume, or dust originate.
(b) “Lead compound” means any compound of lead other than galena which when treated in the manner described below, yield to an aqueous solution of hydrochloric acid a quantity of soluble lead compound exceeding, which calculated as lead monoxide, 5 per cent of the dry weight of the portion taken for analysis. The method of treatment shall be as follows:

A weighed quantity of the material which has been dried at 100 degrees C, and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its Weight of an aqueous solution of hydrochloric acid containing 0.25 per cent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filterate shall then be precipitated as lead sulphide and weighed as lead sulphate.
(c) [145][xxx]
3. Exhaust draught: The following processes shall not be carried on except under an efficient exhaust draught or under such other Conditions as may be approved by the Chief Inspector:
(a) The mixing of raw-materials to form a “batch”.
(b) The dry grinding, glazing and polishing of glass or any article of glass.
(c) All process in which hydrofluoric acid fumes or ammonia Cal vapors are given off.
(d) All processes in the making of furnace moulds or ‘pot’ including the grinding or crushing of, used ‘pots.’
(e) All Processes involving the use of a dry lead compound.
4. Prohibition relating to women and young persons: No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 3 or at any place where such operations are carried on.
5. Floor and work-benches: The floor and work-benches of every room in which a dry compound of lead is manipulated or which any process is carried On giving off silica dust shall be kept moist and shall comply with the following requirements:

The floors shall be:
(a) of cement or similar material so as to be smooth and impervious to water;
(b) maintained in sound condition; and

(c) cleaned daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room.

The work-benches shall
(a) have smooth surface and be maintained in sound condition; and
(b) be cleaned daily either after being thoroughly damped or by means of section cleaning apparatus at a time when no other work is being carried on thereat.
6. Use of Hydrofluoric acid: The following provisions shall apply to rooms in which glass is treated with hydrofluoric acid:

(a) there shall be inlets and outlets of adequate size so as to secure and maintain efficient ventilation to all parts of the room;
(b) the floor shall be covered with gutta-percha and be tight and shall slope gently down to a covered drain;
(c) the work places shall be so enclosed in projecting hoods that openings required for bringing in the objects to be treated shall be as small as practicable; and
(d) the efficient exhaust draught shall be so contrived that the gases are exhausted downwards.
7. Storage and transport of hydrofluoric acid: Hydrofluoric acid shall not be stored or transported except in cylinders or receptacles made of lead or rubber.
8. Blow-pipes: Suitable facilities shall be readily available for sterilizing the blow pipes used by the glass-blowers and such blow-pipes shall be sterilized at the beginning of the operation of blowing, each day.
9. Food, drinks, etc., prohibited in work-rooms: No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any room or work-place wherein any process specified in paragraph 3 is carried on.
10. Protective clothing: The occupier shall provide, maintain in good repair and keep in a clean condition for the use of all persons employed in the processes specified in paragraph 3 suitable protective clothing, footwear and goggles according to the nature of the work and such clothing, footwear, etc., shall be worn by the persons concerned.
11. Washing facilities: There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in the processes specified in paragraph 3
(a) A wash place with either—
(i) a trough with a smooth impervious surface fitted with a waste pipe, without plug, and sufficient length to allow of at least two feet for every five such persons employed at any one time, and having a constant supply of water, from taps or jets above the trough at intervals of not more than two feet; or

i (ii) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe any plug and having an adequate supply of water laid on or always readily available;

and
a sufficient supply of clean towels made of suitable material renewed daily with a sufficient supply of soap or other suitable cleaning material and of nail brushes;
and
(b) a sufficient number of stand pipes with taps the number and location of such stand pipes shall be to the satisfaction of the Chief Inspector.
12. 146[Medical facilities and record of examinations and tests:
(1) The occupier of every factory in which glass manufacturing processes are carried out, shall
(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector of Factories; and
(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

(2) The records Medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

12-A. Medical examination by Certifying Surgeon:

1 (1) Every worker employed in processes specified in Paragraph 2 shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include pulmonary function tests and in suspected cases chest X-ray as well as tests for lead and urine. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the certifying surgeon.

2 (2) Every worker employed in the said processes shall be re-examined by a certifying surgeon at least once in every twelve calendar months. Such re-examination shall, wherever the certifying surgeon considers appropriate, include tests as specified in sub-paragraph (1).

3 (3) The certifying surgeon after examining a worker, shall issue a Certificate of Fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraph (1) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.

1 (4) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.

2 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes.

3 (6) No person who has been found unfit to work as said in sub-paragraph (5) shall be reemployed or permitted to work in the said processes unless the certifying surgeon, after further examination, again certifies him fit for employment in those processes.

12-B. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the certifying surgeon, in which case the person affected shall be suitably rehabilitated.

SCHEDULE V

GRINDING OR GLAZING OF MATERIALS AND PROCESSES INCIDENTAL THERETO

1 1. Definitions: For the purposes of this schedule:

2 (a) “Grindstone’ means a grindstone composed. of natural or manufactured sandstone but does not include a metal wheel or cylinder into which blocks of natural or manufactured sandstone are fitted.

3 (b) “Abrasive wheel” means a wheel manufactured of bounded emery or similar abrasive.

4 (c) “Grinding” means the abrasion, by aid of mechanical power, of metal, by means of a grindstone or abrasive wheel.
5 (d) “Glazing” means the abrading, polishing or finishing by aid of mechanical power of metal, by means of any wheel, buff, mop or similar appliance to which any abrading or polishing substance is attached or applied.
6 (e) “Racing” means turning up, cutting or dressing of a revolving grindstone before it is brought into use for the first time.
7 (f) “Hacking” means the chipping of the surface of a grindstone by a Hack or similar tool.
8 (g) “Rodding” means the dressing of the surface of a revolving grindstone by the application of a rod bar or string of metal to such surface.
9 2. Exceptions:

1 (1) Nothing in this schedule shall apply to any factory in which only repairs are carried on except any part thereof in which one or more persons are wholly or mainly employed in the grinding of metals.
2 (2) Nothing in this schedule except paragraph 4 shall apply to any grinding or glazing of metal carried on intermittently and at which no person is employed for more than 12 hours in any week.
3 (3) The Chief Inspector may by certificate in writing, subject to such conditions as he may specify therein, relax or suspend any of the provisions of this schedule in respect of any factory if owning to the special methods of work or otherwise such relaxation or suspension is practicable without danger to the health or safety of the persons employed.
4 3. Equipment for removal of dust: No racing, dry grinding or glazing shall be performed without
5 (a) a hood or appliance so constructed, arranged, placed, and maintained as substantially to intercept the dust thrown off; and
6 (b) a duct of adequate size, air tight and so arranged as to be capable of carrying away the dust, which duct shall be kept free from obstruction and shall be provided with proper means of access for inspection and cleaning and where practicable, with a connection at the end remote from the fan to enable the Inspector to attach thereto any instrument necessary for ascertaining the pressure of air in the said duct; and
7 (c) a fan or other efficient means of producing a draught sufficient to extract the dust:

Provided that the Chief Inspector may accept any other appliance, that is, in his opinion, as effectual for the interception, removal and disposal of dust thrown off as a hood, duct and fan would be.
1 4. Restriction on employment on grinding operations: Not more than one person shall at any time perform the actual process of grinding, or glazing upon a grindstone abrasive wheel or glazing appliance:

Provided that this paragraph shall not prohibit the employment of persons to assist in the manipulation of heavy or bulky articles at any such grindstone, wheel or glazing appliance.

1 5. Glazing: Glazing or other processes, except processes incidental to wet grinding upon a grindstone shall not be carried on in any room in which wet grinding upon a grindstone is done.
2 6. Hacking and rodding: Hacking or rodding shall not be done unless during the process either (a) an adequate supply of water is laid on at the upper surface of the grindstone or (b) adequate appliances for the interception of dust are provided in accordance with the requirements of paragraph 3.

1 7. Examination of dust equipment:
2 (a) All equipment for the extraction or suppression of dust shall at least once in every six months be examined and tested by a competent person, and any defect disclosed by such examination and test shall be rectified as soon as practicable.
3 (b) A register containing particulars of such examination and tests shall be kept in Form No.27-A.
4 8. 147[Medical facilities and record of examinations and tests.'
5 (1) The occupier of every factory in which grinding or glazing of metals are carried out, shall
6 (a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector of Factories; and
7 (b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).
8 (2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.]
9 9. Medical Examination by certifying surgeon.
10 (1) Every worker employed in grinding or glazing of metal and processes incidental there to shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include pulmonary function tests and in suspected cases chest X-rays. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the certifying surgeon.
11 (2) Every worker employed in the said processes shall be re-examined by a Certifying surgeon at least once in every 12 calendar months. Such re-examination shall, wherever the certifying surgeon considers appropriate, include tests and as specified in sub-paragraph (1).
12 (3) The Certifying Surgeon after examining a worker shall issue a certificate of fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manner of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.
13 (4) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.

1 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes.
2 (6) No person who has been found unfit to work as said in sub-paragraph (5) shall be reemployed or permitted to work in the said processes unless the certifying surgeon, after further examination again certifies him fit for employment in those processes.
3 10. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the certifying surgeon, which case the person affected shall be suitably rehabilitated.]

SCHEDULE VI
MANUFACTURE AND TREATMENT OF LEAD AND CERTAIN COMPOUNDS OF LEAD
1 1. Exemption: Where the Chief Inspector is satisfied that all or any of the provisions of this schedule are not necessary for the protection of the persons employed he may by certificate in writing exempt any factory from all or any of such provision, subject to such conditions as he may specify therein.
2 2. Definitions: For the purposes of this schedule
3 (a) “Lead compound” means any compound of lead other than galena which, when treated in the manner described below ‘yields to an aqueous solution of hydrochloric acid, quantity of soluble lead compound exceeding when calculated as lead monoxide, five per cent of the dry weight of the portion taken for analysis, in the case of plants and similar products and other mixtures containing oils or fat the “dry weight” means the dry weight of the material remaining after the substance has been thoroughly mixed and treated with suitable solvents to remove oil, fats, varnish or other media.

The method of treatment shall be as follows: A weighed quantity of the material which has been dried at 100°C thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight or an aqueous solution of hydrochloric acid containing 0.25 per cent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filterate shall then be precipitated as lead sulphide and weighed as lead sulphate.
(b) “Efficient exhaust draught” means localized ventilation effected by heat or mechanical means, for the removal of gas, vapour dust or fumes so as to prevent them (as far as practicable under the atmospheric conditions usually prevailing) form the escaping into the air of any place in which work is carried on. No

draught shall be deemed efficient which fails to remove smoke generator at the point where such gas, vapour, fumes or dust originate.
3. Application: This schedule shall apply to all factories or parts of factories in which any of the following operations are carried on:
(a) Work at a furnace where the reduction or treatment of zinc or lead ores is carried on.

(b) The manipulation, treatment or reduction of ashes containing lead, the desilverising of lead or the melting of scrap lead or zinc.
(c) The manufacture of solder or alloys containing more than ten per cent of lead.
(d) The manufacture of any oxide, carbonate, sulphate, chromate, acetate, nitrate or silicate of lead.
(e) Handling or mixing of lead-tetraethyl.
(f) Any other operation involving the use of a lead compound.
(g) The cleaning of work-rooms where any of the operations aforesaid are carried on.
4. Prohibition relating to women and young persons: No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 3.
5. Requirements to be observed: No person shall be employed or permitted to work in any process involving the use of lead compounds if the process is such that dust or fume from a lead compound is produced therein, or the persons employed therein are liable to be splashed with any lead compound in the course of their employment unless the provisions of paragraphs 6 to 14 are complied with.
6. Exhaust draught: Where dust, fume, gas or vapour is produced in the process, provision shall be made for removing them by means of any efficient exhaust draught so contrived as to operate on the dust, fume, gas or vapour as closely as possible to the point of origin.
7. 148[Medical facilities and records of examinations and tests:
(1) The occupier of every factory to which the schedule applies shall
(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose appointment shall be subject to the approval of the Chief Inspector of Factories; and
(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).
(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief for Inspection by the Inspector.
8. Medical examination by certifying surgeon:

1 (1) Every worker employed in the processes referred to in paragraph (1) shall be examined by a Certifying surgeon within 15 days of his first employment. Such examination shall include tests for lead in blood and urine, ALA in urine, hemoglobin content, stippling of cells and steadiness test. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.
2 (2) Every worker employed in the said processes - shall be re-examined by a Certifying Surgeon at least once in every three calender months. Such re-examination shall, wherever the certifying surgeon considered appropriate, include tests specified in sub-paragraphs (1).
3 (3) The certifying surgeon after examining a worker, shall issue a certificate of fitness in Form 28. The record of examination and re-examination carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.

4 (4) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.
5 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said process on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes.
6 (6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.]

8-A. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.
1 9. Food, drinks, etc., prohibited in work-rooms: No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work-room in which the process is carried on and no person shall remain in any such room during intervals for meals or rest.
2 10. Protective clothing: Suitable protective overalls and head coverings shall be provided, maintained and kept clean by the factory occupier and such overalls and head coverings shall be worn by the persons employed.
3 11. Cleanliness of work-rooms, tools, etc.; The rooms in which the person are employed and all tools and apparatus used by them shall be kept in a clean State.

1 12. Washing facilities;
2 (1) The occupier shall provide and maintain for the use of all persons employed suitable washing facilities consisting of
3 (a) a trough with a smooth impervious surface fitted with a waste pipe without plug and of sufficient length to allow at least two feet for every ten persons employed at any one time, and having a constant supply of clean water from taps or jet above the trough at intervals of not more than two feet; or
4 (b) at least one wash-basin for every ten persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of clean water, together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleaning material and clean towels.
5 (2) The facilities so provided shall be placed under the charge of a responsible person and be kept clean.
6 13. Mess-room or canteen: The occupier shall provide and maintain for the use of the persons employed suitable and adequate arrangements for taking their meals. The arrangement shall consist of the use of a room separate from any work-room which shall be furnished with sufficient table and benches, and unless a canteen serving hot meals is provided, adequate means for warming food. The room shall be adequately ventilated by the circulation of fresh air, shall be placed under the charge of a responsible person and shall be kept clean.

7 14. Cloak-room: The occupier shall provide and maintain for the use of persons employed, suitable accommodation for clothing not worn during working hours, and for the drying of wet clothing.

SCHEDULE VII

GENERATION OF AS FROM DANGEROUS ETROLEUM AS DEFINED IN THE PETROLEUM ACT, 1934

1 1. Prohibition relating to women and young persons: No woman or young person shall be employed or permitted to work in or shall be allowed to enter any building in which the generation of gas from dangerous petroleum as defined in the Petroleum Act, 1934 is carried on.

2 2. Flame traps: The plant for generation of gas from dangerous petroleum as defined in the Petroleum Act, 1934 and associated piping and fitting shall be fitted with at least two efficient flame traps so designed and maintained as to prevent a flash back from any burner to the plant. One of these traps shall be fitted as close to the plant as possible. The plant and all pipes and valves shall be installed and maintained free from leaks.

1 3. Generating building or room: All plants for generation of gas from dangerous petroleum as defined in the Petroleum Act, 1934 erected after the coming into force of the provisions specified in this Schedule, shall be erected outside the factory building proper in a separate well ventilated building (hereinafter referred to as the “generating building”). In the case of such plant erected before the coming into force of the provisions specified in this Schedule there shall be no direct communication between the room where such plants are erected (hereinafter referred to as “the generating room”) and the remainder of the factory building. So far as practicable, all such generating rooms shall be constructed of fire-resisting materials.

2 4. Fire extinguishers: An efficient means of extinguishing petrol fires shall be maintained in an easily accessible position near the plant for generation of gas from dangerous petroleum as defined in the Petroleum Act, 1934.

3 5. Plant to be approved by Chief Inspector: Petrol gas shall not be manufactured except in a plant for generating petrol gas, the design and construction of which has been approved by the Chief Inspector.

4 6. Escape of petrol: Effective steps shall be taken to prevent petrol from escaping into any drain or sewer.

5 7. Prohibition relating to smoking, etc.: No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in the generating room or building or in the vicinity thereof and a warning notice in the language understood by the majority of the workers shall be posted in the factory prohibiting smoking and the carrying of matches fire or naked light or other means of producing, a naked light or spark into such room or building.

6 8. Access to petrol or container: No unauthorized person shall have access to any petrol or to a vessel containing or having actually contained petrol.

7 9. Electric fittings: All electric fittings shall be of flame proof construction and all electric conductors shall either be enclosed in metal conductors or be lead-sheathed.

8 10. Construction of doors: All doors in the generating room of building shall be constructed to open outwards or to slide and no door shall be locked or obstructed or fastened in such manner that it cannot be easily and immediately opened from the inside while gas is being generated and any person is working in the generating room or building.

9 11. Repair of containers: No vessel that has contained petrol shall be repaired in a generating room or building and no repairs to any such vessel shall be undertaken unless live steam has been blown into the vessel and until the interior is thoroughly steamed out or other equally effective steps have been taken to ensure that it has been rendered free from petrol in inflammable vapour.

SCHEDULE VIII

CLEANING OR SMOOTHING OF ARTICLES BY A JET OF SAND METAL, SHOT OR GRIT OR OTHER ABRASIVE PROPELLED BY A BLAST OF COMPRESSED AIR OR STEAM

Definition: For the purposes of this schedule

1 1. "Sand blasting" means the blasting of any articles by a jet of sand, metal shot, grit or other abrasive.

2 2. Sand blasting to be done in enclosed chamber: Sand blasting shall not be done in any room except in an enclosed chamber or cabinet in which no other work is performed and at which efficient means are provided. arranged and maintained to prevent the escape of dust to the outside of such chamber or cabinet.

3 3. Prohibition relating to employment of women and young persons: No woman or young person shall be employed or permitted to work at any operation of sand blasting.

4 4. Protective equipment:

5 (1) Unless he is wearing a suitable protective helmet and guantlets

6 (a) no person shall be employed or permitted to work a blasting in the open air or work within 30 feet of sand blasting apparatus in operation in the open air; and

7 (b) no person shall be employed or permitted to work or allowed in a sand blasting chamber whilst the sand blasting apparatus is in Operation

8 (2) The occupier of the factory shall provide and maintain in good Condition a]] helmets overall and gauntlets that are necessary to comply with the requirements of this Schedule.

9 (3) Every protective helmet shall early the distinguishing mark of the person by whom it is to be used and shall be provided with a sufficient supply if pure air for breathing and ventilation, 'together with suitable arrangements to permit the escape of the expired air.'

10 (4) No person shall wear a protective helmet that has been worn by another person unless such protective helmet shall have been thoroughly disinfected.

11 (5) All persons engaged in sand blasting while at work shall wear the protective equipment provided under the Provisions of this paragraph.

12 (6) [149][Medical facilities and records of exam mat ions and tests:

13 (1) The occupier of every factory to which the schedule applies shall

14 (a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

15 (b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

1 (2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.
2 (7) Medical Examination by Certifying Surgeon;
3 (1) Every worker employed in any of the processes to which this schedule applies shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include pulmonary function test and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.
4 (2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every 12 calendar months and such re-examination shall, wherever the certifying surgeon considers appropriate, include pulmonary function test and chest X-ray once in every three years.
5 (3) The certifying surgeon after examining a worker, shall issue a certificate of Fitness in Form 28, the record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the Factory. The record of each examination carried under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.
6 (4) The certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.
7 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes.
8 (6) No person who has been found unfit to work in the said processes as said in subparagraph (5) above shall be re-employed or permitted to work unless the Certifying Surgeon, after further examination, again certified him fit for employment in those processes.
9 (7) The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.]

SCHEDULE IX
LIMING AND TANNING OF RAW HIDES AND SKINS AND PROCESSES INCIDENTAL THERETO
1 1. Cautionary notices.
2 (1) Cautionary notices as to anthrax in the form specified by Chief Inspector shall be affixed in prominent positions in the factory where they may be easily and conveniently read by the persons employed.

3 (2) A copy of a warning notice as to anthrax in the form specified by the Chief Inspector shall be given to each person employed when he is engaged, and subsequently if still employed, on the first day of each calendar year.
4 (3) Cautionary notices as to the effects of chrome on the skin shall be affixed in prominent positions in every factory in which chrome solutions are used and such notices shall be placed as to be easily and conveniently read by the persons employed.
5 (4) Notices shall be affixed in prominent places in the factory staying the position of the "First-Aid" box or cupboard and the name of the persons in charge of such box or cupboard.
6 (5) If any person employed in the factory is illiterate, effective steps shall be taken to explain carefully to such illiterate persons the contents of the notice specified in paragraphs 1, 2 and 4 and if chrome solutions are used in the factory the contents of the notice specified in paragraph 3.
7 2. Protective clothing: The occupier shall provide and maintain in good condition the following articles of protective clothing:
8 (a) waterproof foot wear, leg covering, aprons and gloves for persons employed in processes involving, contract with chrome solutions, including the preparation of such solutions;
9 (b) gloves and boots for persons employed in lime yard; and
10 (c) protective footwear, aprons and gloves for persons employed in processes involving the handling of hides or skins, other than in processes specified in Clauses (a) and (b):

Provided that
i (i) the gloves, aprons, leg coverings or boots may be of rubber or leather, but the gloves and boots to be provided under Clauses (a) and (b) shall be of rubber;
ii (ii) the gloves may not be provided to persons fleshing by hand or employed in processes in which there is no risk of contact with lime, sodium sulphide or other caustic liquor.

1 3. Washing facilities, mess-room and cloak-room: They shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed
2 (a) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least two feet for every ten persons employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals of not more than two feet; or
3 (b) at least one wash basin for every ten such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleaning material, and clean towels;
4 (c) a suitable mess-room, adequate for the number remaining on the premises during the meal intervals, which shall be furnished with (1) sufficient tables and benches and (2) adequate means for warming food and for boiling water. The mess-room shall (1) be separate from any room or shed in which hides or skins are stored, treated or manipulated (2) be separated from the cloak-room and (3) be placed under the charge of a responsible person;
5 (d) suitable accommodation for clothing put off during working hours and another accommodation for protective clothing and shall also make adequate arrangement for drying

up the clothing in both the cases, if wet. The accommodation so provided shall be kept clean at all times and placed under the charge of a responsible person.

6 4. Food, drinks, etc., prohibited in work-rooms. No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work-room or shed in which hides or skins are stored or manipulated.

7 5. [150][Medical facilities and records of examinations and tests.

(1) The occupier of every factory to which the schedule applies shall- (a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories

(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a);

(c) arrange for inspection of the hands of all the persons keeping in contact with chromium substances to be made twice a week; and

(d) provide and maintain and supply suitable ointment and plaster in box readily accessible to the workers and solely used for the purpose to the workers and solely used for the purpose of keeping the ointment and the plaster.

(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by

1 the Chief Inspector of Factories, which shall be kept readily available for inspector by the Inspector.]

2 6. Medical Examination by Certifying Surgeon.

3 (1) Every worker employed in any of the processes to which the schedule applies shall be examined by a Certifying Surgeon within 15 days of his first employment. Such examination shall include skin test for dermatoses and detection of anthrax bacillus from local vision by gram stain. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the certifying surgeon.

4 (2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every twelve calendar months. Such re-examination shall, wherever the certifying surgeon considers appropriate, include tests and as specified in sub-paragraph (1).

5 (3) The Certifying Surgeon after examining a worker, shall issue a Certificate of fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.

6 (4) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.

7 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker. he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also

include the period for which he considers that the said person is unfit for work in the said processes.

8 (6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the certifying surgeon, after further examination again certifies him fit for employment in those processes.

9 (7) The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person shall be suitably rehabilitated.]

SCHEDULE X

CELLULOSE SPRAYING

1 1. Application: The provisions of this Schedule shall apply to all factories or parts of factor in which the spraying of cellulose ester paints or lacquers is carried on.

1 2. Prohibition of the employment of children and adolescents: No child or adolescent shall be employed in any factory on the operation specified in paragraph 1 above.

2 3. Exhaust draught: An efficient exhaust draught shall be provided by mechanical means for the process specified in paragraph 1. The draught shall operate on the vapour given off in the process as near as may be at the point of origin as so to prevent it (as far as practicable under the atmospheric conditions usually prevailing) from escaping into the air of any place in which work is carried on. The draught shall be maintained working for a period of at least five minutes after the cessation of the operation:

Provided that the Chief Inspector may grant exemption from these provisions if he is satisfied that due to the casual nature of the operation they are not necessary to secure the health of the workers.

1 4. Position of spray operators: Arrangements shall, as far as practicable, be made so as to render it unnecessary for the person operating the spray to be in a position between a ventilating out fit and the article being sprayed.

SCHEDULE XI

GRAPHITE POWDERING

1 1. Application: The provisions of this schedule shall apply to all factories or parts of factories in which grinding and sieving of graphite and the processes incidental thereto are carried on.

2 2. Prohibition of employment of women children and adolescents: No woman, child or adolescent shall be employed in any factory upon any of the operations specified in paragraph 1 above.

3 3. Medical certificates and examinations

4 (1) No person shall be employed in any factory for more than fifteen days in the year upon any of the operations specified in paragraph I above unless a special certificate of fitness in Form No.27, granted to him by a Certifying Surgeon appointed under Section 10, is in the custody of the manager of the factory.

5 (2) The Inspector of Factories may require that any person in respect of whom a certificate referred to in sub-paragraph (1) has been granted shall carry with him while at work a token giving reference to such certificate.
6 (3) Every person so employed shall be medically examined by a certifying surgeon at intervals of not more than six months and a record of such examinations shall be entered in the special certificate granted under subparagraph (1).
7 (4) If at any time a Certifying Surgeon is of opinion that any person is no longer fit for employment upon any of the operations specified in paragraph 1 above, he shall cancel the special certificate of fitness granted to that person.
8 (5) No person whose special certificate of fitness has been cancelled shall be employed upon any of the operations specified in paragraph 1 above unless Certifying Surgeon again certifies him to be fit.

1 4. Exhaust draughts: Provision shall be made for removing the dust produced in any of the operations specified in paragraph 1 above by means of an efficient exhaust draught so contrived as to operate on the dust as closely to the point of origin as possible:

Provided that where the provision of an exhaust draught is not reasonably practicable the Inspector may require
(a) respirators of a type approved by him to be provided and maintained in a clean and efficient condition by the occupier and worn by every person working under such conditions; and
(b) the damping of floors, apparatus and material to prevent the raising of dust.

1 5. Floor and work-benches.
2 (1) The floor of every room in which any person is employed upon any of the operations specified in paragraph I above shall be of cement or other impervious material.
3 (2) The top of every work-bench in every such room shall be of impervious material.
4 (3) The said floors and work-benches shall be kept clean and in good condition.
5 (4) The Inspector may, by order in writing, require the said floors and work-benches to be kept wet in such manner as he deem suitable, in order to reduce dust.
6 6. Washing facilities: The occupier shall provide and maintain in a clean state and good repair for the use of persons employed upon any of the operations specified in paragraph 1 above either (a) a trough with smooth impervious surface fitted with a waste-pipe without plug, and of sufficient length to allow at least two feet for every five such persons employed at any one time, and having a constant supply for water from taps or jets above trough at intervals of not more than two feet, or (b) at least one lavatory basin for every five such persons employed at any one time, fitted with a waste-pipe and plug having a constant supply of water, together with, in either case a sufficient supply of nail brushes, soap or other suitable cleaning material and clean towels.
7 7. Food, drink and tobacco: No food drink, pan and supari or tobacco shall be brought into, or consumed in any room in which any person is employed upon any of the operations specified in paragraph 1 above.

8 8. Protective clothing: Adequate protective clothing such as overalls in a clean condition shall be provided by the occupier to every person employed upon any of the operations specified in paragraph 1 above.

1 9. Exemptions: The Chief Inspector may exempt any factory or part of factory from the provisions of paragraphs 4 to 7 to the extent he deems suitable, if he is satisfied that their observance is not necessary for safeguarding the health of the operative.

SCHEDULE XII
PRINTING PRESSES AND TYPE FOUNDRIES - CERTAIN LEAD PROCESS CARRIED ON THEREIN

1 1. Exemptions: Where the Chief Inspector is satisfied that all or any of the provisions of this schedule are not necessary for the protection of persons employed he may by certificate in writing exempt any factory from all or any of such provisions subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector.

1 2. Definitions: In these regulations

“Lead material” means material containing not less than 3 per cent of lead.
“Lead Process” means
(a) the melting of lead or any lead material for casting and mechanical composing;
(b) The re-charging of machines with used lead material; or
(c) any other work including removal of dross from melting pots, cleaning of plungers; and
(d) manipulation movement or other treatment of lead material.

“Efficient exhaust draught” means localized ventilation effected by heat or mechanical means for the removal of gas, vapour, dust or fumes so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove gas, vapour fume or dust at the point where they originate.

1 3. Exhaust draught: None of the following processes shall be carried on except with an efficient exhaust draught

2 (a) melting lead material or slugs;

3 (b) heating lead material so that vapour containing lead is given off; or Unless carried on in such a manner as to prevent free escape of gas, vapour, fumes or dust into any place in which work is carried on; or

Unless earned on in electrically heated and thermostatically controlled melting pots.
Such exhaust draught shall be effected by mechanical means and so contrived as to operate on the dust, fume, gas or vapour given off as closely as may be at its point of origin.

1 4. Prohibition relating to women and young person: No women or young person shall be employed or permitted to work in any lead process.

2 5. Separation of certain processes: Each of the following processes shall be carried on in such a manner and under such condition as to secure effectual separation from any other process

3 (a) melting of lead or any lead material;
4 (b) casting of lead ingots;
5 (c) mechanical composing;
6 6. Container for dross: A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptacle shall be kept covered while in the work-room near the machine except when the dross is being deposited therein.
7 7. Floor of work-room: The floor of every work-room where lead process is carried on shall be
8 (a) of cement or similar material so as to be smooth and impervious to water;
9 (b) maintained in such condition; and
10 (c) shall be cleansed throughout daily after being thoroughly damped with water at a time when no other work is being carried on at the place.
11 8. Mess room: There shall be provided and maintained for the use of all persons employed in a lead process and remaining on the premises during the meal intervals, a suitable mess-room which shall be furnished with sufficient tables and benches.
12 9. Wash facilities: There shall be provided and maintained in a cleanly state and in good repair for the use of all persons employed in a lead process
13 (a) a wash place with either
14 (i) a trough with smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least two feet for every five such persons employed at any one time and having a constant supply of water from taps or jets above the trough at intervals of not more than two feet; or
15 (ii) at least one wash basin for every five such persons employed at any one time, fitted with a waste pipe and plug and having an adequate supply of water laid on or always readily available; and
16 (b) a sufficient supply and clean towels made of suitable material renewed daily with a sufficient supply of soap or other suitable cleaning material.
17 10. Medical facilities and records of examinations and tests
18 (1) The Occupier of every factory to which the schedule applies shall

(a) employ a qualified medical practitioner for medical surveillances of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and
(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).
(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for Inspection by the Inspector.

10-A. Medical examination by certifying surgeon:
1 (1) Every worker employed in a lead process shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include tests for lead in blood and urine, ALA in urine, hemoglobin, stippling of cells and steadiness test. No worker shall be

allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

2 (2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every six calendar months. Such re-examination shall, wherever the certifying surgeon considered appropriate, include tests as specified in sub-paragraph (1)

3 (3) The certifying surgeon after examining a worker, shall issue a certificate of fitness in Form 28. The record of examination and re-examination carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.

4 (4) The Certificate of fitness and the health register shall be kept readily available for inspection by the inspector.

5 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said process on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes.

6 (6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

10-B: The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.]

1 11. Food, drinks, etc., prohibited in work-rooms: No food, drink, pan and supari or tobacco shall be consumed or brought by any worker into any work-room in which any lead process is carried on.

SCHEDULE XIII

1 1. Short title and application: These rules may be cited as the Cashew nut processing Rules, 1958 and shall apply to all factories in which roasting, scrubbing and shelling of Cashewnut, or extracting, oil from cashewnut or Cashewnut shells is carried on.

2 2. Prohibition of employment of women and young persons: No women or young person shall be employed in any of the process specified in Rule 1 except in shelling of roasted Cashewnut.

3 3. Protective clothing and equipment: The occupier shall provide and maintain for the use of all persons employed in roasting and scrubbing of Cashewnut or extracting oil from Cashewnut or cashewnut shells

4 (a) suitable rubber or washable leather gloves;

5 (b) suitable type of impervious aprons with sleeves to cover body from down to knees;

6 (c) suitable type of footwear to afford protection to feet and legs against cashewnut oil;

7 (d) a protective ointment containing 10 per cent of shellac, 55 per cent of alcohol, 10 per cent of sodium perborate, 5 per cent of carbitol and 20 per cent talc;
8 (e) sufficient quantity of kaolin and coconut oil;
9 (f) any other material or equipment which the Chief Inspector of Factories may deem to be necessary for the protection of the workers.
10 4. Use of protective clothing and equipment: Every person employed in processes specified in Rule 1 shall make use of protective clothing and equipment supplied and arrangements shall be made by the occupier to supervise its use, maintenance and cleanliness.
11 5. Disposal of shells, ashes or oil of cashewnut:
12 (1) Shells, ashes, or oil of Cashewnut shall not be stored in any room in which workers are employed and shall be removed at least twice a day to any pit or enclosed place in the case of shells and ashes and to closed containers kept in a separate room in the case of oil.

1 (2) No worker shall be allowed to handle shells or oil of Cashewnut without using the protective measures provided under Rule 3 above.
2 6. Floors of work-rooms: The floor of every work-room in which processes specified in Rule 1 are carried on, shall be of a hard material so as to be smooth and impervious and of even surface and shall be cleaned daily; and spillage of any cashewnut oil in any work-room shall be washed with soap and cleaned immediately.
3 7. Seating accommodation: Workers engaged in shelling of Cashewnut shall be provided with adequate seats or work benches which shall be cleaned daily.
4 8. Rest-rooms:
5 (a) There shall be provided and maintained for the use of all persons employed in process specified in Rule 1, a suitable rest room furnished with sufficient tables and chairs or benches;
6 (b) Separate lockers shall be provided where food, etc., shall be stored by workers, before it is consumed in the rest room.
7 9. Food, drinks, prohibited in work rooms: No food, drink, pan, supari or tobacco shall be brought or consumed by any worker in any room in which processes specified in Rule 1 are carried out and no person shall remain in any such room during intervals for means or rest.
8 10. Washing facilities: Where roasting, scrubbing and shelling of Cashewnut or extracting oil from Cashewnut or cashewnut shells is carried on, there shall be provided and maintained in a clean and good repair washing facilities, with a sufficient supply of soap, coconut oil, nail brushes and towels at the scale of one tap or stand pipe for every 10 workers and the taps or stand pipes shall be spaced not less than 4 feet apart.
9 11. Time allowed for washing: Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal times, shall be allowed for washing, to such person employed in any of the processes specified in Rule 1, and a notice to this effect in English and in the regional language shall be affixed in a conspicuous place in each work-room concerned.
10 12. Smoke or gas produced by roasting cashewnut: Where smoke or gas is produced in the operation of roasting, provision shall be made for removing the smoke or gas through a chimney of sufficient height and capacity or by such other arrangements as may be necessary to prevent the gas or smoke escaping into the air, or any place in which workers are employed.

11 13. Storage of protective equipment: A suitable room or a portion of the factory suitably partitioned off, shall be provided exclusively for the storage of all the protective equipment supplied to the workers and no such equipment shall be stored in any place other than the room or place so provided.

12 14. [151][Medical facilities and records of examinations and tests

13 (1) The occupier of every factory to which the schedule applies shall—

(a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories.
(b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a).

1 (2) The said medical practitioner shall inspect daily the hands and feet of all the persons employed in the processes specified in paragraph 1.

2 (3) The record of such examinations carried out by the Medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

3 (4) The first-aid box maintained shall also Contain burrough's Solution (1:20) and aqueous solution of tonic acid (10%) for treatment of cases of dramatist.

14-A Medical examination by cer4i5iing Surgeon:

1 (1) Every worker employed in the processes specified in paragraph 1. shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include skin test for dermatitis and no worker shall be allowed to work after days of his first employment in the factory unless certified fit for such employment by the certifying surgeon.

2 (2) Every worker employed in the said processes shall be re-examined by a Certifying surgeon at least once in every three calender months. Such re-examination shall, wherever the certifying surgeon considers appropriate, include asking tests for dramatitis.

3 (3) The Certifying Surgeon after examining a worker, shall issue a Certificate of fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of these tests, shall also be entered by the certifying surgeon in a health register in Form 29.

4 (4) Their certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.

5 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said processes.

6 (6) No person who has been found unfit to work as said in paragraph (5) shall be reemployed or permitted to work in the said processes unless the certifying

1 surgeon, after further examination again certifies him fit for employment in those processes.

14-B.
The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.
1 15. Power of Chief Inspector of Factories: The Chief Inspector of Factories may grant exemptions from the operation of any of these rules where he is satisfied that their observance is not necessary for safeguarding the health of the workers.

SCHEDULE XIV
MANUFACTURE OF POTTERY
1 1. Definitions: For the purposes of this schedule
2 (a) "Pottery" includes earthenware, stoneware, porcelain China, tiles, and any other articles made from clay or from a mixture containing clay and other materials such as quartz, flint, feldspar and gypsum;
3 (b) "Efficient exhaust draught" means localized ventilation effected by mechanical or other means for the removal of dust or fume so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove effectively dust or fume generated at the point where dust or fume originates;
4 (c) "Fettling" includes sealloping, fowing, sand papering, sand sticking, brushing or any other process of cleaning of pottery ware in which dust is given off;
5 (d) "Bedding" means the placing of flatware in powdered flint or quartz for the biscuit firing when the sagger or box containing the ware is filled up with powdered flint or quartz;
6 (e) "Flinting" means the placing of flatware in powdered flints for the biscuit firing when the sagger or box containing the ware is not filled with powdered flint.
7 2. Efficient exhaust draught: The following processes shall not be carried on without the use of the efficient exhaust draught
8 (1) All processes involving the manipulation or use of a dry and unfitted lead compound.
9 (2) The fettling operations of any kind, whether or greenware or biscuit, provided that this shall not apply to the wet fettling and to the occasional finishing of pottery articles without the aid of mechanical power.

1 (3) The shifting of clay dust or any other material for making tiles or other articles by pressure, except where: — (a) this is done in a machine so enclosed as effectively to prevent the escape of dust; or (b) the material to be shifted is so damp that no dust can be given of.
2 (4) The pressing of tiles from clay dust, an exhaust opening being connected with each press; this clause shall also apply to the pressing from clay dust of articles other than tiles, unless the material is so damp that no dust is given off.

3 (5) The fettling of tiles made from clay dust by pressure, except, where the fettling is done wholly on or with damp material, this clause shall also apply to the fettling of other articles made from clay dust unless the material is so damp that no dust is given off.
4 (6) The processes of bedding and flinting.
5 (7) The brushing of earthen-ware biscuit, unless the process is carried on, in a room provided with efficient general mechanical ventilation or other ventilation, which is certified by the Inspector of Factories as adequate, having regard to all the circumstances of the case.
6 (8) Fettling of biscuit-ware which has been fired in powdered flint or quartz except where this is done in machines so enclosed as effectively to prevent the escape of dust.
7 (9) Ware cleaning after the application of glaze by dipping or other process.
8 (10) Crushing any dry grinding of materials for pottery bodies unless carried on in machines so enclosed as effectively to prevent the escape of dust.
9 (11) Sieving or manipulation of powdered flint unless it is so damp that no dust can be given of.
10 (12) Grinding of tiles on a power driven wheel unless an efficient water spray is used on the wheel.
11 (13) Removal of biscuit-ware from saggers packed with flint.
12 (14) Lifting and conveying of materials by elevators and conveyors unless they are effectively enclosed and so arranged as to prevent escape of dust into the air in or near to any place in which persons are employed.
13 (15) The preparation or weighting out of flow material, lawning of dry colours, colour dusting, colour-blowing and the making of lithographic transfers.
14 (16) In mould making the binds or similar receptacles used for holding Plaster of Paris unless they are provided with suitable covers.
15 3. Each of the following processes shall be carried on in such a manner and under such conditions as to secure effectual separation from one another and from other wet processes;

(a) dry grinding or sieving of materials, handling and manipulation of such materials, scouring, loading and unloading of saggers and drying of clay and green-ware.
(b) All processes involving the use of a dry lead compound.
4. No woman or young person shall be employed or permitted to work in any of the operations specified in paragraph 2 or at any place where such operations are carried on.
5. The potter's wheel (jolly and jigger) shall be provided with screens or constructed as to prevent clay scraps being thrown off beyond wheel.

1 6.
2 (1) All practical means shall be taken by damping or otherwise to prevent dust arising during cleaning of floors.
3 (2) Damp saw-dust or other suitable material shall be used to render the moist method effective in preventing dust rising into the air during the cleaning process which shall be carried out after work has ceased for the day and before 3 a.m. next morning.
4 7. The floors of potters, shop, slip houses, dipping houses and ware cleaning rooms shall be hard and impervious, and shall be thoroughly cleaned daily by a moist method by an adult male after work has ceased for the day, and before 3 a.m. next morning.

5 8. [152][Medical facilities and records of examinations and tests.
6 (1) The occupier of every factory to which manufacture of pottery is carried on, shall
7 (a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and
8 (b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a);
9 (2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspector by the Inspector.]
10 9. Medical Examination by Certifying Surgeon:
11 (1) Every worker employed in any process mentioned under paragraph (3) shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include tests for lead in urine and blood, ALA in urine,

1 hemoglobin content, stippling of cells and pulmonary function tests and chest X-ray for the others. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the certifying surgeon.
2 (2) All persons employed in any of the processes include under sub- paragraphs 3(a) and 3(b) shall be examined by a certifying surgeon once in every 3 calender months. Those employed in any other processes mentioned in the remaining sub-paragraphs of paragraph 3 shall be examined by a certifying surgeon once in every twelve months. Such examination in respect of all the workers shall include all the tests as specified in sub-paragraph (1) except chest X-ray which will be once in 3 years.
3 (3) The certifying surgeon after examining a worker, shall issue a certificate of Fitness in Form 28, the record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the Factory. The record of each examination carried out under sub-paragraphs (I) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.
4 (4) The certificate of Fitness and the health register shall be kept available for inspection by the Inspector.
5 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes.
6 (6) No person who has been found unfit to work in the said processes as said in subparagraph (5) above shall be re-employed or permitted to work unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

9-A. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion in of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.]

1 10. Protective equipment

2 (1) The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in process included under paragraph 2.

3 (2) The occupier shall provide and maintain suitable aprons of a waterproof or similar material which can be sponged daily for the use of the dipper assistants and ware cleaners.

1 (3) Aprons provided in pursuance of paragraph 10(2) shall be thoroughly cleaned daily by the wearers by sponging or other wet process. All overalls and head coverings shall be washed, cleaned and mended at least once a week, and this washing, cleaning or mending shall be provided for by the occupier.

2 (4) No person shall be allowed to work in employing sacks of dust materials, weighing out and mixing of dusty materials and charging of ball mills and blungers without wearing a suitable and efficient respirator.

3 (5) A suitable room or a portion of the factory suitably partitioned off shall be provided exclusively for the storage of all protective equipment supplied to the workers and no such equipment shall be stored in any place other than the room or place provided.

4 11. Washing facilities: — The occupier shall provide and maintain in a cleanly state and in good repair for the use of all persons employed in any of the processes specified in paragraph 2 a wash place under cover with either

5 (a)

6 (i) a trough with a smooth impervious surface fitted with a waste pipe, without plug, and of sufficient length to allow at least two feet for every five such persons employed at any one time and having a constant supply of clean water from taps or jets above the trough at intervals of not more than two feet; or

7 (ii) at least one tap or stand pipe for every five such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 4 feet apart; and

8 (b) a sufficient supply of clean towels made of suitable material renewed daily with sufficient supply of nail brushes and soap.

9 12. Time allowed for washing: Before each meal and before the end of the day's work, at least ten minutes, in addition to the regular meal time, shall be allowed for washing to each person employed in any of the processes mentioned in paragraph 2.

10 13. Mess room:

11 (1) There shall be provided and maintained for use of all persons remaining within the premises during the rest intervals, a suitable mess room providing accommodation of 10 square feet per head and furnished with

12 (i) a sufficient number of tables and chairs or benches with back rest

13 (ii) arrangements for washing utensils;

14 (iii) adequate quantity means for warming food

15 (iv) adequate quantity of drinking water;

16 (2) The room shall be adequately ventilated by the circulation of fresh air and placed under the charge of a responsible person and shall be kept clean.

1 14. Food, drinks, etc., prohibited in the work rooms: No food, drink, pan and supari or tobacco shall be' brought or consumed by any worker into any work room in which any of the processes mentioned in paragraph 2 is carried on and no person shall remain in any such room during intervals for meals or rest.
2 15. Cloak room etc.: There shall be provided and maintained for the use of all persons employed in any of the processes mentioned in paragraph 2
3 (a) a cloak-room for clothing put off during working hours and such accommodation shall be separate from any mess-room;
4 (b) separate and suitable arrangements for the storage of protective equipment provided under paragraph 10.
5 16. These regulations shall not apply to a factory in which any of the following articles but no other pottery is made
6 (a) unglazed or salt glazed bricks and tiles; and
7 (b) architectural terra cotta made from plastic clay and either unglazed or glazed with a leadless glaze only.
8 17. Exemptions: If in respect of any factory the Chief Inspector is satisfied that all or any of the provisions of this schedule are not necessary for the protection of the persons employed in such factory, he may by certificate in writing exempt such factory from all or any of such provisions subject to such conditions as he may specify therein. Such Certificate may at any time be revoked by the Chief Inspector without assigning any reasons.

[SCHEDULE XV
CHEMICAL WORKS
PART-I
1 1. Application: This schedule shall apply to all manufacture and processes incident at thereto carried on in Chemical works.
2 2. Definitions - For the purpose of this schedule:
3 (a) "Chemical Works" means any factory or such part of any factory as are listed in appendix 'A' to this schedule;
4 (b) "efficient exhaust draughts means localized ventilation effected by mechanical or other means for the removal of gas, vapour, fume or dust to prevent it from escaping into the air of any place in which work is carried on;
5 (c) "bleaching powder" means the bleaching powder commonly called chloride of lime;
6 (d) "chlorate" means chlorate or perchlorate;
7 (e) "caustic" means the hydroxide potassium or sodium;

(f) "chrome process" means the manufacturing of chromate or bichromate of potassium or sodium or the manipulation, movement or other treatment of these substances;
(g) "nitro or amino process" means the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues, and the making of explosives with the use of any of these substances;

(h) the term 'permit to work' system means the compliance with the procedures laid down under para 20 of part II;
(i) "toxic substances" means all those substances which when they enter into the human body, through inhalation or ingestion or absorption through skin, in sufficient quantities cause facility or exert serious affliction of health, or chronic harmful effects on the health of persons exposed to it due to its inherent chemical or biological effects. In respect of substances whose TLV in specified in Rule 123-A, exceeding the concentration specified therein would make the substance toxic;
(j) "emergency" means a situation or condition leading to a circumstances or set of circumstances in which there is danger to the life or health of persons or which could result in big fire or explosion to the work and outside environment affecting the workers or neighborhood in a serious manner, demanding immediate action;
(k) "dangerous chemical reaction "means high speed reactions, runaway reaction, delayed reactions, etc., and are characterized by evolution of large quantities of heat, in tense release or toxic flammable gases or vapor's, sudden pressure build-up etc.
(l) "manipulation "means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping, handling using etc.;
(m) "approved personal protective equipment" means items of personal protective equipment conforming to the relevant ISI specifications or in the absence of it, personal protective equipment approved by the Chief Inspector of Factories;
(n) "appropriate personal protective equipment" means that when the "protective equipment" is used by the worker, he shall have no risk to his life of health or body; and
(o) "confined space" means any space by reason of its construction shall as well as in relation to the nature of the work carried therein and where hazards to the persons entering into or working inside exist or are likely to develop during working.

PART – II
GENERAL REQUIREMENTS
Applying to all the works in Appendix 'D'

1 1. Housekeeping:
2 (1) Any spillage of materials shall be cleaned up before further processing.
3 (2) Floor, platforms, stairways, passages and gangways shall be kept free of any obstructions.
4 (3) There shall be provided easy means of access to all parts of the plant to facilitate cleaning
5 2. Improper use of chemicals: No chemicals or solvents or empty containers containing chemicals or solvents shall be permitted to be used by workers for any purposes other than in the processes for which they are supplied.
6 3. Prohibition on the use of food, etc.: No food drink, tobacco, pan or any edible item shall be stored or heated or consumed on or near any part of the plant or equipment.
7 4. Cautionary Notices and Instructions:
8 (1) Cautionary notices are a language understood by the majority of workers shall be prominently displayed in all hazardous areas drawing the attention of all workers about the

hazards to health, hazards involving fire explosion and any other hazard such as consequences of testing of material or substances used in the process or using any contaminated container for drinking or eating to which the workers' attention should be drawn for ensuring their safety and health.

9 (2) In addition to the above cautionary notice, arrangements shall be made to instruct and educate all the workers including illiterate workers about the hazards, in the process including the specific hazards to which they may be exposed to, in the normal course of their work. Such instructions and education should also deal with the hazards involved in unauthorized and unsafe practices including the properties of substances used in the process under normal conditions as well as abnormal conditions and the precautions to be observed against each and every hazard. Further, as undertaking from the workers shall be obtained within one month of their employment and for old workers employed, within one month of coming into operation of the rules, to the effect that they have read the contents of the cautionary notices and instructions, understood them and would abide by them. The training and instructions to all workers and all supervisory personnel shall include the significance of different types of symbols and colours used on the labels struck or painted on the various types of containers and pipe lines.

10 5. Evaluation and provision safeguards before the commencement of process

11 (1) Before commencing any process or any experimental work, or any new manufacture covered under Appendix 'A' the occupier shall take all possible steps to ascertain definitely all the hazards involved both from the actual operations and the chemical reactions including the dangerous chemical reactions. The properties of the raw materials, used, the final products to be made, and any by-products derived during manufacture, shall be carefully

1 studied and provisions shall be made for dealing with any hazards including effects on workers, which may occur during manufacture.

2 (2) Information in writing giving details of the process, its hazards and the steps taken or proposed to be taken from the design stage to disposal stage for ensuring the safety as in sub-para (1) above should be sent to the Chief Inspector at the earliest but in no case less than 15 days before commencing manufacture, handling, or storage of any of items covered under Appendix 'A' whether on experimental basis, or as pilot plant or as trial production, or as large scale manufacture.

3 (3) The design, construction, installation, operation, maintenance and disposal of the buildings, plant and facilities shall take into consideration effective safeguards against all the safety and health hazards so evaluated.

4 (4) The requirements under the sub-para (1) to (3) shall not act in lieu of or in derogation to, any other provisions contained in any Act governing the work.

5 6. Authorized entry: Authorized persons only shall be permitted to enter any section of the factory or plant where any dangerous operations or processes are being carried on or where dangerous chemical reactions are taking place of where hazardous chemicals are stored.

6 7. Examinations of instruments and safety devices:

7 (1) All instruments and safety devices used in the process shall be tested before taking into use and after carrying out any repair to them and examined once in a month, by a competent person. Records of such tests and examinations shall be maintained in a register.

8 (2) All instruments and safety devices used in the process shall be operated daily or as often as it is necessary, to ensure its effective and efficient working at all times.
9 8. Electrical installations: All electrical installations used in the process covered in Appendix 'A' shall be of an appropriate type to ensure safety against the hazard prevalent in that area such as suitability against dust, dampness, corrosion, flammability and explosivity etc., and shall confirm to the relevant 1ST specifications governing their construction and use for that area.
10 9. Handling and storage of chemicals:
11 (1) The containers for handling and storage of chemicals shall be of adequate strength taking into consideration the hazardous nature of the contents. They shall also be provided with adequate labelling and colour coding arrangements to enable identification of the containers and their contents indicating the hazards and safe handling methods and shall confirm to the respective 151 standards. The instructions given in the label shall be strictly adhered to Damaged Containers shall be handled only under supervision of a

1 knowledgeable and responsible person and spillage shall be rendered innocuous in a safe manner using appropriate means.
2 (2) The arrangement for the storage of chemicals including charging of chemicals in reaction vessels and containers shall be such as to prevent any risk of fire or explosion or formation of toxic concentration of substances above the limits specified in Rule 123-A.
3 (3) Without prejudice to the generality of the requirements in sub-para (2) above, the arrangements shall have suitable ventilation facilities and shall enable the maintenance of safe levels in vessels and containers. Such arrangements shall also take into consideration, the type of flooring and the capacity of flooring and the compatibility requirements of substances with other chemicals stored nearby.
4 (4)
5 (a) Storage of chemicals and intermediate products, which are highly unstable or reactive or explosive shall be limited to the quantities required for two months' use.
6 (b) whenever the quantities laid down in the above clause (a) are to be exceeded, the permission of the Chief Inspector shall be obtained.
7 (c) Notwithstanding anything contained in clause (a) and (b) above, the Chief Inspector of Factories may direct any Factory carrying out processes covered in Appendix 'A' to further limit the storage of hazardous substances to quantities less than two months on considerations of safety.
8 (5) Standby arrangements equal to the biggest container shall always be available to transfer the toxic substances quickly into the standby storage facility if any defect develops in any of the container resulting in the release of toxic substances.
9 (6) Any storage facility constructed using non-metallic material such as Fiber Glass Reinforced Plastics (FRP), all glass vessels etc. shall have adequate strength to withstand the stress, if any, exerted by the contents and shall be properly anchored, working platforms, access ladders, pipe lines etc., used in such storage facility shall not have may support on the structure of the storage facility and shall be independently supported.
10 10. Facility for isolation: The plant and equipment shall be so constructed and maintained as to enable quick isolation of plant or part of plant or equipment, with appropriate

indication. One copy of the layout plant indicating the isolation facilities shall always be available with the security personnel, the maintenance and the health and safety personnel and these isolation facilities shall be checked for its effectiveness once in a month.

11 11. Personal Protective Equipment:

1 (1) All workers exposed to the hazards in the process covered by this schedule shall be provided with appropriate and approved type of personal protective equipment. Such equipment shall be in a clean, sterile and hygienic condition before issue.

2 (2) The occupier shall arrange to inform, educate and supervise all the workers in the use of personal protective equipment while carrying out the job.

3 (3) As regards any doubt regarding the appropriateness of any personal protective equipment, the decision of the Chief Inspector will be final.

4 12. Alarm Systems:

5 (1) Suitable and effective alarm system giving audible and visible indications, shall be installed at the control room as well as in all strategic locations where process control arrangements are available so as to enable corrective action to be taken before the operational parameters exceed the predetermined safe levels or lead to conditions conducive for an outbreak of fire or explosion to occur. Such alarm systems shall be checked daily and tested every month at least once to ensure its performance efficiency at all times.

6 (2) The Chief Inspector of Factories may direct such system to be installed in case of plant or processes where toxic materials are being used and spillage or leakage of which may cause wise and spillage or leakage of which may cause wide spread poisoning in or around the plant.

7 13. Control of escape of substances into the work atmosphere:

8 (1) Effective arrangements such as, enclosure, or by pass, or efficient exhaust draught, maintenance of negative pressure etc., shall be provided in all plants, containers, vessels, sewers, drains, flues, ducts, culverts, and buried pipes and equipment, to control the escape and spread of substances which are likely to give rise to fire or explosion or toxic hazards during normal working and in the event of accident or emergency.

9 (2) In the event of the failure of the arrangements for control resulting in the escape of substances in the work atmosphere immediate steps shall be taken to control the process in such a manner, that further escape is brought down to the safe level.

10 (3) The substances that would have escaped into the work atmosphere before taking immediate steps as required in sub-para (2), shall be rendered innocuous by diluting with air or water or any other suitable agent or by suitably treating the substances.

11 14. Control of dangerous chemical reactions: Suitable provision, such as automatic and or remote control arrangements, shall be made for controlling the effects of dangerous chemical reactions. In the event of failure of control arrangements automatic flooding or blanketing or other effecting arrangements shall come into operation.

1 15. Testing, examination and repair of plant and equipment.

2 (1) All parts of plant, equipment and machinery used in the process which in the likely event of their failure may give rise to an emergent situation shall be tested by a competent person before commencing process and retested at an interval of two years or after carrying

out repairs to it. The competent persons shall identify the parts of the plant, equipment and machinery required to be tested as aforesaid and evolve a suitable testing procedures. In carrying out the test as mentioned above in respect of pressure vessels or reaction vessels the following precautions shall be observed namely:

3 (a) before the test is carried out, each vessel shall be thoroughly cleaned and examined externally, and as far as practicable, internally, and as far as practicable, internally also for surface defects, corrosion and foreign matter. During the process of cleaning and removal of sludge, if any, all due precautions shall be taken against fire or explosion, if such sludge is of phoropheric nature of contents spontaneously combustible chemicals;

4 (b) as soon as the test is completed, the vessel shall be thoroughly dried internally and shall be clearly stamped with the marks and figures indicating the person by whom testing has been done and the date of test; and

5 (c) any vessel which fails to pass the test or which for any other reasons is found to be unsafe for use shall be destroyed or rendered unusable under intimation to the Chief Inspector.

6 (2) All parts of plant, equipment, machinery which in the likely event of failure may give rise to an emergent situation shall be examined once in a month by the competent person.

7 (3) Records of testing and examination referred to in paragraphs (1) and (2) shall be maintained as long as that part of the plant, equipment and machinery are in use.

8 (4) All repair work including alteration, modification and addition to be carried to the plant, equipment and machinery shall be done under the supervision of a responsible person who shall evolve a procedure to ensure safety and health of persons doing the work. When repairs for modification is done on pipelines, and joints are required to be welded, but welding of joints shall be preferred. Wherever necessary, the responsible person shall regulate the aforesaid work through a 'permit to work system.'

9 16. Staging:

10 (1) All staging that is erected for the purpose of maintenance work or repair work or for work Connected with entry into confined spaces and used in the processes included in Appendix 'A' shall be stable, rigid and Constructed out of

1 substantial material of adequate strength. Such staging shall confirm to the respective Indian Standard specific actions.

2 (2) Staging shall not be erected over any closed or open vessel unless the vessel is so constructed and ventilated to prevent exposure of persons working on the stages.

3 (3) All the staging constructed for the purpose of this para shall have appropriate access which are safe and shall be fitted with proper hand rails to a height of the one meter and toe board.

4 17. Seating arrangements: The seating arrangements provided for the operating personnel working in processes covered in Appendix 'A' shall be located in a safe manner as to prevent the risk of exposure of toxic, flammable and explosive substances evolved in the work environment in the course of manufacture of repair or maintenance, either due to failure of plant and equipment or due to the substances which are under pressure, escaping into atmosphere.

5 18. Entry into or work in confined spaces:

6 (1) The Occupier of every factory to which the provisions of this schedule apply, shall ensure the observance of the following precautions before permitting any person to enter or work inside the confined spaces

7 (a) identify all confined spaces and the nature of hazards that are encountered in such spaces, normally or abnormally and arrange to develop the most appropriate safeguards for ensuring the safety and health of persons entering into or working inside, the confined spaces;

8 (b) regulate the entry or work inside the confined spaces through a 'permit to work system' which should include the safeguards so developed is required under sub-clause (a) above;

9 (c) before testing the confined space for entry into work, the space shall be rendered safe by washing or cleaning with neutralizing agents; or purging with steam or inert gases and making adequate forces ventilation arrangements or such measure which will render the confined space safe;

10 (d) shall arrange to carry out such tests as are necessary for the purpose by a competent person and ensure that the confined space is safe for the persons to enter or work. Such testing shall be carried out as often as is necessary during the course of work to ensure its continued safety;

11 (e) Shall arrange to educate and train the personnel who would be required to work in confined spaces about the hazards involved in the work. He shall also keep in readiness the appropriate and approved personal protective equipment including arrangements for rescue, resurrection and first aid, and shall arrange supervision of the work at all times by a responsible all knowledgeable person.

1 (2) The manager shall maintain a log of all entry into or work, in, confined spaces and such record shall contain the work and such other details of persons as signed for the work, the location of the work and such other details that would have a bearing on the safety and health of the persons assigned for this work. The log book so maintained shall be retained as long as the concerned workers are in service and produced to the inspector when demanded.

2 19. Maintenance work etc.:

3 (1) All the work connected with the maintenance of plants and equipment including cleaning of empty containers which have held hazardous substances used in the processes covered in this Schedule, shall be carried out under 'permit to work system' employing trained personnel and under the supervision of responsible person, having knowledge of the hazards and precautions required to deal with them.

4 (2) Maintenance work shall be carried out in such a manner that there is no risk to persons in the vicinity or the persons who pass by. If necessary, the place of such work shall be cordoned off or the presence of unconnected persons effectively controlled

5 20. Permit to work system: The permit to work system shall interalia include the observance of the following precautions while carrying out any specified work to be subjected to the permit to work system

6 (a) all work subject the permit to work system shall be carried out under the supervision of a knowledgeable and responsible person;

7 (b) all parts of plant or machinery or equipment on which permit to work system is carried out, shall remain isolated from other parts throughout the period of permit to work and

the place of work including the parts of plant, machinery shall be rendered safe by cleaning, purging, washing etc.;

8 (c) all work subject to the permit to work system shall have predetermined work procedures which integrate safety with the work. Such procedures shall be reviewed whenever any change occurs in material or equipment so that continued safety is ensured;

9 (d) persons who are assigned to carry out the permit work system shall be physically fit in all respects taking into consideration the demands and nature, of the work before entering into the confined space. Such person shall be adequately informed about the correct work procedures as well as the precautions to be observed while carrying out the permit to work system;

10 (e) adequate rescue arrangements wherever considered necessary and adequate first aid, rescue and resurrection arrangements shall be available in good working condition near the place of work while carrying out the permit to work system, for use in emergency;

(f) appropriate and approved personal protective equipment shall be used while carrying out the permit to work system;

(g) after completion of work subject to the permit to work system the person responsible shall remove all the equipment and tools and restore to the original conditions so as to prevent any danger while carrying out regular process.

21. Safety sampling personnel: The occupier shall ensure the safety of persons assigned for collecting samples by instructing them on the safe procedures. Such personnel shall be provided with proper and approved personal protective equipment, if required.

22. Ventilation: Adequate ventilation arrangements shall be provided and maintained at all times in the process area where dangerous or toxic or flammable or explosive substances could be evolved. These arrangements shall ensure that concentrations, which are either harmful or could result in explosion, are not permitted to be build up in the work environment.

23. Procedures for meeting emergencies:

(1) The occupier of every factory carrying out the works covered in Appendix 'A' shall arrange to identify all types of possible emergencies that could occur in the processes during the course of work or while carrying out maintenance work or repair work, the emergencies so identified shall be reviewed every year.

(2) The occupier shall formulate a detailed plan to meet all such identified emergencies including arrangements for summoning outside help for rescue and firefighting and arrangements for making available urgent medical facilities.

(3) The occupier shall have sent the list of emergencies and the details of procedures and plans formulated to meet the emergencies, to the Chief Inspector of Factories.

(4) The occupier shall arrange to install distinctive and recognizable warning arrangements to caution all persons inside the plant as well as the neighboring community, if necessary, to enable evacuation of persons and to enable the observance of emergency procedures by the persons who are assigned emergency duties. All concerned must be well informed about the warning arrangements and their meeting. The arrangements must be checked for its effectiveness every month.

(5) Alternate power supply arrangements shall be made and interlocked with the normal power supply system so as to ensure constant supply of power to the facilities and equipment meant

for compliance with requirements of paragraphs 10,11,12,13,14,18,22, and this paragraph of part II, part III, part IV and part V of this schedule.
(6) The occupier shall arrange to suspend the further process work in a place where emergency is established and shall forthwith evacuate all persons in that area except workers who have been assigned emergency duties.

1 (7) All the employees of the factory shall be trained about the action to be taken by them including evacuation procedures during emergencies.
2 (8) All emergency procedures must be rehersed every three months and deficiencies, if any, in the achievements of the objectives shall suitably be corrected.
3 (9) The occupier shall arrange to have ten percent of the workers trained in the use of First Aid, firefighting appliances and in the rendering of specific First Aid measures taking into consideration the special hazards of the particular process.
4 (10) The occupier shall furnish immediately on the request the specific chemical identify of the hazardous substance to the treating physician when the information is needed to administer proper emergency or first-aid treatment to exposed persons.
5 24. Danger due to effluents:
6 (1) Adequate precautions shall be taken to prevent the mixing of effluents from different processes and operations which may cause dangerous or poisonous gases to be evolved.
7 (2) Effluents which contain or give rise in the presence of other effluents to poisonous gases shall be provided with independent drainage systems to ensure that they may be trapped and rendered safe.

PART – III
FIRE AND EXPLOSIONS RISKS
1 1. Sources of ignition including lighting installation:
2 (1) No internal combustion engine and no electric motor or other electrical equipment, and fittings and fixtures capable of generating sparks or otherwise causing combustion or any other source of ignition or any naked light shall be installed or permitted to be used in the process area where there could be fire and explosion hazards.
3 (2) All hot exhaust pipes shall be installed outside a building and other hot pipes or hot surface or surfaces likely to become hot shall be suitable protected.
4 (3) The classification of work areas in terms of its hazard potential and the selection of electrical equipment or other equipment that could constitute a source of ignition shall be in accordance with the respective Indian Standard.
5 (4) Where a flammable atmosphere may be prevalent or could occur, the soles of footwear worn by workers shall have no metal on them, and the wheels of trucks of conveyors shall be conductive type.
6 (5) All tools and appliances used for work in this area shall be of non-sparking type.

1 (6) Smoking in process areas where there are risks of fire and explosion shall be prohibited, and warning notices in the language understood by majority of workers shall be posted in the factory prohibiting smoking into specified areas.

2 2. Static Electricity:
3 (1) All machinery and plant, particularly, pipe lines and belt drives, on which static charge is likely to accumulate, shall be effectively earthed. Receptacles for flammable liquids shall have metallic connections to the earthed supply tanks to prevent static sparking Where necessary, humidity shall be regulated.
4 (2) Mobile tanker wagons shall be earthed during filling and discharge, and precautions shall be taken to ensure that Earthing is effective before such filling or discharge taken place.
5 3. Lighting protection: Lighting protection arrangement shall be fitted where necessary, and shall be maintained.
6 4. Process heating: The method of providing heat for a process likely to result in fire and explosion shall be as safe as possible and where the use of naked flame is necessary, the plant shall be so constructed as to prevent any escaping flammable gas, vapour, or dust coming into contact with the flame, or exhaust gases, or other sources likely to cause ignition. Wherever possible, the heating arrangements shall be automatically controlled at a predetermined temperature below the danger temperature.
7 5. Leakage of flammable liquids:
8 (1) Provisions shall be made to confine by means of bund walls, dykes, sumps etc., possible leakages from storage vessels containing flammable liquids.
9 (2) Waste material in contact with flammable substances shall be disposed of suitably under the supervision of knowledgeable and responsible person.
10 (3) Adequate and suitable fire-fighting appliances shall be installed in the vicinity of such vessels.
11 6. Safety valves: Every still and every closed vessel in which gas is evolved or into which gas is passed, and in which the pressure is liable to rise above the atmospheric pressure, shall have attached to it a pressure gauge, and a proper safety valve or other equally efficient means to receive the pressure. These appliances shall be maintained in good condition.
12 7. Installation of pipe line etc.: All pipelines carrying flammable or explosive substances shall be protected from mechanical damage and shall be examined by a responsible person once in a week to detect any deterioration or defects, or accumulation of flammable or explosive substances, and record kept of any defects found and repairs made.
13 8. Fires fighting systems:
14 (1) Every factory employing 500 or more persons and carrying processes listed in Appendix ‘A’ shall provide

(a) Trained and responsible firefighting squad so as to effectively handle the firefighting and lifesaving equipment in the event of fire or other emergency. Number of persons in this squad will necessarily depend upon the size of risk involved but in no case shall be less then such trained persons to be available at any time. The squad shall consist of watch and ward personnel, fire pump man and departmental supervisors and operators trained in the operation of fire and emergency services.
(b) Squad leaders shall preferably be trained in a recognised gover1wnen institution and their usefulness enhanced by providing residence on the premises.
(c) Squad personnel shall be provided with clothing and equipment including helmets, boots and belts.

(2) A muster roll showing the duties allocated to each member of the squad shall be prepared and copies supplied to each leader as well as displayed in prominent places so as to be easily available for reference in case of emergency.
(3) The pump man shall be thoroughly conversant with the location of all appliances. He shall be responsible for maintaining all firefighting equipment in proper working order. Any defect coming to his notice shall be immediately be brought to the notice of squad leader.
(4) As far as is practicable, the fire pump room and the main states of the factory be connected to all manufacturing or storing areas through telephone interlinked and placed in a convenient location near such areas.

PART—IV
RISKS OF TOXIC SUBSTANCES

1 1. Leakage:

2 (1) All plants shall be so designed and Constructed as to prevent the escape of toxic substance. Where necessary, separate buildings, rooms, or protective structures shall be used for the dangerous stages of the process and the buildings shall be so designed as to localize any escape of toxic substances

3 (2) Catch pits, bund walls, dykes, or other suitable safeguards shall be provided to restrict the serious effects of such leakages, catch pits shall be placed below joints in pipelines where there is danger involved to maintenance and other workers from such leakage.

4 2. Drainage: Adequate drainage shall be provided and shall lead to collection tanks specifically provided for this purpose wherein deleterious material shall be neutralized, treated or otherwise rendered safe before it is discharged into public drains or sewers.

5 3. Covering of Vessels:

1 (1) Every fixed vessel or structure containing any toxic substance and not so covered as to eliminate all reasonable risk of accidental contact of any portion of the body of worker, shall be so constructed as to avoid physical contact.

2 (2) Such vessel shall, unless its edge is at least 90 cms. above the adjoining ground or platform, be securely fenced to a height of at least 90 cms. above such adjoining ground or platform.

3 (3) Where such vessels adjoin and the space between them clear of any surrounding brick or other work is either less than 45 cms in width or is 45 or more cms in width, but is not securely fenced on both sides to a height of at least 90 cms, secure barriers shall be so placed as to prevent passage between them:

Provided that sub-paragraph (2) of this paragraph shall not apply to
(a) Saturators used in the manufacture of sulphate of ammonia; and
(b) that part of the sides of brine evaporating pans which require raking, drawing of filling.

4. Continuous exhaust arrangement:
(1) Any process evolving toxic vapour, gas, fume and substance shall have efficient continuous exhaust draught, such arrangement shall be interlocked in the process central wherever possible.

(2) In the event of failure of continuous exhaust arrangement means shall be provided to automatically stop the process.
5. Work Bench: All the work benches used in processes involving the manipulation of toxic substances, shall be graded properly and shall be made of smooth impervious surface which shall be washed daily after the competition of work.
6. Waste disposal:
(1) There shall be provided a suitable receptacle made of non-absorbable material with a tightly fitting cover for depositing waste material soiled with toxic substances and the contents of such receptacle shall be destroyed by burning or using other suitable methods under the supervision of a responsible person.
(2) During the course of manufacture, whenever any batch or intermediate products having toxicity is rejected on Consideration of quality, sufficient precautions shall be taken to render them innocuous or otherwise treat them or inactive them, before disposal.
(3) The empty containers of toxic substances shall be Cleaned thoroughly before disposal under the supervision of a responsible person.

PART—V
SPECIAL PROVISIONS

1 1. Special precautions for Nitro or Amino Processes:
2 (1) Unless the crystallized nitro or amino substances or any of its liquor is broken or agitated in a completely enclosed process so as not to give rise to dust or fume, such process shall be carried on under an efficient exhaust draught or by adopting any other suitable means in such a manner as to prevent the escape of dust of fume in the working atmosphere
3 (2) No part of the plant or equipment of implements which was in contact with nitro or amino compounds shall be repaired, or handled unless they have been emptied and thoroughly cleaned and decontaminated
4 (3) Filling of containers with nitro or amino compounds shall be done only by using a Suitable scoop to avoid physical contact and the drying of the containers in the stove shall be done in such a manner that the hot and contaminated air from the stove is not drawn into the work room.
5 (4) Processes involving the steaming into or around any vessel containing nitro or amino compounds or its raw materials shall be carried out in such a manner that these team or vapour is effectively prevented to be blown back into the working atmosphere.
6 (5) Suitable antidotes such as methylene blue injections shall always be available at designated places of work for use during emergency involving the Poisoning with intro or amino Compounds.
7 2. Special precautions for ‘Chrome processes’:
8 (1) Grinding and sieving of raw materials in chrome processes shall be carried on in such a manner and under such condition as to secure effective separation from any other processes and under an efficient exhaust draught.
9 (2) There shall be washing facilities located very near to places where wet chrome processes such as leaching, acidification, sulphate settling, evaporation, crystallization,

centrifugation or packing are carried out, to enable quick washing of effected parts of body with running water.

(3) Weekly inspection of hand and feet of all persons employed in chrome process shall be done by a qualified nurse and record of such inspections shall be maintained in a form approved by the Chief Inspector of Factories.

(4) There shall be always available at designated places of work suitable ointment such as glycerine, Vaseline etc., and water proof plaster in a separate box readily accessible to the workers so as to protect against preformation of nasal septum.

3. Special precautions for processes carried out in all glass vessels:

(1) Processes and chemical reactions such as manufacture of vinyl chlorine, benzyl chloride etc., which are required to be carried out in all glass vessels shall have

suitable means like substantial wire-mesh covering to protect persons working nearby in the event of breakage of glass vessel.

(2) Any spillage or emission of vapour from the all glass vessel due to breakage, shall be immediately inactivated or rendered innocuous by a suitable means such as dilution with water or suitable solvents so as to avoid the risks of fire or explosion or health hazard.

4. Special precautions for processes involving chlorate manufacture:

(1) Crystallization, grinding or packing of chlorate shall not be done in a place used for any other purpose and such places shall have hard, smooth and impervious surface made of non-combustible material. The place shall be thoroughly cleaned daily.

(2) The personal protective equipment overall, etc. provided for the chlorate workers shall not be taken from the place of work and they shall be thoroughly cleaned daily.

(3) Adequate quantity of water shall be available near the place of chlorate process for use during fire emergency.

(4) Wooden vessels shall not be used for the crystallization of chlorate or to Contain crystalized ground chlorate.

5. Special precautions in the use of plant and equipment made from reinforced plastics:

(1) All plant and equipment's shall conform to appropriate Indian or any other National Standard.

(2) Care shall be taken during storage, transport, handling and installation of plant and equipment's to avoid accidental damage.

(3) All plant and equipment's shall be installed in such a way as to ensure that leads are distributed as intended in design or as per the recommendations of the manufacturers.

(4) All pipe work shall be supported so that total loads local in the branches on the vessel or tank do not exceed their design values.

(5) After erection all plant and equipment's shall be subjected to a pressure test followed by a thorough examination by a competent person. A certificate of test and examination by competent person shall be obtained and kept available at site.

(6) All plant and equipment's shall be subjected to Periodical test and examination and record maintained as per paragraph 15 in Part-Il of this schedule.

(7) Plant and equipment's during their use shall not be subjected to overfilling or overloading beyond rated capacity.

PART—VI

Medical Requirements

1 1. Decontamination facilities: In all places where toxic substances are used in proces8 listed in Append 'A' the following Provisions shall be made to meet an emergency:

2 (a) Fully equipped first aid box;

3 (b) readily accessible means of drenching with water persons, parts of body of persons, and clothing of persons who have been contaminated with such toxic and Corrosive substances and such means shall be as shows in the Table below:

No. of persons employed at any time	No. of drenching showers
Upton 50 persons	2
between 51 to 100	2
201 to400	3
201 to 400	3+1 for every 50 persons thereafter
401 and above	3+1 for every 200 persons thereafter

(c) A sufficient number of eye wash bottles filled with distilled water or suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all time.

2. Occupational health centre: In all the factories carrying out processes covered in Appendix 'A' there shall be provided and maintained in good order an occupational health centre with facilities as per scale laid down hereunder

(1) For factories employing up to 50 workers

(a) The services of a qualified medical practitioner hereinafter known as factory medical officer, available on a retainer ship basis, in this notified clinic near to the factory for seeking medical help during emergency. He will also carry out the re-employment and periodical medical examination as stipulated in paragraph 4 of this part.

(b) A minimum of five persons trained in first aid procedures, amongst whom at least one shall always be available during the working period. (c) A fully equipped first aid box.

(2) For factories employing 51 to 200 workers

(a) The occupational health centre shall have a room having a minimum floor area of 15 Sq.m. with floors and walls made of smooth, hard and impervious surface and shall be adequately illuminated, ventilated and equipped.

(b) A part-time Factory Medical Officer will be in overall charge of the Centre who shall visit the factory minimum twice in a week and whose services shall be readily available during emergencies.

(c) There shall be one qualified and trained dresser-cum-compounder or duty throughout the working period.

(d) A fully equipped first aid box.

(3) For factories employing above 200 workers:

(a) There shall be one full-time Factory Medical Officer, for factories employing up to 500 workers and one more medical officer for every 1000 workers or part thereof.
(b) The occupational health centre in this case shall have a minimum of 2 rooms each having a minimum floor area of 15 s.m. with floors and walls made of smooth, hard and impervious surface and shall be adequately illuminated, ventilated and equipped.
(c) There shall be one trained nurse, one dresser-cum-compounder and one sweeper cum ward boy throughout the working period.
(d) The occupational Health Centre in this case shall be suitably equipped to manage medical emergencies.
3. Ambulance Van:
(1) In every factory carrying out processes covered in appendix 'A' there shall be provided and maintained in good condition, a suitably constructed and fully equipped ambulance van as per Appendix 'C', manned by a fully equipped ambulance van as per appendix 'C', manned by a full-time driver-cum-mechanic and a helper, trained in first aid for the purposes of transportation of serious cases of accidents or sickness unless arrangements for procuring such facility at short notice during emergencies have been made with the nearby hospital or other places. The ambulance van shall not be used for any purpose other than purpose stipulated herein and will always be available near the occupational Health Centre.
(2) The realization to procure Ambulance Van from nearby places provided for in sub-para (1) above will not be applicable to factories employing more than 500 workers.

1 4. Medical examination:
2 (1) Workers employed in processes covered in Appendix 'A' shall be medically examined by a Factory Medical Officer in the following manner
3 (a) Once before employment, to ascertain physical suitability of the person to do the particular job;

(b) Once in a period of 6 months, to ascertain the health status of the worker, and
(c) The details of pre-employment and periodical medical examinations carried out as aforesaid shall be recorded in the prescribed form.
(2) Any finding of the Factory Medical Officer revealing any abnormality or unsuitability of any person employed in the process shall immediately be reported to the Certifying Surgeon who shall in turn, examine the concerned workers and communicate his findings within 30 days. If the Certifying Surgeon is of the opinion that the person so examined is required to be suspended from the process for health protection he .vi1l direct the occupier accordingly, who shall not employ the said worker in the same process. However, the person so suspended from the process shall be provided with alternate placement facilities unless he is fully in capacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated:

Provided that the Certifying Surgeon on his own any examine any other worker whom he feels necessary to be examined for ascertaining the suitability of his employment in the process covered in Appendix 'A' or for ascertaining the health status of any other worker and his opinion shall be final.

1 (3) No person shall be newly appointed without the certificate of fitness granted by the factory medical officer. If the Factory Medical Officer declares a person unfit for being appointed to work in the process covered in Appendix 'A' such person shall have a right of appeal to the certifying surgeon whose opinion shall be final in this regard.

2 (4) The worker suspended from the process owing to the circumstances covered in sub-para (2) shall be employed again in the same process only after obtaining the Fitness Certificate from the Certifying Surgeon and after making entries to that effect in the health register.

PART VII

ADDITIONAL WELFARE AMENITIES

1 1. Washing Facilities:

2 (1) There shall be provided and maintained in every factory for the use of all the workers taps for washing, at the rate of one tap for every 15 persons including liquid soap in a container with fluting arrangements and nail brushes or other suitable means for effective cleaning. Such facilities shall be conveniently accessible and shall be kept in a clean and hygienic Condition.

3 (2) If washing facilities as required above are provided for women such facilities shall be separate of them and adequate privacy at all times shall be ensured in such facilities.

4 2. Mess room facilities:

5 (1) The occupier of all the, factories carrying out processes Covered in Appendix 'A' and employing so workers or more, shall provide for all the workers working in a shift mess room facility which are well ventilated and provided with tables and sitting facilities along with the provision of cold and hygienic drinking water facilities.

6 (2) Such facilities shall include suitable arrangements for cleaning and washing and shall be maintained in a clear and hygienic condition.

7 3. Cloak room facilities:

8 (1) The occupier of every factory carrying out any process covered in Appendix 'A' shall provide for all the workers employed in the process cloak room facilities with lockers. Each worker shall be provided with two lockers; one for work clothing and another separately for personal clothing the lockers Should be such as to enable the keeping of the clothing in a hanging position.

9 (2) The cloak room facilities so provided in pursuance of sub-para (1) of para I shall be located as far as possible near to the facilities provided for washing in pursuance of sub-para 1(1). If it is not possible to locate the washing facilities, the cloak room facilities shall have adequate and suitable arrangements for cleaning and washing.

10 4. Special bathing facilities:

11 (1) The Occupier of any factory carrying out the process covered under Appendix 'B' shall provide special bathing facilities for all the workers employed and such facilities shall be provided at the rate of 1 for 25 workers and part thereof, and shall be maintained in a clean and hygienic condition.

12 (2) The occupier shall insist all the workers employed in the processes covered in Appendix 'B' to take bath after the completion of the day's shift work using the bathing facilities so provided and shall also effectively prevent such of those workers taking bath in any place other than the bathing facilities.

1 (3) Notwithstanding anything contained in sub-para (I) above, the Chief Inspector may require in writing the occupier of any factory carrying out any other process for which in his opinion bathing facilities are essential from the health point of view, to provide special bathing facilities.

PART—VIII

1 1. Duties of workers.

2 (1) Every worker employed in the processes covered in Appendix 'A' and Appendix 'B' shall not make safety device or appliance or any guarding or fencing arrangement, inoperative or defective and shall report the defective condition of the aforesaid arrangements as soon as he is aware of any such defect.

3 (2) Before commencing any work, all workers employed in processes covered in Appendix 'A' shall check their workplace as well as the machinery, equipment or appliance used in the processes and report any malfunction or defect immediately to the supervisor or any responsible person of the management.

4 (3) All workers shall co-operate in all respects with the management while carrying out any work or any emergency duty assigned to the in pursuance of this schedule and shall always use all the personal protective equipment's issued to them in a careful manner.

5 (4) All workers employed in the processes covered in Appendix 'A' or Appendix 'B' shall not smoke in the process area or storage area. If special facilities are provided by the management only such facilities should be used.

6 (5) All workers employed in the processes covered in Appendix 'A' shall not remain in unauthorized place or carryout unauthorized work or improvise any arrangements or adopt short cut method or misuse any of the schedule, in such a manner as to other employed.

7 (6) The workers shall not refuse undergoing medical examination as required under these rules.

PART—IX

Restrictions on the employment of young persons under 18 years of age and women

1 (1) The Chief Inspector of Factories may by an order in writing, restrict or prohibit the employment of women and young persons under the age of 18; in any of the processes covered in Appendix 'A' of this schedule on considerations of health and safety of women and young persons.

2 (2) Such persons who are restricted or prohibited from working in the process due to the order issued in pursuance of sub-para (1) above shall be provided with alternate work which is not detrimental to their health or safety.

PART—X

Exemptions

1 1. Power of Exemption: The State Government or subject to the control of the State Government, the Chief Inspector may exempt from the compliance with any of the requirements of this schedule partly or fully, any factory carrying out processes covered in Appendix 'A', if it is clearly and satisfactorily established by the occupier that the compliance with any of the requirement is not necessary to ensure the safety and health of persons

employed suitable and effective alternate arrangements are available to any of the requirements covered in this schedule.

APPENDIX 'A'

Any works or that part of the works in which
(a) the manufacture, manipulation or recovery of any of the following is carried on:
(i) Sodium, Potassium, Iron, Aluminium, Cobalt, Nickel, Copper, Arsenic, Antimony, Chromium, Zinc, Selenium, Magnesium, Cadmium, Mercury, Nerylluim and their organic and inorganic salts, alloys, oxides and hydroxides;
(ii) ammonia, ammonium hydroxide and s salt is of ammonium;
(iii) the organic or inorganic compounds of sulphurous, sulphuric, nitric, nitrous, hydrochloric, hydrofluoric hydriodic, hydrosulphuric, hydrobromic, boric;
(iv) cyanogen compounds, cyanide compounds, cyanate compounds
(v) phosphorous and its compounds other than organo phosphorous insecticides;
(b) hydrogen suiphide is evolved by the decomposition of metallic sulphides, or hydrogen suiphide is used in the production of such sulphides;
(c) bleaching powder is manufactured or chlorine gas is produced in chloro-alkali plants;
(d)
(i) gas tar or coal tar or bitumen or shallow oil asphalt or any residue of such tar is distilled or is used in any process of chemicals manufacture;
(ii) tar based synthetic colouring matters or their intermediates are produced;
(e) nitric acid is used in the manufacture of nitro compounds;
(f) explosives are produced with the use of nitro compounds;
(g) aliphatic or aromatic compounds or their metallic and nonmetallic derivatives or substituted derivatives such as chloroform glycol, formal dehyde, benzyle chloride, phenol, methyl ethyl keytone peroxide, cobalt carbonyl, tungsten carbide etc., are manufactured or recovered.

APPENDIX 'B'

1 1. Nitro or amino processes
2 2. All chromo processes
3 3. Processes of distilling gas or coal tar or processes of chemical manufacture in which tar is used. 4
4 4. Processes involving manufacture, manipulation, handling or recovery or cyanogen compound, cyanide compound, cyanate compounds.
5 5. Processes involving manufacture of bleaching powder or production of chlorine gas in chloralkali plants.
6 6. Manufacture, manipulation or recovery of nickel and its compounds.
7 7. All processes involving the manufacture, manipulation or recovery aliphatic or aromatic compounds or their derivatives or substituted derivatives. Ambulance: Ambulance should have the following equipment; General

APPENDIX 'C'

Ambulance: Ambulance should have the following equipment;
General:

—An wheeled stretcher with folding and adjusting devices;
— Head of the stretcher must be capable of being tilted upward
— Fixed suction unit with equipment's;
— Fixed oxygen supply with equipment's;
— Pillow with case; Sheets;
— Blankets;
— Towels;
— Emesis bag;
— Bed pan;
— Urinal;
— Glass;
Safety Equipment:
— Flares with life of 30 minutes;
— Flood lights;
— Flash lights;
— Fire extinguisher dry powder type;
— Insulated gauntlets;

Emergency care equipment's: Resuscitation
— Portable suction unit;
— Portable oxygen unit;
— Bag-valve-mask, hand operated artificial ventilation unit;
— Air ways;
— Mouth gags;
Tracheostomy adaptors:
— Short spine board;
— I.V. Fluids with administration unit;
— B.P. Manometer;
— Cugg;
— Stethoscope;
Immobilization:
— Long & Short padded boards; Wire ladder splints;
— Triangular bandage;
— Long & short spine boards;
Dressings
— Guaze pads - 4 "X 4"
— Universal dressing 10 "X 36"
—Roll of aluminium foils;
— Soft roller bandages 6" x 5 yards;
— Adhesive tape in 3" roll;
— Safety pins;
— Bandage Sheets;
—Burn Sheet;
Poisoning:

—Syrup of Ipecac;
—Activated Charcoal; PRE POCKETED INDOSES
— Snake bite kit;
—Drinking water;

Emergency Medicines:
—As per requirements (under the advice of Medical Officer only).]

SCHEDULE XVI

COMPRESSION OF OXYGEN AND HYDROGEN- PRODUCED BY THE ELECTROLYSIS OF WATER

1 1. The room in which electrolyser plant is installed shall be separate from the plant for storing and compressing the Oxygen and Hydrogen and also the electric, generator room.

2 2. The purity of Oxygen and Hydrogen shall be tested by a competent person at least once in every shift at the following points:

3 (i) in the electrolysis room;

4 (ii) at the gas holder in-test; and

5 (iii) at the suction end of the compressor.

The purity figures shall be entered in the register and signed by the persons carrying out such tests.

Provided, however, that if the electrolyser plant is fitted with automatic recorder of purity of Oxygen and Hydrogen with alarm lights, it shall be sufficient if the purity of the gases is tested at the suction end of the compressor only.

1 3. The Oxygen and Hydrogen gases shall not be compressed if their purity as determined under Clause 2 above falls below 98 per cent at any time.

2 4. The bell of any gas holder shall not be permitted to go within 30 cms. if its lowest position when empty and a limit switch shall be fitted to the gas holder in such a manner as to switch off the compressor motor when this limit is reached.

3 5. There shall be at least two gas holders for each kind of gas compressed and the gas holders for same gas shall be provided with suitable arrangements to ensure that no gas holder is connected to the compressor and to electrolyser at the same time, and only one gas holder is connected to the compressor line at any one time.

4 6. The water and caustic soda used for making lye shall be chemically pure within pharmaceutical limits.

5 7. Electrical connections at the electrolyser cells and at the electric generator terminals shall be so constructed as to preclude the possibility of wrong connections leading to the reversal of polarity and in addition an automatic device shall be provided to cut off power in the event of reversal of polarity owing to wrong connections either at the switch board or at the electric generator terminals.

1 8. Oxygen and Hydrogen pipes shall be painted with distinguishing colours and in the event of leakage in the joints of the hydrogen gas pipe. the pipe after reconnection shall be purged of all air before drawing in hydrogen gas.

2 9. All electrical wiring and apparatus in the electrolyser room shall be of flame-proof construction or enclosed in flame-proof fittings and no naked light or flame shall be allowed to

be taken either in the electrolyser room or where compression and filling of gases is carried on and such warning notices shall be exhibited in prominent places.

3 10. No part of the electrolyser plant and the gas holders and compressor shall be subjected to welding, brazing, soldering or cutting until steps have been taken to remove any explosive substance from that part and render the part safe for such operations and after the completion of such operations no explosive substance shall be allowed to enter that part until the metal has cooled sufficiently to prevent risk of explosion.

4 11. No work of operation, repair or maintenance shall be undertaken except under the direct supervision of a person who, by his training, experience and knowledge of the necessary precautions against risk of explosion is competent to supervise such work. No electric generator after erection or repairs shall be switched on to the electrolysers unless the same is certified by the competent persons under whose direct supervision erection or repairs are carried on to be in a safe condition and the terminals have been checked for the polarity as required by Rule 7.

5 12. Every part of the electrolyser plant and the gas holders and compressor shall have a regular schedule of overhaul and checking and every defect noticed shall be rectified forthwith.

[SCIIEDULE XVII

MANIPULATION OF STONE OR ANY OTHER MATERIAL CONTAINING FREE SILICA.

1 1. Application: This schedule shall apply to all factories or parts of factories in which manipulation of stone or any other material containing free silica is carried on.

2 2. Definitions: For the purpose of this schedule-

3 (a) “manipulation” means crushing, breaking, chipping, dressing, grinding, sieving, mixing, grading or handling of stone or any other material containing free silica or any other operation involving such stone or materials;

4 (b) “stone or any other material Containing free silica” means a stone or any other solid material containing not less than 5% by weight of free silica;

5 3. Precautions in manipulation: No manipulation shall be carried out in factory or part of a factory unless one or more of the following measures, namely

6 (a) damping the stone or other material being processed;

7 (b) providing water supply;

8 (c) enclosing the process;

(d) isolation the process; and

(e) providing localized exhaust ventilation are adopted so as to effectively control the dust in any place in the factory where any person is employed, at a level equal to or below the maximum permissible level for silica dust as laid down in the table:

Substance	Permissible time weighted average Concentration
1. (i)Silica (a) Crystalline	

(1) In terms of dust count;	1060 _____mpp cm % Quartz +10
(2) In terms of respirable dust	_____mg/rn3 % respirable quartz +2
(3) In terms of total dust	_____mg/rn3 % quartz + 3
(ii) Cristobalite	Half of the limits given against quartz
(iii) Tridymite	Half of the limits given against quartz
iv) Silica fused;	Same limit as for quartz
v) Tripoli;	Same limit as in formula in item 2 given against quartz
(b) Amorphous	705 mpp cm.
2. Silicate having less than 1% free silica by weight	
(a) Asbestos (fibres longer - 2 fibres/cubic centimetre than 5 microne)	
b) Mica (c) Mineral wool fibre (d) Portilite (e) Portland cement (f) Soap stone (g) Talc (non Bostiform) (h) Talco (fibrous) (i) Tromolite	705 mpp cm. 10 mg/rn3 1060 mpp cm 1060 mpp cm 705 mpp cm Same limit as for asbestos Same limit as for asbestos Same limit as for asbestos

3. Coal dust	
(1) For airborne dust having less than 5% silicon dioxide by weight (2) for airborne dust having over 5% silicon dioxide	2 mglm3 Same limit as prescribed by formula in item (2) against quartz

Provided that such measures as above said are not necessary if the process or operation itself is such that the level of dust created and prevailing does not exceed the permissible level preferred to.

1 4. Maintenance of floors:

2 (1) All floors or places where fine dust is likely to settle on and whenever any person has to work or pass shall be of impervious material and maintained in such condition that they can be thoroughly cleaned by a moist method or any other method which would prevent dust being airborne in the process of cleaning.

3 (2) The surface of every floor of every work room or place where any work is carried on or where any person has to pass during the course of his work, shall be cleaned of dust once at least during each shift after being sprayed with water or by any other suitable method so as to prevent dust being airborne in the process of cleaning.

4 5. Prohibition relating your persons: No young person shall be employed or permitted to work in any of the operations involving manipulation or at any place where such operations are carried on.

5 6. Medical facilities and records of examinations and tests:

6 (1) The occupier of every factory to which the schedule applies, shall

7 (a) employ a qualified medical officer for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

8 (b) Provide to the said medical officer all the necessary facilities for the purpose referred to in clause (1).

9 (2) The record of medical examination and appropriate tests carried out by the said medical officer shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept available for inspection by the Inspector.

1 7. Medical examination by Certifying Surgeon:

1 (1) Every worker employed in the process specified in paragraph, shall be examined by a certifying surgeon within 15 days of his first employment. Such medical examination shall include pulmonary function tests and chest X-ray. No worker shall be allowed to work after 15 days of certified fit for such employment by the Certifying Surgeon.

2 (2) Every worker employed in the said processes shall be re-examined by a certifying surgeon at least once in every twelve months. Such examination shall, wherever the certifying surgeon considers appropriate, include all the tests as specified in sub-paragraph (1) except chest X-ray which will be once in 3 years.

3 (3) The certifying surgeon after examining a worker, shall issue a certificate of Fitness in Form 28. The record of re-examinations carried out shall be entered in the certificate and the Certificate shall be kept in the custody of the Manager of the Factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.

4 (4) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.

5 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would processes on the involved special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person in unfit for work in the said processes.

6 (6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed on permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

7 8. The person suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the certifying surgeon, in which case the person affected shall be suitably rehabilitated.

8 9. Exemptions .— If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or in frequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may by a certificate in writing, which he may in his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.]

[SCHEDULE XVIII

HANDLING AND PROCESSING OF ASBESTOS, MANUFACTURE OF ANY ARTICLE OF ASBESTOS AND ANY OTHER PROCESS OF MANUFACTURE OTHERWISE IN WHICH ASBESTOS IS USED IN ANY FORM

1 1. Application: This schedule shall apply to all factories or parts of factories in which any of the following processes is carried on:

2 (a) breaking, crushing, disintegrating, opening, grinding mixing or serving of asbestos and any other processes involving handling and manipulation of asbestos incidental thereto;

3 (b) all processes in the manufacture of asbestos textiles including preparatory and finishing processes;

4 (c) making or insulation slabs or sections, composed wholly or partly of asbestos, and processes incidental thereto;

5 (d) making or repairing of insulating mattresses, composed wholly or partly of asbestos, and processes incidental thereto;

6 (e) manufacture of asbestos cardboard and paper;

7 (f) manufacture of asbestos cement goods;

8 (g) application of asbestos by spray method;

9 (h) sawing, grinding, turning, abrading and polishing in dry state of articles composed wholly or partly of asbestos,

10 (i) cleaning of any room, vessel, chamber, fixture or appliance for the collection of asbestos dust; and

11 (j) any other processes in which asbestos dust is given off into the work environment.

12 2. Definitions: For the purpose of this schedule

13 (a) “Asbestos” means any fibrous silicate mineral and any admixture containing actionlite, amosite, anthophylite, dhrysotile, crocidolite, tremolite or any mixture thereof, whether curde, crushed or opened;
14 (b) “asbestos textiles” means yarn or cloth composed of asbestos or asbestos mixed with any other material;
15 (c) “approved” means approved for the time being in writing by the Chief Inspector
16 (d) “breathing apparatus” means a helmet or face piece with necessary connection by means of which a person using it breathes air free from dust, or any other approved apparatus;
17 (e) “efficient exhaust draught” means localized ventilation by mechanical means for the removal of dust so as to prevent dust from escaping into air of any place in which work is carried on. No draught shall be deemed to be efficient which fails to control dust produced at the point where such dust originates,

(f) “preparing” means crushing, disintegrating, and any other processes in or incidental to the opening of asbestos;
(g) “protective clothing” means overalls and head covering which (in either case) will when worn exclude asbestos dust.
3. Tools and Equipment: Any tools or equipment used in processes to which this schedule applied shall be such that they do not create asbestos dust above the permissible limit or are equipped with efficient exhaust draught.
4. Exhaust draught
(1) An efficient exhaust draught shall be provided and maintained to control dust from the following processes and machines.
(a) manufacture and conveying machinery namely
(i) preparing, grinding or dry mixing machines;
(ii) carding, card waste and ring spinning machines, and looms;
(iii) machines or other plant fed with asbestos; and
(iv) machines used for the sawing, grinding, turning drilling, abrading or polishing; in the dry state, of articles composed wholly or partly of asbestos.
(b) Cleaning, and grinding of the cylinders or other parts of carding machine;
(c) chambers hoppers or other structures into which loose asbestos is delivered or passes
(d) work-benches for asbestos waste Sorting or for other manipulation of asbestos by a hand;
(e) workplaces at which the filling or emptying of sacks, skips or other portable containers, weighing or other process incidental there to which is effected by hand, is carried on;
(f) sack cleaning machines;
(g) mixing and blending of asbestos by hand; and
(h) any other process in which dust is given off into the work environment
(2) Exhaust ventilation equipment provided in accordance with sub-paragraph (1) shall, while any work of maintenance or repair to the machinery, apparatus or other plant or equipment in Connection with which it is provided IS being carried on, be kept in use so as to produce an exhaust draught which prevents the entry of asbestos dust into the air of any work place.
(3) Arrangements shall be made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air of any workroom.

1 (4) The asbestos bearing dust removed from any workroom by the exhaust system shall be collected in suitable receptacles of filter bags which shall be isolated from all work areas.
2 5. Testing and examination of ventilating systems:
3 (1) All ventilating systems used for the purpose of extracting or suppressing dust as required by this schedule shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person once in every period of 12 months. Any defects found by such examination or test shall be rectified forthwith.
4 (2) A register containing particulars of such examination and tests and the state of the plant and the repairs or alterations (if any) found to be necessary shall be kept and shall be available for inspection by an inspector.
5 6. Segregation in case of certain process: Mixing or blending by the hand of asbestos, or making or repairing of insulating mattresses composed wholly or partly of asbestos shall not be carried on in any room in which any other work is done.
6 7. Storage and distribution of loose asbestos:
7 (1) All loose asbestos shall while not in use, be kept in suitable closed receptacles which prevent the escape of asbestos dust there from such asbestos shall not be distributed within a factory except in such receptacles or in a totally enclosed system of conveyance.
8 8. Asbestos sacks:
9 (1) All sacks used as receptacles for the purpose of transport of asbestos within the factory shall be constructed of impermeable materials and shall be kept in good repair.
10 (2) A sack which has contained asbestos shall not be cleaned by hand beating but by a machine, complying with paragraph 3.
11 9. Maintenance of floors and workplaces:
12 (1) In every room in which any of the requirements of this schedule apply
13 (a) the floors, work-benches, machinery and plant shall be kept in a clean state and free from asbestos debris and suitable arrangements shall be made for the storage of asbestos not immediately required for use; and
14 (b) the floors shall be kept free from any materials, plant or other articles not immediately required for the work carried on in the room, which would obstruct the proper cleaning of the floor.
15 (2) The cleaning as mentioned in sub-rule (1) shall, so far as is practicable, be carried out by means of vacuum cleaning equipment so designed and constructed and so used that asbestos dust neither escapes nor is discharged into the air of any work place.

1 (3) When the cleaning is done by any method other than that mentioned in subparagraph (2), the persons doing cleaning work and any other person employed in that room shall protective clothing.
2 (4) The vacuum cleaning equipment used in accordance with provision of sub-paragraph (2), shall be properly maintained and after each cleaning operation, its surface kept in a clean state and free from asbestos waste and dust.
3 (5) Asbestos waste shall not be permitted to remain on the floors or other surfaces at the work place as the end of the working shift and shall be transferred without delay to suitable receptacles. Any spillage of asbestos waste occurring during the course of the work at any time shall be removed and transferred to the receptacles maintained for the purpose without delay.

4 10. Breathing Apparatus and Protective clothing.
5 (1) An approved breathing apparatus and protective clothing shall be provided and maintained in good conditions for use of every person employed
6 (a) in chambers containing loose asbestos;
7 (b) in cleaning, dust settling or filtering chambers of apparatus;
8 (c) in cleaning the cylinders, including the copper cylinders or other parts of a carding machine by means of hand-stickle; and
9 (d) in filling, beating, or levelling in the manufacture or repair of insulating mattresses; and
10 (e) in any other operation or circumstances in which it is impracticable to adopt technical means to control asbestos dust in the work environment within the permissible limit.
11 (2) Suitable accommodation in conveniently accessible position shall be provided for the use of person when putting on or taking off breathing apparatus and protective clothing provided in accordance with this rule and for the storage of such apparatus and clothing when not in use.
12 (3) All breathing apparatus and protective clothing when not in use shall be stored in the accommodation provided in accordance with sub-rule (2) above.
13 (4) All protective clothing in use shall be deducted under an efficient exhaust draught or by vacuum cleaning and shall be washed at suitable intervals. The cleaning schedule and procedure should be such as to ensure the efficiency in protecting the wearer.
14 (5) All breathing apparatus shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person.
15 (6) A record of the cleaning and maintenance and of the condition of the breathing apparatus shall be maintained in a register provided for the purpose which shall be readily available for inspection by an inspector.

1 (7) No person shall be employed to perform any work specified in subparagraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has been fully instructed in the proper use of that equipment.
2 (8) No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another person unless it has been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed in the proper use of that equipment.
3 11. Separate accommodation for personal clothing: A separate accommodation shall be provided in a conveniently accessible position for all persons employed in operations to which this schedule applied for storing of personal clothing. This should be separated from the accommodation provided under sub-paragraph (2) to prevent contamination of personal clothing.
4 12. Washing and bathing facilities:
5 (1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the processes covered by the schedule adequate washing and bathing places having a constant supply of water under cover at the rate of one such place of every 15 persons employed.

6 (2) The washing places shah have standpipes place at intervals or not less than one meter.
7 (3) Not less than one half of the total number of washing places shall be provided with bathrooms.
8 (4) Sufficient supply of clean towels made of suitable material shall be provided. Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector.
9 (5) Sufficient supply of soap and nail brushes shall be provided.
10 13. Mess room:
11 (1) There shall be provided and maintained for the use of all workers employed in the factory covered by this schedule, remaining on the premises during the rest intervals, a suitable Mess room which shall be furnished with:
12 (a) Sufficient tables and benches with back rest, and
13 (b) adequate means for warming food,
14 (c) The mess room shall be placed under the charge of a responsible person and shall be kept clean.
15 14. Prohibition of employment of young persons: No young person shall be employed in any of the process covered by this schedule.

1 15. Prohibition relating to smoking: No person shall smoke in any area where processes covered by this schedule are carried on. A notice in the language understood by majority of the workers shall be posted in the plant prohibiting smoking at such areas.
2 16. Cautionary Notices:
3 (1) Cautionary notices shall be displayed at the approaches and along the perimeter of every asbestos processing area to warn all persons, regarding
4 (a) hazards to health from asbestos dust
5 (b) need to use appropriate protection equipment
6 (c) prohibition of entry to unauthorized persons, or authorized persons but without protective equipment.
7 (2) Such notices shall be in a language understood by the majority of the workers.
8 17. Air Monitoring: To ensure the effectiveness of the control measures. monitoring of asbestos fiber in air shall be carried out once at least in every shift and the record of the results so obtained shall be entered in a register specially maintained for the purpose.
9 18. Medical facilities and records of medical examinations and tests:
10 (1) The occupier of every factory or part of the factory to which the schedule applies, shall
11 (a) employ a qualified medical practitioner for medical surveillance of the workers covered by this schedule whose employment shall be subject to the approval of the Chief Inspector of Factories;
12 (b) provide to the said medical practitioner shall all the necessary facilities for the purpose referred to in clause (a)
13 (2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories which shall be kept readily available for inspection by the Inspectors.

14 19. Medical examination by Certifying Surgeon:
15 (1) Every worker employed in the processes specified in paragraph (1) shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include pulmonary function tests, tests for detecting asbestos fibers in sputum and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.
16 (2) Every worker employed in the said process shall be re-examined by a certifying surgeon at least once in every twelve calender months. Such examinations shall, wherever the certifying surgeon considers appropriate, include all the tests

1 specified in sub-paragraph (1) except chest X-ray which will be carried in once in 3 years.
2 (3) The Certifying Surgeon after examining a worker, shall issue a certificate of Fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.
3 (4) The certificate of fitness and 'the health register shall be kept readily available for inspection by the Inspector.
4 (5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents shall also include the period for which he considers that the said person is unfit to work in the said processes.
5 20. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion in of the certifying Surgeon, in which case the person affected shall be suitably rehabilitated.
6 21. Exemptions: If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or in frequency of the processes or for any other reason, all or any of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may be a certificate of writing, which he may at his discretion revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

SCHEDULE XIX
CLEANING OR SMOOTHING, ROUGHENING, ETC., OF ARTICLES, BY A JET OF SAND, METAL SHOT OR GRIT OR OTHER ABRASIVE PROPELLED BY A BLAST OF COMPRESSED AIR ON STEAM [Blasting Regulations]
1 1. Definitions: "Blasting" means cleaning, smoothing, roughening or removing of any part of the surface of any article by the use as an abrasive of a jet of sand, metal shot or grit or other material propelled by a blast of compressed air or steam.

Blasting enclosure" means a chamber, barrel, cabinet or any other enclosure designed for the pperformance of blasting therein.
"Blasting chamber" means a blasting enclosure in which any person may enter at any time in connection with any work or otherwise.
"Cleaning of castings" where done as an incidental or supplemental process in connection with the making of metal castings, means the freeing of the casting from

adherent sand or other substance and includes the removal of cores and the general smoothing of a casting, but does not include the free treatment.
1 2. Prohibition of sand blasting: Sand or any other substance containing free silica shall not be introduced as an abrasive into any blasting apparatus and shall not be used for blasting:
2 (i) Provided that this clause shall come into force two years after the coming into operation of this Schedule;
3 (ii) Provided further that no woman or young person shall be employed or permitted to work on any operation of sand blasting.
4 3. Precautions in connection with blasting operations:
5 (1) Blasting to be done in blasting enclosure: Blasting shall not be done except in blasting enclosure and no work other than blasting and any work immediately incidental thereto and cleaning and repairing of the enclosure including the plants and appliances situated therein shall be performed in a blasting enclosure. Every door, appurture and joint of blasting enclosure, shall be kept closed and air tight while blasting is being done therein.
6 (2) Maintenance of blasting enclosure: Blasting enclosure shall always be maintained in good condition and effective measures shall be taken to prevent dust escaping from such enclosures, and from any apparatus connected therewith into the air of any room.
7 (3) Provisions of separating apparatus: There shall provide and maintained for and in connection with every blasting enclosure, efficient apparatus for separating, so far as practicable, abrasive which has been used for blasting and which is to be used again as an abrasive from dust or particles of other materials arising from blasting and no such abrasive shall be introduced into any blasting apparatus and used for blasting until it has been so separated:

Provided that this clause shall not apply, except in the case of blasting chambers, to blasting enclosures constructed or installed before the coming into force of this schedule, if the Chief Inspector is of the opinion that it is not reasonably practicable to provide such separating apparatus.
1 (4) Provision of ventilating plant: There shall be provided and maintained in connection with every blasting enclosure efficient ventilating plant to extract, by exhaust draught effected by mechanical means, dust produced in the enclosure. The dust extracted and removed shall be disposed of by such method and in such a manner that is shall not escape into the air of any room, and every other filtering or settling device situated in a room in which persons are employed, other than persons attending to such bag or other filtering or settling device, shall be completely separated from the general air of that room in an enclosure ventilated to the open air.

1 (5) Operation of ventilating plant: The ventilating plant provided for the purpose of subparagraph (4) shall kept in continuous operation whenever the blasting enclosure, is in use whether or not blasting, is actually taking place, therein, and in the case of a blasting chamber, it shall be in operation even when any person is inside the chamber for the purpose of cleaning

2 4. Inspection and examination:

3 (1) Every blasting enclosure shall be specially inspected by a competent person at least once in every week in which it is used for blasting. Every blasting enclosure, the apparatus connected therewith and the ventilating plant shall be thoroughly examined and in the case of ventilating plant, tested by a competent person at least once in every month.

4 (2) Particulars of the result of every such inspection, examination and test shall forthwith be entered in a register, which shall be kept in a form approved by the Chief Inspector and shall be available for inspection by any workman employed in or in connection with blasting, in the factory. Any defect found on any such inspection, examination or test shall be immediately reported by the person carrying out the inspection, examination or test to the occupier manager or other appropriate person and without prejudice to the foregoing requirements of this schedule shall be removed without avoidable delay.

5 5. Provision of protective helmets gauntlets and overalls.

6 (1) There shall be provided and maintained for the use of all persons who are employed in a blasting chamber, whether in blasting or in any work connected therewith or in cleaning such a chamber protective helmets of a type approved by a certificate of the Chief Inspector; and every such person shall wear the helmet provided for his use whilst he is in the chamber and shall not remove it until he is outside the chamber.

7 (2) Each Protective helmet shall carry a distinguishing mark indicating the person by whom it is intended to be used and no person shall be allowed or required to wear a helmet not carrying his mark or a helmet which has been worn by another person and has not since been thoroughly disinfected.

8 (3) Each protective helmet when in use shall be supplied with clean and not unreasonably cold air at a rate of not less than six cubic feet per minute.

9 (4) Suitable gauntlets and overall shall be provided for the use of all persons while performing blasting or assisting at blasting and every such person shall while so engaged wear the gauntlet and overall provided.

1 6. Precautions in connection with cleaning and other works:

2 (1) Where any person is engaged upon cleaning of any blasting apparatus or blasting enclosure or of any apparatus or ventilating plant connected therewith

1 or the surroundings thereof upon any other work in connection with any blasting apparatus or blasting enclosure or with any apparatus or ventilating plant connected therewith so that he is exposed to the risk of inhaling dust which has arisen from blasting, all practicable measures shall be taken to prevent such inhalation.

2 (2) In connection with any cleaning operation referred to in Clause 5 and with the removal of dust from filtering or settling devices all practicable measures shall be taken to dispose of the dust in such a manner that it does not enter the air of any room. Vacuum cleaners shall be provided and used wherever practicable for such cleaning operations.

3 7. Storage accommodation for protective wear: Adequate and suitable storage accommodation for the helmets, gauntlets and overalls required to be provided by Clause 6 shall be provided outside and conveniently near to every blasting enclosure and such accommodation shall be kept clean. Helmets, gauntlets and overalls when not in actual use shall be kept in this accommodation.

4 8. Maintenance and cleaning of protective wear: All helmets, gauntlets overalls and other protective devices or clothing provided and worn for the purpose of this schedule shall be kept in good condition and so far as is reasonably practicable shall be cleaned on every weekday in which they are used. Where dust arising from the cleaning of such protective clothing or devices is likely to be inhaled, all practicable measures shall be taken to prevent such inhalation. Vacuum cleaners shall, wherever practicable, be used for removing dust from such clothing and compressed air shall be used for removing dust from any clothing.

5 9. Maintenance of vacuum cleaning plant: Vacuum cleaning plant used for the purpose of this schedule shall be properly maintained.

6 10. Restrictions in employment of young persons:

7 (1) No person under 18 years of age shall be employed in blasting or assisting at blasting or in any blasting chamber or in the cleaning of any blasting apparatus or any blasting enclosure or any apparatus or ventilating plant connected therewith or be unemployed on maintenance or repair work at such apparatus enclosure or plant.

8 (2) No person under 18 years of age shall be employed to work regularly within twenty feet of any blasting enclosure unless the enclosure is in a room and he is outside that room where he is effectively separated from any dust coming from the enclosure.

1 11. Power to exempt or relax:

1 (1) If the Chief Inspector is satisfied that in any factory or any class of factory, the use of sand or other substance containing free silica as abrasive in blasting is necessary for a particular manufacture or process (other than the process incidental or supplemental to making of metal castings) and that the manufacture or process cannot be carried on without the use of such abrasive or that owing to the special conditions or special method of work or otherwise any requirement of this Schedule can be suspended either temporarily, or permanently, or can be relaxed without endangering the health of the persons employed; or that application of any of such requirements is for any reason impracticable or inappropriate, he may, with the previous sanction of the State Government, by an order in writing exempt the said factory or class of factory from such provisions of this Schedule, to such an extent and subject to the conditions and for such period as may be specified in the said order.

2 (2) Where an exemption has been granted under sub-clause (1) a copy of the order shall be displayed at a notice board at a prominent place at the main entrance or entrances to the factory and also at the place where the blasting is carried on.

SCHEDULE XX

HANDLING AND MANIPULATION OF CORROSIVE SUBSTANCES

1 1. Definitions: For the purposes of this schedule:

2 (a) “Corrosive operation” - means an operation of manufacturing, stering, handling, processing, packing, or using any corrosive substance in a factory;
3 (b) “Corrosive substance” includes sulphuric acid, nitric acid, Hydrochloric acid, hydrofluoric acid, carbolic acid, phosphoric acid, liquid bromine, ammonia, sodium hydroxide, potassium hydroxide and any mixture thereof, and any other substance which the State Government may, by notification in the Telangana Gazette, specify to be a corrosive substance.
4 2. Flooring: The floor of every work-room of a factory in which corrosive operation is carried on hall be made of impervious corrosive and fire resistant material and shall be so constructed as to prevent collection or accumulation of any corrosive so) stance. The surface of such flooring shall be glazed or smooth and cleaned as often as is necessary and maintained in a sound condition.
5 3. Protection Equipment:
6 (a) The occupier shall provide for the use of all persons employed in any corrosive operation suitable protective wear for hands and feet, suitable aprons, face shields, chemical safety goggles, and respirators. The equipment shall be maintained in good order and shall be kept in a clean and hygienic condition by suitably treating them to get rid of the ill effects of any absorbed chemicals and by disinfecting. The occupier shall also provide suitable protective creams and

other preparations wherever necessary for the protection of the persons engaged in corrosive operations.
(b) The protective equipment and preparations provided shall invariably be used by the persons employed in any corrosive operation.
(c) The occupier shall provide and maintain suitable accommodation for the storage of the protective equipment.
4. Water facilities: Where any corrosive operation is carried on, there shall be provided as close to the place of such operation as possible a source of clean water at a height 210 cms., from a pipe of 1.25 cm. diameter and fitted with a quick acting valve so that in case of injury to the worker by any corrosive substance, the injured part can be thoroughly flooded with water. Whenever necessary, in order to ensure continuous water supply, a storage tank having a minimum length, breadth and height of 2l0 cms. and 60 cms. respectively or of such dimensions as are approved by the Chief Inspector shall be provided for the source of clean water.
5. Cautionary notice: A cautionary notice in the following form and printed in red in the language, which a majority of the persons employed understand shall be displayed Prominently Close to the place where any of the corrosive operations is carried on and where it can be easily and conveniently be read by the persons employed If any such person is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed.

CAUTIONARY NOTICE
Danger Corrosive substances cause severe bums and vapor's thereof may be extremely hazardous in case of contact, immediately flood the part affected with plenty of water for at least fifteen minutes.
Get medical attention quickly

1 6. Transport:
2 (a) Corrosive substances shall not be filled, moved or carried except in [153][containers or through pipes and when they are to be transported in containers the containers shall be securely packed in crates of Sound construction and of sufficient strength.
3 (b) A container with a capacity of 115 liters or more of a Corrosive substance shall be placed in a receptacle or crate and then carried by more than one person at a height below the waist line unless a suitable rubber wheeled truck is used for the purpose. (c) Containers for corrosive substances shall be plainly labelled.
4 7. Devices for handling corrosives.
5 (a) [154][tilting, lifting, or Pumping arrangements] shall be used for emptying jars, carboys and other Containers and other containers of corrosive. (b) Corrosive

substance shall not be handled with bare hands but by means of a suitable scoop or other devices.
8. Opening of valves: Valves fitted to containers holding a corrosive substance shall be opened with great care If they do not work freely, they shall not be forced open. They shall be opened by a worker suitably trained for the purpose.
9. Cleaning tanks, stills etc.:
(a) In cleaning out or removing residues from suits of other large chambers used for holding any corrosive substance, suitable implements made of wood material or other material shall be used to prevent production of arseniuretted hydrogen (Arsine).
(b) Whenever it is necessary for any person employed for the purpose of cleaning or other maintenance work to enter any chamber, tank, vat, pit or other confined space where a corrosive substance had been stored, all possible precautions required under Section 36 shall be taken to ensure the safety of the person employed.
(c) Wherever possible, before repairs are undertaken to any part of equipment in which a corrosive substance was handled, such equipment or part thereof shall be freed of any adhering corrosive substance by adopting suitable methods.
10. Storage
(a) Corrosive substances shall not be stored in the same room with other chemicals, such as turpentine, carbides, metallic powder and combustible materials, the accidental mixing with which may cause a reaction which is either violent or gives rise to toxic fumes and gases.
(b) Except as required under paragraph 4, no tap, sink and the like shall be located in any room where concentrated sulphuric acid, caustic soda, caustic potash, and similar corrosive substances are stored.

(c) Pumping or filling overhead tanks, receptacles, vats, or other containers for storing corrosive substance shall be so arranged that there is no possibility of any corrosive substances overflowing and causing injury to any person.
(d) Every container having a capacity of twenty liters or more and every pipe line, valve, and fitting used for storage or carrying corrosive substances shall be thoroughly examined every year to find out any defects and the defects so found shall be rectified forthwith. A register shall be maintained of every such examination made and shall be produced before the Inspector whenever required.
11. Fire extinguishers and fire-fighting equipment: An adequate number of suitable type of fire extinguishers or other firefighting equipment, depending on the nature of chemicals stored, shall be provided. Such extinguishers or other equipment shall be regularly tested and refilled. Clear instructions as to how the extinguishers or other

1 equipment should be used shall be printed in the language which majority of the persons employed understand and shall be fixed near each extinguisher or other equipment.
2 12. Exemption.— If, in respect of any factory on an application made by the manager, the Chief Inspector is satisfied that owning to the exceptional circumstances, or the infrequency of the process of for any other reason to be recorded by him in writing, all or any of the provisions of this schedule are not necessary for the protection of the persons employed therein, he may by a certificate in writing, which he may at any time revoke, exempt the factory from such of the provisions and subject to such conditions as he may specify therein.

[SCHEDULE XXII]
[MANUFACTURE OR MANIPULATION OF CARCINOGENIC DYE INTERMEDIATES]
1 1. Application: The Schedule shall apply in respect of all factories or any part thereof where processes in which the substances mentioned in paragraphs 3 and 4 are formed, manufactured, handled, or used and the processes incidental thereto in the course of which these substances are formed are carried on. the process indicated in this paragraph shall be referred to herein after as 'the said process", and such a reference shall mean any or all the processes described in this paragraph.
2 2. Definitions: For the purpose of this Schedule the following definitions shall apply, unless the context otherwise requires:
3 (a) "controlled substances" means chemical substances mentioned in paragraph 7 of this Schedule.
4 (b) "efficient exhaust draught" means localized ventilation effected by mechanical means for the removal of gas, vapour, dust or fume so as to prevent them from escaping into the air of any place in which work is carried on. No draught, shall be deemed to be efficient which fails to remove smoke generated at the point where such gas, vapour, fume or dust originated.
5 (c) "first employment" means first employment in the said processes and also reemployment in such processes following any cessation of employment for a continuous period exceeding three calendar months.
6 (d) "prohibited substances" means chemical substances mentioned in paragraph 3 of this Schedule.

7 3. Prohibited substances: For the purpose of this Schedule, the following chemical substances shall be classified as “prohibited substances” except when these substances are present or are formed as a by-product of a chemical reaction in a total concentration not exceeding one per cent:

8 (a) Beta-naphthylamine and its salts,

9 (b) Benzidine and its salts,

10 (c) 4-amino diphenyl and its salts,

(d) 4-nitro diphenyl and its salts, and

(e) any substance containing any of these compounds.

4. Controlled substances: For the purpose of this Schedule, the following chemical substances shall be classified as controlled substances namely:

(a) Alpha naphthylamine or alpha naphthylamine containing not more than one per cent of beta naphthylamine either as by-product of chemical reaction or otherwise, and its salts.

(b) Ortho-tolidine and its salts.

(c) Dianisidine and its salts.

(d) Dichlorobenzidine and its salts.

(e) Magneta.

5. Prohibition of employment: No person shall be employed in the said process in any factory in which any prohibited substance is formed, manufactured, processed, handled or used except as exempted by the Chief Inspector as stipulated in paragraph 23.

6. Requirements for processing or handling controlled substances

(1) Wherever any of the controlled substances referred to in paragraph 4 are formed, manufactured, processed, handled, or used, all practical steps shall be taken to prevent inhalation, ingestion or absorption of the said controlled substance, by the workers while engaged in processing that substance and its storage or transport within the plant, or in cleaning or maintenance of the concerned equipment, plant, machinery and storage areas.

(2) As far as possible all operations shall be carried out in a totally enclosed system. Wherever such enclosure is not possible, efficient exhaust draught shall be applied at the point where the controlled substances are likely to escape into the atmosphere during the process.

(3) The controlled substances shall be received in the factory in tightly closed containers and shall be kept so except when those substances are in process or in use. The controlled substances shall leave the factory only in tightly closed containers of appropriate type. All the containers shall be plainly labelled to indicate the contents.

7. Personal protective equipment.:

(1) The following items of personal protective equipment shall be provided and issued to every worker employed in the said process:

(a) long trousers and shirts or overall with full sleeves and head coverings. The shirt or over all shall cover the neck completely.

(b) Rubber-gum-boots.

1 (2) The following items of personal protective equipment shall be provided in sufficient numbers for use by workers employed in the said processes when there is danger of injury during the performance of normal duties or in the event of emergency:

2 (a) Rubber hand-gloves
3 (b) rubber aprons
4 (c) Airline respirators or other suitable respiratory protective equipment.
5 (3) It shall be the responsibility of Manager to maintain all items of personal protective equipment in a clean and hygienic condition and in good repair.
6 8. Prohibition relating to employment of women and young persons: No woman or young person shall be employed or permitted to work in any room in which the said manufacturing processes are carried on.
7 9. Floors of work room: The floor of every work in which the said manufacturing processes are carried on shall be (a) smooth and impervious to water provided that asphalt or tar shall not be used in the compuSt10fl of the floor, (b) maintained in a state of good repair, (c) with a suitable slope for easy draining and provided with gutters and (d) thoroughly washed daily with the drain water being led into a sewer through a closed channel.
8 10. Disposal of empty container: Empty containers used for holding controlled substances shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded.
9 11. Manual handling: Controlled substances shall not be allowed to be mixed, filled, emptied or handled except by means of a scoop with a handle. Such scoop shall be thoroughly cleaned daily
10 12. Instructions regarding risk: Every worker on his first employment in the said processes shall be fully instructed on the properties of the toxic chemicals to which he is likely to be exposed to, of the dangers involved and the precautions to be taken. Workers shall also be instructed about the measures to be taken to deal with an emergency.
11 13. Cautionary placards: Cautionary placards in the Form specified in Appendix attached to this Schedule and printed in the language of the majority of the workers employed in the said processes shall be affixed in prominent places frequented by them in the factory, where the placards can be easily and conveniently read by the workers. Arrangements shall be made by the manager to instruct periodically and such workers regarding the precautions contained in the cautionary placards.
12 14. 155[Medical facilities and records of examinations and tests:
13 (1) The occupier of every factory to which the schedule applies shall
14 (a) Employ qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a)
(2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available.]
15. Medical examination by the Certifying Surgeon:
(1) Every worker employed in the said processes shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include tests for detection of methaemoglobin in blood (Baematologjcal tests), paranitriphenol in urine, Pulmonary function

tests and C.N.S. tests. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.
(2) Every worker employed in the said processes shall be re-examined by a certifying surgeon at least once in every six calender months and such re-examination shall, wherever the certifying surgeon considers appropriate, include all the tests specified in sub-paragraph (1).
(3) The certifying surgeon after examining a worker, shall issue a Certificate of Fitness in 2Form No.] The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory [x x x].
(4) The certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.
(5) If at any time the Certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance there is would involve special danger to the health of the worker, he shall have made a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said processes.
(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be reemployed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes.

15-A. The person so suspended from the processes shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion if of the certifying surgeon, in which case the person affected shall be suitably rehabilitated.]
1 16. Obligation of the workers: It shall be the duty of the persons employed in the said processes to submit themselves for the medical examination including exfoliative cytology of urine by the certifying Surgeon or the qualified medical practitioner as provided for under these rules

1 17. Washing and bathing facilities:
2 (1) The following washing and bathing facilities shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the said processes namely:
3 (a) A wash place under cover having constant supply of water and provided with clean towels, soap and hair brushed and with at least one stand pipe for every such worker.
4 (b) 50 per cent of the stand pipes provided under Clause (a) shall be located in bathrooms where both hot and cold water shall be made available during the working hours of the factory and for one hour thereafter.
5 (c) The washing and bathing facilities shall be in close proximity of the area housing the said processes.
6 (d) Clean towels shall be provided individually to each worker.
7 (e) In addition to the taps mentioned under Clause (a) one stand pipe, in which warm water is made available, shall be provided on each floor.
8 (2) Arrangements shall be made to wash factory uniforms and other work clothes every day.

9 18. Food, drinks, etc., prohibited in work room: No worker shall consume foods, drink, pan, supari or tobacco or shall smoke in any work room in which the said processes are carried on and no worker shall remain in such room during intervals for meals or rest.

10 19. Cloak room: There shall be provided and maintained in a clean state and in a good repair for the use of workers those employed in the said processes (a) a cloak room with lockers having two compartments one for street clothes and the other for work clothes and (b) a place separate from the locker room and from the mess room for the storage of protective equipment provided under paragraph 7. The accommodation so provided shall be under the case of a responsible person and shall be kept clean.

11 20. Mess room: There shall be provided and maintained for the use of workers employed in the said processes who remain on the premises during the meal intervals, a mess room which shall be furnished with tables and benches and provided with suitable means for warming food.

12 21. Time allowed for washing: Before the end of each shift thirty minutes shall be allowed for bathing for each worker who is employed in the said processes. Further, at least ten minutes shall be allowed for washing before each meal in addition to the regular time allowed for meals.

13 22. Restriction on age of persons employed: No worker under the age of forty years shall be engaged in the factory in the said processes for the first time after the date on which the Schedule comes into force.

1 23. Exemptions regarding prohibited substances:

2 (1) The Chief Inspector may by a certificate in writing (which he may at his discretion revoke at any time) subject to such conditions, if any, as may be specified therein, exempt any process in the course of which any of the prohibited substances is formed, processed, manufactured, handled, or used from the provisions of paragraph 5 if he is satisfied that the process is carried out in a totally enclosed and hermetically sealed system in such a manner that the prohibited substance is not removed from the system except in quantities no greater than that required for the purpose of control of the process or such purposes as is necessary to ensure that the product is free from any of the prohibited substances.

3 (2) The Chief Inspector may allow the manufacture, handing or use of benzidine hydrochloride provided that all the processes in connection with it are carried out in a totally enclosed system in such a manner that no prohibited substance other than benzidine hydrochloride is removed therefrom except in quantities no greater than that required for the purpose of control of the processes or such purposes as is necessary to ensure that the product is free from prohibited substances and that adequate steps are taken to ensure that benzidine hydrochlorides is except while not in a totally enclosed system, kept wet with not less than one part of water to two parts of benzidine hydrochloride at all times.

4 24. General Exemption:— if in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reasons, all or any of the provisions of this Schedule are not necessary for the protection of the workers in the factory, the Chief Inspector may by a certificate in writing (which he may in his discretion revoke at any time), exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify' therein.

APPENDIX

Cautionary Placard/Notice

[See Paragraph 13)

1 1. Dye intermediates which are nitro or amino derivatives or aromatic hydrocarbons are toxic. You have to handle these chemicals frequently in this factory.

2 2. Use the various items of protective wear to safeguard your own health.

3 3. Maintain scrupulous cleanliness at all times, thoroughly wash hands and feet before taking meals. It is essential to take a bath before leaving the factory.

4 4. Wash off any chemical falling on your body with soap and water. If splashed with a solution of the chemical, move the contaminated clothing immediately. These chemicals re-known to produce cyanosis. Contact the medical officer or appointed doctor immediately and get his advice.

1 5. Handle the dye intermediates only with long handled scoops, never with bare hands.

2 6. Alcoholic drinks should be avoided as they enhance the risk of Poisoning by the chemicals.

3 7. Keep your food and drinks away from work place. Consuming food, drinks or tobacco in any form at the place of work is prohibited.

4 8. Serious effects from work with toxic chemicals may follow after many years. Great care must be taken to maintain absolute cleanliness of body, clothes, machinery and equipment.

SCHEDULE XXII

PROCESS OF EXTRACTING OILS AND FATS FROM VEGETABLE AND ANIMAL SOURCES IN SOLVENT EXTRACTION PLANTS

1 1. Definitions:

2 (a) “Solvent extraction plant” means a plant in which the process of extracting oils and fats from vegetable and animals Sources by the use of solvents is carried on.

3 (b) “Solvent” means an inflammable liquid shall as pentane, hexane and heptane used for the recovery of vegetable oils.

4 (c) “Flame-Proof enclosure” as applied to electrical machinery or apparatus means an enclosure that will withstand when covers or other access doors are properly secured, an internal explosion of the flammable gas or vapour which may enter or which may originate inside the enclosure without suffering damage and without communicating internal inflammation (or explosion) to the external flammable gas or vapour.

5 (d) “Competent person” for the purpose of this schedule shall be at least a Member of the Institution of Engineers (India) or an Associate Member of the said Institution with 10 years’ experience in a responsible Position as may be approved by the Chief Inspector. Provided that a Graduate in Mechanical Engineering or Chemical Technology with specialized knowledge of oils and fats and with a minimum experience of 5 years in a solvent extraction plant shall also be considered to be a competent person. Provided further that the State Government may accept any other qualifications if in their opinion they are equivalent to the qualifications aforesaid.

1 2. Location and layout:
2 (a) No solvent extraction plant shall be permitted to be constructed or extended to within a distance of 30 meters from the nearest residential locality.
3 (b) A 1.5-metre-high continuous wire fencing shall be provided around the solvent extraction plant up to a minimum distance of 15 meters from the plant.

(c) No person shall be allowed to carry any matches or an open flame or fire inside the area bound by the fencing.
(d) Boiler houses and other buildings where open flame processes are carried on shall be located at least 30 meters away from the solvent extraction plant.
(e) If godowns and preparatory processes are at less than 30 meters' distance from the solvent extraction plant, there shall be at least 15 meters' distance from the plant, and a continuous barrier wall of non- combustible material 1.5 meters high shall be erected at a distance of not less than 15 meters from the solvent extraction plant so that it extends to at least 30 meters of vapour travel around its ends from the plant to the possible source of ignition.
3. Electrical installations:
(a) All electrical motors and wiring and other electrical equipment installed or housed in solvent extraction plant shall be of flame-proof construction [156][x x x].
(b) All metal parts of the plant and building including various tanks and containers where solvents are stored or are present and all parts of electrical equipment not required to be energized shall be properly bounded together and connected to earth so as to avoid accidental rise in the electrical potential of such parts above earth potential.
4. Restriction of smoking: Smoking shall be strictly prohibited within 15 meters' distance from solvent extraction plant. For this purpose, No Smoking' signs shall be permanently displayed in the area.
5. Precautions against friction:
(a) All tools and equipment's including ladders, chains and other lifting tackle required to be used in solvent extraction plant shall be of non- sparking type.
(b) [157][No machinery or equipment in any solvent extraction plant shall be belt driven unless the belt used is of such a type it does not permit accumulation of static electricity to a dangerous level.]
(c) No person shall be allowed to enter and work in the solvent extraction plant wearing clothes made of nylon or such other fiber that can generate static electrical charge or wearing foot-wear which is likely to cause sparks by friction.

1 6. firefighting apparatus:
2 (a) Adequate number of portable fire extinguishers suitable for use against flammable liquid fires shall be provided in the solvent extraction plant.
3 (b) An automatic water spray sprinkler system on a wet-pipe or open head deluge system with sufficient supply of storage water shall be provided over solvent extraction plant and throughout the building housing such plant.

1 7. Precautions against power failure: Provision shall be made for automatic cutting off of team in the event of power failure and also for emergency overhead water supply for feeding water by gravity to condensers which shall come into play automatically with the power failure.
2 8. Magnetic separators: Oil cake shall be fed to the extractor by a conveyor through a hopper and a magnetic separator shall be provided to remove any piece of iron during its transfer.
3 9. Venting:
4 (a) Tanks containing solvents shall be protected with emergency venting to relieve excessive internal pressure in the event of fire.
5 (b) All emergency relief vents shall terminate at least 6 meters above the ground and be so located that vapor's will not re-enter the building in which solvent extraction plant is located.
6 10. Waste Water: Process waste water shall be passed through a flash evaporator to remove any solvent before it is discharged into a sump 130[which should be located within the fenced area but should not be closer than 8 meters to the fence].
7 11. Ventilation: The solvent extraction plant shall be well ventilated and if the plant is housed in a building the building shall be provided with mechanical ventilation with provision for at least six air changes per hour.
8 12. House-keeping:
9 (a) Solvents shall not be stored in an area covered by solvent extraction plant except in small quantities which shall be stored in approved safety cans.
10 (b) Waste materials such as oily rags, other wastes and absorbents used to wipe off solvent and points and oils shall be deposited in approved containers and removed from the premises at least once a day.
11 (c) Space within the solvent extraction plant and within 15 meters from the plant shall be kept free from any combustible materials and any spills of oil or solvent shall be cleaned up immediately.
12 13. Examination and Repairs:
13 (a) The solvent extraction plant shall be examined by the competent person to determine any weakness or corrosion and wear once in every 12 months. Report of such examination shall be supplied to the Inspector with his observation as to whether or not the plant is in safe condition to work.
14 (b) No repairs shall be carried out to the machinery or plant except under the direct supervision of the competent person.
15 (c) Facility shall be provided for purging the plant with inert gas before Opening for cleaning or repairs and before introducing solvent after repairs.

1 14. Operating Personnel: The plant and machinery in the solvent extraction plant shall be in the charge of such duly qualified and trained persons as are certified by the competent person to be fit for the purpose and no other person shall be allowed to operate the plant and machinery.
2 15. Employment of women and young persons: No woman or young person shall be employed in the solvent extraction plant.
3 16. Vapour Detection: A suitable type of flameproof and portable combustible gas indicator shall be provided and maintained in good working order and a schedule of routine

sampling of atmosphere at various locations as approved by the Chief Inspector shall be drawn out and entered in a register maintained for the purpose.

4 (1) When the solvent is removed from a batch extractor by vacuum, vacuum gauges shall be provided and tests shall be carried out to ensure that a minimum vacuum of 650 mm (26) mercury is obtained and maintained steadily for a minimum period of 30 minutes before extractor is allowed to be opened for discharge of cake or for persons to enter.

5 (2) Where solvent is removed by steam heating, the presence of the solvent shall be tested at the vent provided on the top of the vessel before opening the vessel.

6 (3) When on opening the door of a batch extractor the extractor meal cannot be dislodged from the extractor freely, the door shall be closed and material re-heated for at least sixty minutes before the door is reopened.

7 (4) A log book of operations with the following particulars shall be maintained and made available on demand to the Inspector:

8 (i) Vacuum gauge reading for each charge where vacuum extraction is used.

9 (ii) Date of testing of continuity of electrical bonding and Earthing system and the report of each test.

10 (iii) Loss of solvent every 24 hours of operation or less of solvent per tonne of raw material treated.

11 17. [158][Exemption.— If, in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reasons, all or any of the provisions of this Schedule is not necessary for the protection of the workers in the factory, the Chief Inspector may, by a certificate in writing (which he may, in his discretion revoke at any time), exempt such factory from all or any of the provisions subject to conditions, if any, as he may specify therein.]

SCHEDULE XXIII

CARBON DISULPHIDE PLANTS

1 1. Application: This Schedule shall apply to all electric furnaces in where carbon disulphide is generated and all other plants where carbon disulphide after generation,

1 is condensed, refined and stored. These rules are in addition to and not in derogation of any of the provisions of the Act and Rules made thereunder.

2 2. Construction, Installation and Operation:

3 (a) The buildings in which electric furnaces are installed and carbon disulphide after generation is condensed and refined shall be segregated from other parts of the factory and shall be open type to ensure optimum ventilation and the plant layout shall be such that only minimum number of workers are exposed to the risk of any fire or explosion at any one time.

4 (b) Every electric furnace and every plant in which carbon disulphide is condensed, refined and stored with all their fittings and attachments shall be of good construction, sound material and of adequate strength to sustain the internal pressure to which the furnace or the plant may be subjected and shall be signed that carbon disulphide liquid and gas are in closed system during their normal working.

5 (c) The electric furnace support shall be firmly grouted about 2 feet in concrete or by other effective means.

6 (d) Every electric furnace shall be installed and operated according to manufacturer's instructions and these instructions shall be clearly imparted to the personnel in-charge of construction and operation.
7 (e) The instruction regarding observance of correct furnace temperature, sulphure doze admissible Current power consumption and periodical checking of charcoal level shall be strictly complied with.
8 3. Electrodes:
9 (a) Where upper ring electrode (s) made of steel are used in the electric furnace, they shall be of seamless tube Construction and shall have arrangement for being connected to cooling water system through a siphon built in the electrodes or through a positive pressure water pump.
10 (b) The arrangement for cooling water referred to in Clause (a) shall be connected with automatic alarm system which will actuate in the event of interruption of cooling water in the electrodes and give visible and audible alarm signals in the control room and simultaneously stop power supply for the furnace operation and to stop the further supply of water. The alarm system and the actuating device shall be checked every day.
11 4. Maintenance of Charcoal level: When any electric furnace is in operation, it shall be ensured that the electrodes are kept covered with a charcoal bed.
12 5. Charcoal Separator: A cylone type of charcoal separator shall be fitted on the offtake pipe between the electric furnace and sulphur separator to prevent entry of pieces of charcoal into the condensers piping.
13 6. Rupture Discs and Safety Seal:

(a) At least two rupture discs of adequate size which shall blow off at a pressure twice the maximum operating pressure shall be provided on each furnace and shall either be mounted directly on the top of the furnace or each through an independent pipe as close as possible to the furnace.
(b) A safety water seal shall be provided and tapped from a point between the charcoal separator and the sulphur separator.
7. Pyrometers and Monometers:
(a) Each electric furnace shall be fitted with adequate number of pyrometers [159][to give an indication of the temperature as correctly as practicable] at various points in the furnace. The dials for reading the temperatures shall be located in the control room.
(b) Monometers [160][or any other suitable devices] shall be provided for indicating pressure
(i) in the offtake pipe before and after the sulphur separator; and
(ii) in primary and secondary condensers.
8. Check Valves: All piping carrying carbon disulphide shall be fitted with check valves at suitable positions so as to prevent gas from flowing back into an electric furnace in the event of its shut down.
9. Inspection and Maintenance of Electric Furnaces:
(a) Every electric furnace shall be inspected internally by a competent person
(i) before being placed in service after installation;
(ii) before being placed in service after reconstruction of repairs; and

(iii) periodically every time the furnace is opened for cleaning or deashing or for replacing electrodes.
(b) When an electric furnace is shut down for cleaning or deashing.
(i) the brick lining shall be checked for continuity and any part found defective moved,
(ii) after removal of any part of the lining referred to in (a) the condition of the shell shall be closely inspected; and
(iii) any plates forming shell found corroded to the extent that safety of the furnace is endangered shall be replaced.
10. Maintenance of Records: The following hourly records shall be maintained in a log book:
(i) Manometer readings at the points specified in 7 (b) (i) and (ii).
(ii) Gas temperature indicated by pyrometers and all other vital points near the sulphur separator and primary and secondary condensers.

i (iii) Water temperature and flow or water through the siphon in the electrodes.
ii (iv) Primary and secondary voltages and current and energy consumed.
iii 11. Electrical apparatus, wiring and fittings: All buildings in which carbo disulphide is refined or stored shall be provided with electrical apparatus, wiring and fittings which shall afford adequate protection from fire and explosion.
iv 12. Prohibition relating to smoking: No person shall smoke or carry matches, fire or naked light or other means of producing a light or spark in buildings in which carbon disulphide is refined or stored, and notice in the language understood by a majority of the workers shall be posted in the plant prohibiting smoking and carrying of matches, fire or naked light or other means of producing naked light or spark into such rooms.
v 13. Means of Escape: Adequate means of escape shall be provided and maintained to enable persons to move to a safe place as quickly as possible in case of an emergency. At least two independent stair cases of adequate width shall be provided in every building, housing the furnaces at reasonable intervals at opposite ends. These shall always be kept clear of all obstructions and so designed as to afford easy passage.
vi 14. Warnings in case of fire: There shall be adequate arrangements for giving warnings in case of fire or explosion which shall operate on electricity and in case of failure of electricity, by some mechanical means.
vii 15. Fire-fighting Equipment:
viii (a) Adequate number of suitable fire extinguishers or other firefighting equipment shall be kept in constant readiness for dealing with risks involved and depending on the amount and nature of materials stored.
ix (b) Clear instructions as to how the extinguishers or other equipment should be used printed in the language which the majority of the workers employed understand, shall be affixed to each extinguisher or other equipment and the personnel trained in their use.
x 16. Bulk Sulphur:
xi (a) Open or semi enclosed spaces for storage of bulk sulphur shall be sited with due regard to the dangers which may arise from sparks given off by nearby locomotive etc., and precautions shall be taken to see that flames, smoking and matches and other sources of ignition do not come in contact with the clouds of dust arising during handling of bulk sulphur.

xii (b) All enclosures for bulk sulphur shall be of non-combustible construction, adequately ventilated and so designed as to provide a minimum of ledges on which dust may lodge.
xiii (c) The bulk sulphur in the enclosures shall be handled in such a manner as to minimize the formation of dust clouds and no flame, smoking and matches or other sources of ignition shall be employed during handling and non-sparking

tools shall be used whenever sulphur is shoveled or otherwise removed by hand.
(d) No repairs involving flames, heat or use of hand or power tools shall be made in the enclosure where bulk sulphur is stored.
17. Liquid Sulphur: Open flames, electric sparks and other sources of ignition, including smoking and matches, shall be excluded from the vicinity of molten sulphur.
18. Training and supervision
(a) All electric furnaces and all plants which carbon disulphide is condensed, refined or stored shall be under adequate supervision at all times while the furnaces and plant are in operation.
(b) Workers in charge of operation and maintenance of electric furnaces and the plants shall be properly qualified and adequately trained.
19. Washing facilities: The Occupier shall provide and maintain in a clean state and in good repair, for the use of all persons employed, wash place under cover with at least one tap or stand-pipe, having a constant supply of clean water for every five such persons, the taps or standpipes being spaced not less than 120 centimeters apart with a sufficient supply of soap and clean towels, provided that towels shall be supplied individually to each worker if so ordered by the Inspector. All the workers employed in the sulphur storage, handling and melting operations shall be provided with a nail brush.
20. Personal Protective Equipment:
(a) Suitable goggles and protective clothing consisting of overalls without pockets, gloves and footwear shall be provided for the use of operatives:
(i) when operating valves or cocks controlling fluids etc.;
(ii) drawing off of molten sulphur from sulphur pots; and
(iii) handling charcoal or sulphur.
(b) Suitable respiratory protective equipment shall be provided and stored in the appropriate place for using during abnormal conditions or in an emergency.
(c) Arrangements shall be made for the proper and efficient cleaning of all such protective equipment.
21. Cloak rooms: There shall be provided and maintained for the use of all persons employed in the processes a suitable cloak room for clothing put off during work hours and a suitable place separate from the cloak room for the storage of overalls or working clothes. The accommodation so provided shall be placed in the charge of a responsible person and shall be kept clean.
22. Unauthorized Persons: Only maintenance and repair personnel, persons directly connected with the plant operations and those accompanied by authorized persons shall be admitted into the plant.

SCHEDULE XXIV
MANUFACTURE AND MANIPULATION OF DANGEROUS PESTICIDES

1 1. Definitions: For the purpose of this schedule the following shall apply
2 (i) 'Dangerous pesticides' means any product proposed or used for controlling, destroying or repelling any pest or for preventing growth or mitigating effects of such growth including any of its formulations which is considered toxic under and is covered by the Insecticides Act, 1968 and the rules made thereunder and any other product, as may be notified, from time to time by the State Government.
3 (ii) 'Manipulation' includes mixing, bending, formulating, filling, emptying, packing or otherwise handling.
4 (iii) 'Efficient exhaust draught' means localized mechanical ventilation for removal of smoke, gas, vapour, dust, fume or mist so as to prevent them from escaping in the air of any work room in which work is carried on. No exhaust draught shall be considered efficient if it fails to remove smoke generated at the point where such gas, fume, dust, vapour or mist originates from the process.
5 (iv) 'First employment' shall mean first employment in any manufacturing process to which this schedule applies and shall also include reemployment in the said manufacturing process following any cessation of employment for a continuous period exceeding three calendar months.
6 (v) [161][x x x]
7 2. Application: This schedule shall apply in respect of all factories or any plant thereof in which the process of manufacture or manipulation of dangerous pesticide hereinafter referred to as the said manufacturing process is carried on.
8 3. Instruction of workers: Every worker on his first employment shall be fully instructed on the properties including dangerous properties of the chemicals handled in the said manufacturing process and the hazards involved. The employees shall also be instructed in the measures to be taken to deal with any emergency. Such instructions shall be repeated periodically.
9 4. Cautionary Notice and Placards: Cautionary notices and placards in the form specified in Appendix I of this schedule and printed in the language of the majority of the workers shall be displayed in all work places in which said manufacturing process is carried on so that they can be easily and conveniently read by the workers. Arrangements shall be made by the occupier and the manager of the factory to periodically instruct the workers regarding the health hazards arising in the said manufacturing process and methods of protection. Such notices shall include brief instructions regarding the periodical clinical tests required to be undertaken for protecting health of the workers.

1 5. Prohibition relating to employment of women or young persons: No woman or young person shall be employed or permitted to work in any room in which the said manufacturing process is carried on or in any room in which dangerous pesticide is stored.
2 6. Food and drinks, smoking prohibited
3 (1) No food, drink, tobacco, pan or supari shall be brought in or consumed by any worker into any work room in which the said manufacturing process is carried out.
4 (2) Smoking shall be prohibited in any work room in which the said manufacturing process is carried out.
5 7. Medical facilities and records of examinations and tests:

6 (1) The occupier of every factory to which the schedule applies, shall
7 (a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories;
8 (b) provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a)
9 (2) The record of medical examination and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available.]
10 8. 162[Medical examination by certifying surgeon:
11 (1) Every worker employed in the processes mentioned in paragraph I shall be examined by the certifying surgeon within 15 days of his first employment. Such examination in respect of Halogenated Pesticides, shall include tests for determination of the chemical in blood and in fact tissues, EEG abnormalities and memory tests. In respect of organo phosphorous compounds such examinations shall include tests for depression of cholinesterase in plasma and red blood cells. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.
12 (2) Every worker employed in the said processes shall be re-examined by a certifying surgeon at least once in every six calendar months. Such examination shall, wherever the certifying surgeon considers appropriate, include the tests specified in sub-paragraph 1). Further every worker employed in the said processes shall also be examined once in every three months by the factory medical officer.
13 (3) The certifying surgeon after examining a worker, shall issue a certificate of fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody

1 of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of these tests, shall also be entered by the Certifying surgeon in a health register in Form 29.
2 (4) The certificate of fitness and the health register shall be kept readily available for inspection by the inspector.
3 (5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein could involve special danger to the health of the worker, he shall make a record of his findings of the workers, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit to work in the said processes.
4 (6) No person who has been found unfit to work as said in sub-paragraph (5) shall be reemployed or permitted to work in the said processes unless the certifying surgeon after further examination again certifies him fit for the employment in those processes.

8-A. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully in capacitated in the opinion in of the certifying surgeon, in which case the person affected shall be suitably rehabilitated.]

9. Protective clothing and protective equipment:

(1) Protective clothing consisting of long pants and shirts or overalls with long sleeves and head covering shall be provided for all workers employed in the said manufacturing process.

(2)

(a) Protective equipment's consisting of rubber gloves, gum boots, rubber aprons, chemical safety goggles, and respirators shall be provided for all workers employed in the said manufacturing process,

(b) gloves, boots, aprons shall be made from synthetic rubber where a pesticide contains oil.

(3) Protective clothing and equipment shall be worn by the workers supplied with such clothing and equipment.

(4) Protective clothing and equipment shall be washed daily from inside and outside if the workers handle pesticides containing nicotine or phosphorous and shall be washed frequently if handling other pesticides.

(5) Protective clothing and equipment shall be maintained in good repair.

10. Floors and work benches:

(1) Floors in every work room where dangerous pesticides are manipulated shall be of cement or other impervious material giving a smooth surface.

(2) Floors shall be maintained in good repair, provided with adequate slope leading to a drain and thoroughly washed once a day with hose pipe.

(3) Work benches where dangerous pesticides are manipulated shall be made of smooth, non-absorbing material preferably stainless steel and shall be cleaned at least once daily.

11. Spillage and waste:

(1) If a dangerous pesticide during its manipulation splashes or spills on the work bench, floor or on the protective clothing worn by a worker, immediate action shall be taken for thorough decontamination of such areas or articles.

(2) Cloth rags, paper or other material soaked or soiled with a dangerous pesticide shall be deposited in suitable receptacle with tight fitting cover. Contaminated waste shall be destroyed by burning at least once a week.

(3) Suitable deactivating agents, where available, shall be kept in a readily accessible place for use while attending to a spillage.

(4) Easy means or access shall be provided to all parts of the plant for cleaning maintenance and repairs.

12. Empty containers used for dangerous pesticides: Containers used for dangerous pesticides shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded or destroyed.

13. Manual handling:

(1) A dangerous pesticide shall not be required or allowed to be manipulated by hand except by means of a long handled scoop.

(2) Direct contact of any part of the body with a dangerous pesticide during its manipulation shall be avoided.

1 14. Ventilation:
2 (1) In every work room or area where a dangerous pesticide is manipulated, adequate ventilation shall be provided at all times by the circulation of fresh air.
3 (2) Unless the process is completely enclosed the following operations during manipulation of a dangerous pesticide shall not be undertaken without an efficient exhaust draught.
4 (a) emptying a container holding a dangerous pesticide.
5 (b) blending a dangerous pesticide.
6 (c) preparing a liquid or powder formulation containing a dangerous pesticide.

(d) changing or filling a dangerous pesticide into a container, tank hopper or machine or small sized containers.
(3) In the event of a failure of the exhaust draught provided on the above operation, the above operations shall be stopped forthwith.
15. Time allowed for washing:
(1) Before each meal and before the end of the day's work at least ten minutes in addition to the regular rest interval shall be allowed for washing to each worker engaged in the manipulation of dangerous pesticide.
(2) Every worker engaged in the manipulation of dangerous pesticides shall have a thorough wash before consuming any food and also at the end of the day's work.
16. Washing and bathing facilities:
(1) There shall be provided and maintained in clean state and in good repair for the use of all workers employed in the factory where the said manufacturing process is carried on, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 5 persons employed.
(2) The washing places shall have stand pipes placed at intervals of not less than one meter.
(3) Not less than one half of the total number of washing places shall be provided with bath rooms.
(4) Sufficient supply of clean towels made of suitable material shall be provided. Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector. (5) Sufficient supply of soap and nail brushes shall be provided.
17. Cloak room: There shall be provided and maintained for the use of all workers employed in the factory, where the said manufacturing process is carried on
(a) a cloak room for clothing put off during working hours with adequate arrangements for drying clothing, if wet;
(b) separate and suitable arrangements for the storage of protective clothing provided under paragraph 9.
18. Mess room: There shall be provided and maintained for the use of all workers employed in the factory in which the said manufacturing process is carried on and remaining on the premises during the rest intervals, as suitable mess room which shall be furnished with
(a) sufficient tables and benches with back rest; and
(b) adequate means for warming food. The mess-room shall be placed under the charge of a responsible person and shall be kept clean.

1 19. Exemption: If in respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the said manufacturing process or for any other reason which he shall record in writing all or any of the provisions of this Schedule are not necessary for the protection of the workers employed in the factory, he may, by a certificate in writing, exempt such factory, from all or any of the provisions on such condition as he may specify therein. Such certificate may, at any time be revoked by the Chief Inspector after recording his reasons thereof.

2 20. Manipulation not to be undertaken: Manufacture or manipulation of a pesticide shall not be undertaken in any factory unless a certificate regarding its dangers or otherwise is obtained from the Chief Inspector.

APPENDIX I

Cautionary Notice (Insecticides and Pesticides)

1 1. Chemicals handled in this plant are poisonous substances.

2 2. Smoking, eating food or drinking, chewing tobacco in this area is prohibited. No food stuff or drink shall be brought in this area.

3 3. Some of these chemicals may be absorbed through skin and may cause poisoning.

4 4. A good wash shall be taken before meals.

5 5. A good bath shall be taken at the end of the shift.

6 6. Protective clothing and equipment supplied shall be used while working in this area.

7 7. Containers of pesticides shall not be used for keeping food stuffs.

8 8. Spillage of the chemicals on any part of the body or on the floor or work bench shall be immediately washed away with water.

9 9. Clothing contaminated due to splashing shall be removed immediately. 10. Scrupulous cleanliness shall be maintained in this area.

10 10. Do not handle pesticides with bare hands, use scoops provided with handle.

11 11. In case of sickness like nausea, vomiting, giddiness, the manager should be informed who will make necessary arrangements for treatment.

12 12. All workers shall report of for the prescribed medical test regularly to protect their own health.

SCHEDULE XXV

MANUFACTURE, HANDLING AND USE OF BENZENE

1 1. This schedule is made to provide protection against hazards of poisoning from benzene and shall apply in respect of factories or parts thereof in which benzene or substances containing benzene are manufactured, handled or used.

2 2. Definitions. For the purpose of this schedule:

(a) “Substances containing benzene” means substances wherein benzene content exceeds 1 per cent, by volume.

(b) “Substitute” means a chemical which is harmless or less harmful than benzene and can be used in place of benzene.

(c) “Enclosed system” means a system which will not allow escape of benzene vapors to the working atmosphere.
(d) “Efficient exhaust draught” means localized ventilation effected by mechanical means for the removal of gases, vapor’s and dusts or fumes so as to prevent them from escaping into the air of any work-room. No draught shall be deemed to be efficient if it fails to remove smoke generated at the point where such gases, vapor’s, fumes or dust originate.
3. Prohibition and substitution:
(a) [163][Use of benzene and substances containing benzene is prohibited in the following processes;
(i) manufacture of varnishes, paints and thinners; and
(ii) cleaning and degressing operations]
(b) Benzene or substances containing benzene shall not be used as a solvent or diluent unless the process in which it is used is carried on in an enclosed system or unless the process is carried on in manner which is considered equally safe as if it were carried out in an enclosed system.
(c) Where suitable substitutes are available, they shall be used instead of Benzene or substances containing Benzene. This provision, however shall not apply to the process specified in Appendix-A.
(d) The Chief Inspector may, subject to confirmation by the State Government, permit exemptions from the percentage laid down in clause 2 (a) and also from the provisions of sub clause (b) temporarily under conditions and within limits of time to be determined after consultation with the employees and workers concerned.
4. Protection against inhalation:
(a) The process involving the use of benzene or substances containing benzene shall as far as practicable be carried out in an enclosed system.
(b) Where, however, it is not practicable to carry out the process in an enclosed system, the work-room in which benzene or substances containing benzene are used shall be, equipped with an efficient exhaust draught or other means for the removal of benzene vapor’s or prevent their escape into the air of the work-room so that the concentration of benzene in the air does not exceed 25 parts per million by volume or 80 mg/3m.

(c) Air analysis for the measurement of concentration of benzene vapor’s in air shall be carried out every 8 hours at. such intervals as may be directed by the Chief Inspector at places where process involving use of benzene is carried on and the result of such analysis shall be recorded in a register specially maintained for this purpose. If the concentration of benzene vapor’s in air as measured by air analysis, exceeds 25 parts per million by volume or 80 mg/3m., the manager shall forthwith report of concentration to the Chief Inspector stating the reasons for such increase.
(d) Workers who for special reasons are likely to be exposed to concentration of benzene in the air of the work-room exceeding the maximum referred to in clause (b) shall be provided with suitable respirators or face masks. The duration of such exposure shall be limited as far as possible.
5. Measures against skin contact:

(a) Workers who are likely to come in contact with liquid benzene or liquid substances containing benzene shall be provided with suitable gloves, aprons, boots and where necessary vapour tight chemical goggles, made of material not affected by benzene or its vapor's.
(b) The protective ware referred to in sub-clause (a) shall be maintained in good condition and inspected regularly.
6. Prohibition relating to employment of women and young persons: No woman or young person shall be employed or permitted to work in any work-room involving exposure to benzene or substances containing benzene.
7. Labelling--- Every container holding benzene or substances containing benzene shall have the word "Benzene" and approved danger symbols clearly visible on it and shall also display information of benzene content, warning about toxicity and warning about inflammability of the chemical.

1 8. Improper use of benzene:
2 (a) The use of benzene or substances containing benzene by workers for cleaning their hands or other work clothing shall be prohibited.
3 (b) Workers shall be instructed on the possible dangers arising from such misuse.
4 9. Prohibition of consuming food etc., in work-rooms: No worker shall be allowed to store or consume food or drink in the work-room in which benzene or substances containing benzene are manufactured handled or used. Smoking and chewing tobacco or pan shall be prohibited in such work-rooms.
5 10. Instructions as regards risks: Every worker on his first employment shall be fully instructed on the properties of benzene or substances containing benzene which he

1 has to handle and of the dangers involved. Workers shall also be instructed on the measures to be taken to deal with in an emergency.
2 11. Cautionary notices: Cautionary notices in the form specified in Appendix-B and presented in the language easily read and understood by the majority of the workers shall be displayed in prominent places in the work- rooms where benzene or substances containing benzene are manufactured handled or used.
3 12. Washing facilities, cloak—room and mess-room: In factories in which benzene or substances containing benzene are manufactured handled or used, the occupier shall provide and maintain in clean state and in good repair:
4 (a) washing facilities under cover of the standard of at least one tap for every persons having constant supply of water with soap and a clean towel provided individually to each worker if so ordered by the Inspector;
5 (b) a cloak-room with lockers for each worker, having two compartments-one for street clothing and one for work clothing;
6 (c) a mess-room furnished with tables and benches with means for warming food, provided that where a canteen or other proper arrangements exist for the workers to take their meals the requirements of mess-room shall be dispensed with.
7 13. 164[Medical facilities and records of examinations and tests:
8 (1) The occupier of every factory to which the Schedule applies, shall

9 (a) employ a qualified medical practitioner for medical surveillance of the workers employed the therein whose employment shall be subject to the approval of the Chief Inspector of Factories, and

10 (b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a)

11 (2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the inspector".]

12 14. 165[Medical examination by the Certifying Surgeon:

13 (1) Every worker employed in processes mentioned in paragraph 1, shall be examined by a Certifying surgeon within 15 days of his first employment. Such examination shall include tests for detection of phenol in urine and determination of urinary sulphide ratio and C.N.S. and hematological tests. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

14 (2) Every worker employed in this said processes shall be re-examined by a Certifying Surgeon at least once in every twelve calender months and such examination shall, whenever the Certifying Surgeon considers appropriate,

1 include all the tests specified in sub-paragraph (1). Further, every worker shall also be examined once in every three calender months by the factory medical officer.

2 (3) The certifying surgeon after examining a worker, shall issue a certificate of fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the Certificate and the Certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of these tests shall also be entered by the certifying surgeon in a health register in Form 29.

3 (4) The Certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.

4 (5) If any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period of which he considers that the said person is unfit to work in the said processes.

5 (6) No person who has been found unfit to work as said in sub-paragraph (5) shall be reemployed or permitted to work in the said processes unless the certifying surgeon, after further examination, again certifies him fit for employment in these processes.

6 15. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the certifying surgeon, in which case the person affected shall be suitably rehabilitated."]

APPENDIX A

[Clause 3(b)]

1 1. Production of benzene

2 2. Process where benzene is used for chemical synthesis
3 3. Motor spirits (used as fuel).

APPENDIX B (Clause II)

(a) The hazards:

(i) Benzene and substances containing benzene are harmful

(ii) Prolonged or repeated breathing of benzene vapor's may cause suit in acute or chronic poisoning.

i (iii) Benzene can also be absorbed through skin which may cause skin and other diseases.

ii (b) The preventive measures to be taken:

iii (i) Avoid breathing of benzene vapor's.

iv (ii) Avoid prolonged or repeated contact of benzene with the skin.

v (iii) Remove benzene with soaked or wet clothing promptly.

vi (iv) If at any time you are exposed to high concentration of benzene vapor's and exhibit the sign and symptoms such as dizziness, difficulty in breathing, excessive excitation and losing of consciousness, immediately inform your Factory Manager.

vii (v) Keep all the containers of benzene closed.

viii (vi) Handle, use and process benzene and substances containing benzene carefully in order to prevent their spillage on floor.

ix (vii) Maintain good housekeeping.

x (c) The protective equipment to be used:

xi (i) Use respiratory protective equipment in places where benzene vapors are present in high concentration.

xii (ii) In emergency, use self-generating oxygen mask or oxygen or air cylinder masks.

xiii (iii) Wear hand gloves, aprons, goggles and gum boots to avoid contact of benzene with your skin and body parts.

xiv (d) The first aid measures to be taken in case of acute benzene poisoning:

xv (i) Remove the clothing immediately if it is wetted with benzene,

xvi (ii) If liquid benzene enters eyes, flush thoroughly for at least 15 minutes with clean running water and immediately secure medical attention.

xvii (iii) In case of unusual exposure to benzene vapour, call a physician immediately. Until he arrives do the following:

If the exposed person is conscious:

(a) Move him to fresh air in open

(b) Lay down without a pillow and keep him quiet and warm.

If exposed person is unconscious:

(a) Lay him down preferably on the left side with the head low.

(b) Remove any false teeth, chewing-gum, tobacco or other foreign objects which may be in his mouth.

(c) Provide him artificial respiration in case difficulty is being experienced in breathing.
(d) In case of shallow breathing or cyanosis (blueness of skin, lips, ears, finger-nail beds), he should be provided with medical oxygen or oxygen carbon dioxide mixture, if needed, he should be given artificial respiration. Oxygen should be administered by a trained person only.

SCHEDULE XXVI
MANUFACTURE OR MANIPULATION OF MANGANESE AND ITS COMPOUNDS

1 1. Definitions: For the purpose of the Schedule:

2 (a) "Manganese Process" means processing, manufacture or manipulation of manganese or any compound of manganese or any ore or any mixture Containing manganese.

3 (b) "First Employment" means employment in any manganese process and includes also reemployment in any manganese process following any cessation of employment for a continuous period exceeding 3 calendar months.

4 (c) "Manipulation "means mixing, blending, filling, emptying, grinding, sieving, drying, packing, sweeping, or otherwise handling of manganese or a compound of manganese, or an ore of mixture containing manganese.

5 (d) "Efficient exhaust ventilation" means localized ventilation effected by mechanical means for the removal of dust or fume or mist at its source of origin so as to prevent it from escaping into the atmosphere of any place where any work is carried on. No draught shall be deemed to be efficient which fails to remove the dust or fume or mist at the point where it is generated and fails to prevent it from escaping into and spreading into the atmosphere of a work place.

6 2. Application: This Schedule shall apply to every factory in which or in any part of which any manganese process is carried.

7 3. Exemption:— If in respect of any factory, the Chief Inspector is satisfied that owing to any exceptional circumstances, or infrequency of the process, or for any other reason, application of all or any of the provisions of this schedule is not necessary for the protection of the persons employed in such factory he may, by an order in writing which he may at his discretion revoke exempt such factory from all or any of the provisions on such conditions and for such period as he may specify in the said order.

8 4. Isolation of a process: Every manganese process which may give rise to dust, vapour or mist containing manganese, shall be carried on in a totally enclosed system or otherwise effectively isolated from other processes so that other plants and processes and other parts of the factory and person employed on other work of process may not be affected by the same.

1 5. Ventilation of Process: No process in which any dust, vapour or mist containing manganese is generated, provision shall be carried out except under and efficient exhaust ventilation which shall be applied as near to the point of generation as practicable.

2 6. [166][Medical facilities and records of examination and tests:

3 (1) The occupier of every factory to which the schedule applies, shall

4 (a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the chief Inspector of factories; and

5 (b) provide to the said medical practitioner shall all the necessary facilities for the purpose referred to in clause (a).
6 (2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

6-A. Medical examination by certifying surgeon:
1 (1) Every worker employed in any manganese process shall be examined by certifying surgeon within 15 days of his first employment. Such examination shall include tests for detection of a serum calcium, serum phosphate and manganese in blood and urine and also include steadiness tests and other neuro-muscular coordination tests, no worker shall be allowed to work after 15 days of his first employment in the factory unless certified for such employment by the certifying surgeon.
2 (2) Every worker employed in a manganese process shall be re-examined by a certifying surgeon at least once in every three calender months and such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests sub-paragraph (1).
3 (3) The certifying surgeon after examining a worker, shall issue a certificate of fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and the results of these tests, shall also be entered by the Certifying surgeon in a health register in Form 29.
4 (4) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.
5 (5) If at any time the Certifying surgeon is of the opinion that the worker is no longer fit for employment in the said process on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his

1 findings in those documents should also include the period for which he considers that the said person is unfit to work in the said process.
2 (6) No person who has been found unfit to work as said in sub- paragraphs (5) shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certificates him fit for employment in those processes. 6-B The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying surgeon, in which case the person affected shall be suitably rehabilitated”]
3 7. Personal Protective Equipment:
4 (1) The occupier of the factory shall provide and maintain in good and clean condition suitable overall and head coverings for all persons employed in any manganese process and such overalls and head coverings shall be worn by the persons while working on a manganese process.
5 (2) The occupier of the factory shall provide suitable respiratory protective equipment for use by workers in emergency to prevent inhalation of dusts. fumes or mists. Sufficient

number of complete sets of such equipment shall always be kept near the work place and the same shall be properly maintained and kept always in a condition to be used readily.

6 (3) The occupier shall provide and maintain for the use of all persons employed suitable accommodation for the storage and make adequate arrangements for cleaning and maintenance of personal protective equipment's.

7 8. Prohibition relating to women and young persons: No women or young persons shall be employed or permitted to work in any manganese process.

8 9. Food, drinks prohibited in the work rooms: No food, drink, pan and supari or tobacco shall be allowed to be brought into or consumed by any worker in any work room in which any manganese process is carried on.

9 10. Mess room: There shall be provided and maintained for the use of the persons employed in a manganese process a suitable mess room which shall be furnished with sufficient tables and benches and adequate means for warming of food. The mess room shall be placed under the charge of a responsible person and shall be kept clean.

10 11. Washing facilities: There shall be provided and maintained in a clean state and in good condition, for the use of persons employed on manganese process a wash place under cover, with either:

11 (1) a trough with smooth impervious surfaces fitted with a waste pipe without plug. The trough shall be of sufficient length to allow at least 60 centimeters for every ten such persons employed at any one time. and having a constant supply of water from taps or jets above the trough at intervals of not more than 60 centimeters or at least one wash basin for every five such persons employed at

1 any one time, fitted with a waste pipe and plug and having a constant supply of water; and

2 (2) Sufficient supply of soap or other suitable cleaning material and nail brushes and clean towels.

3 12. Cloak-room: If the Chief Inspector so requires there shall be provided and maintained for the use of persons employed in manganese process a cloak-room for clothing put off during working hours with adequate arrangement for drying the clothing.

4 13. Cautionary placard and instruction: Cautionary notices in the following form and printed in the language of the majority of the workers employed, shall be affixed in prominent places in the factory where they can be easily and conveniently read by the workers and arrangement shall be made by the occupier to instruct periodically all workers employed in a manganese process regarding the health hazards connected with their duties and the best preventive measures and methods to protect themselves. The notices shall always be maintained in a legible condition.

CAUTIONARY NOTICE

Manganese and Manganese Compounds

1 (1) Dust fumes and mist of Manganese and compounds are toxic when inhaled or when ingested.

2 (2) Do not consume food or drink near the work place.

3 (3) Take a good wash before taking meals.

4 (4) Keep the working area clean.
5 (5) Use the protective clothing and equipment's provided.
6 (6) When required to work in situation where dust, fumes or mists are likely to be inhaled, use respiratory protective equipment provided for the purpose.
7 (7) If you get severe headaches, prolonged sleeplessness or abnormal sensations on the body, report to the Manager who would make arrangements for your examination and treatment.

SCHEDULE XXVII
OPERATIONS INVOLVING HIGH NOISE LEVELS
1 1. Application: This Schedule shall apply to all operations in any manufacturing process having high noise level.
2 2. Definitions: For the purpose of this schedule.
3 (a) "I" means any unwanted sound.
4 (b) "High Noise Level" means any noise level measured on the A- weighted scale is 90 DB or above.

(c) "Decibel" means one-tenth of "Bel" which is the fundamental division of a logarithmic scale used to express the ratio of two specified or implied quantities, the number of "Bels" denoting such a ratio being the logarithm to the base of 10 of this ratio. The noise level (or the sound pressure level) corresponds to a reference pressure of 20 x 10-6 newton's per square meter of 0.0002 dynes per square centimeter which is the threshold of hearing. that is, the lowest sound pressure level necessary to produce the sensation of hearing in average healthy listeners. The decibel in abbreviated form is dB.
(d) "Frequency" is the rate of pressure variations expressed in cycles per second or heart.
(e) "dBA" refers to sound level in decibels as measured on a sound level meter operation on the A-weighting network with slow meter response.
(f) "A-weighting" means making graded adjustments in the intensities of sound of various frequencies for the purpose of noise measurement so that the sound pressure level measured by an instrument reflects the actual response of the human ear to the sound measured.
3. Protection against noise:
(1) In every factory, suitable engineering, control or administrative measures shall be taken to ensure, so far as is reasonably practicable, that no worker is exposed to sound levels exceeding the maximum permissible noise exposure levels specified in Tables 1 and 2.

TABLE 1
Permissible Exposures in Cases of Continuous Noise

Total time of exposure (continuous or a number of short term exposures) per day, in hours	Sound pressure level in Dba

8 6 4 3 2 1 1/2 1 3/4 1/2 ¼	90 92 95 97 100 102 105 107 110 115

Notes.

1 1. No exposure in excess of 115 dBA is to be permitted.

2 **2.** For any period of exposure falling in between any figure and the next higher or lower figure as indicated in column 1, the permissible sound pressure level is to be determined by extra-polation on a proportionate basis.

TABLE – 2

Permissible Exposure Levels of Impulsive or Impact Noise

Peak sound pressure level in dB	Permitted number of impulses of impacts per day
140 135 130 125 120	100 315 1,000 3,160 10,000

Notes:

1 1. No exposure in excess of 140 dB peak sound pressure level is permitted.

2 2. For any peak sound pressure level falling in between any figure and the next higher or lower figure as indicated in Column 1, the permitted number of impulses or impacts per day is to be determined by extrapolation on a proportionate basis.

3 (2) For the purposes of this Schedule, if the variations in the noise involve maxima at intervals of one second or less, the noise is to be considered as a continuous one and the criteria given in Table I would apply. In other cases, the noise level is to be considered as impulsive or impact noise and the criteria given in Table-2 would apply.

4 (3) When the daily noise exposure is composed of two or more periods of noise exposure at different levels their combined effect should be considered rather than the

individual effect of each. The mixed exposure should be considered to exceed the limit value if the sum of the fractions C1/T1+ C2/T2+ Cn/Tn

Where the Cl, C2, etc. indicate the total time of actual exposure at a specified noise level and TI, T2, etc., denote the time of exposure permissible at that level. Noise exposure of less than 90 dBA may be ignored in the above calculation.

1 (4) Where it is not possible produce the noise exposure to the levels specified in sub-rule (1) by reasonably practicable engineering control or administrative measures the exposure shall be reduced to the greatest extent feasible by such control measures, and each worker so exposed shall be provided with suitable ear protectors so as to reduce the exposure to noise to the levels specified in sub-rule (1).

1 (5) Where the ear protectors provided in accordance with sub-paragraph (2) and work by worker cannot still attenuate the noise reaching near his ear, determined by subtracting the attenuation value id dBA of the ear protectors concerned from the measured sound pressure level, to a level permissible under Table 1 or Table 2 as the case may be, the noise exposure period shall be suitably reduced to correspond to the permissible noise exposure specified in sub-paragraph (1).

2 (6)

3 (a) In all cases where the Prevailing sound levels exceed the permissible levels specified in sub-paragraph (1), there shall be man effective hearing conservation programme which shall include among other hearing conservation measures, pre-employment and periodical auditory surveys conducted on workers exposed to noise exceeding the permissible levels, and rehabilitation of such workers either by reducing the exposure to the noise levels or by transferring them to places where noise levels are relatively less or by any other suitable means.

4 (b) Every worker employed in areas where the noise exceeds maximum permissible exposure levels specified in the sub-rule (I) shall be subjected to an auditory examination by a certifying surgeon within 14 days of his first employment and there he shall be re-examined at least once after in every 12 months. Such initial and periodical examinations shall include tests which the certifying surgeon may consider appropriate, and shall include determination of auditory thresholds for pure tones of 125, 250, 500, 1000, 2,000, 4,000 and 8.000 cycles per second.

[SCHEDULE XXVIII

MANUFACTURE OF RAYON VISCOSE PROCESS

1 1. Definitions: For the purpose of this schedule

2 (a) “approved” means approved for the time being in Writing by the Chief Inspector

3 (b) “breathing apparatus” means a helmet or face piece with necessary connections by means of which the person using it in a poisonous, asphyxiating or irritant atmosphere breathes unpolluted

4 (c) “churn “means the vessel in which alkali cellulose pulp is treated to a dissolver;

5 (d) “dumping” means transfer of cellulose xanthate from a dry churn to a dissolver;

6 (e) “efficient exhaust draught” means localized ventilation by mechanical means for the removal of any gas or vapour, so as to prevent it from escaping into the air of any place in which work is carried on. No draught shall be deemed to be efficient if it fails. to control effectively any gas or vapour generated at the point where such gas or fume originates;

(f) “Fume process” means any process in which carbon disulphide or hydrogen sulphide is produced, used or given off;
(g) “life belt” means a belt made of leather or other suitable material which can be securely fastened round the body with a suitable length of rope attached to it, each of which is sufficiently strength to sustain the weight of a man;
(h) “protective equipment” means apron, goggles, fact shields, foot wear, gloves and overall made of suitable materials.
2. Ventilation:
(1) In all the workrooms where a fume process is carried on, adequate ventilation by natural or mechanical means shall be provided so as to control, in association with other control measures, the concentration of Carbon-di-sulphide and hydrogen sulphide in the air of every work environment within the permissible limits.
(2) Notwithstanding the requirements in sub-paragraph (1) an efficient exhaust draught shall be provided and maintained to control the concentration of Carbon-di-sulphide and hydrogen sulphide in the air at the following locations:
(a) dumping hoppers of dry chruns;
(b) spinning machines
(c) trick rollers and cutters used in staple fiber spinning;
(d) hydro-extractors for yarn cakes
(e) after treatment processes; and
(f) spin baths.
(3) In so far as the spinning machines and trio rollers and cutters used a staple fiber spinning are concerned, they shall be, for the purpose of ensuring the effectiveness of the exhaust draft to be provided a required in subparagraph (1), enclosed as fully as practicable and provided with suitable shutters inspections to enable the required operations to be carried out without giving rise to undue quantities of Carbon-di-sulphide and hydrogen sulphide escaping to the work environment.
(4) No dry chum shall be opened after completion of reaction without initially exhausting the residual vapors of carbon-di-sulphide by operation of a suitable an efficient arrangement for exhausting the vapor’s which shall be continued to be operated as along as the chum is kept opened.
(5) Whenever any ventilation apparatus normally required for the purpose of meeting the requirements in sub-paragraphs (2), (3) and (4) is ineffective, fails, or is stopped for any purpose whatsoever, all persons shall be required to leave the work areas where the equipment of processes specified in the above said

1 sub-paragraphs are in use, as soon as possible, and in any case not later than 15 minutes after such an occurrence.
2 (6)

3 (i) All ventilating systems provided for the purposes as required in sub- paragraphs (2), (3) and (4) shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person once in every period of 12 months. Any defects found by such examinations or test shall be rectified forth with.

4 (ii) A register containing particulars of such examinations and tests, and the state of the systems and the repairs of alternations (if any) found to be necessary shall be kept and shall be available for inspection by an Inspector.

5 3. Waste from spinning machines: Waste yam from the spinning machine shall be deposited in suitable containers provided with close fitting covers. Such waste shall be disposed of as quickly as possible after decontamination.

6 4. Lining of Dry Churns: The inside surface of all dry chums shall be coated with a non-sticky paint so that cellulose xanthate will not stick to the surface of the chum. Such coating shall be maintained in good condition.

1 5. Air monitoring:

2 (1) To ensure the effectiveness of the control measures, monitoring of carbon-di-sulphide and hydrogen sulphide in air shall be carried out once at least in every shift and the record of the results so obtained shall be entered in a register specially maintained for the purposes.

3 (2) For the purpose of the requirement in sub-paragraph (1) instaneous gas detector tubes shall not be used. Samples shall be collected over a duration of not less than 10 minutes and analyzed by an approved method. The locations where such monitoring is to be done shall be as directed by the Inspector.

4 (3) If the concentration of either carbon-di-sulphide or hydrogen sulphide exceeds the permissible limits for such vapour or gas as laid down in Rule 123-A, suitable steps shall be taken for controlling the concentrations in air of such contaminants report of such occurrences shall be sent to the Chief Inspector of forthwith.

5 6. Prohibition to remain in fume process room: No person during his intervals for meal, or rest shall remain in any room wherein fume process is carried out.

6 7. Prohibition relating to employment of young persons: No young person shall be employed or permitted to work in any fume process or in any room in which any such process is carried on.

1 8. Protective equipment:

2 (1) The occupier shall provide and maintain in good condition protective equipment as specified in the Table for use of persons employed in the processes referred to therein

Process	**Protective equipment**
1. Dumping	Overall, face-shields, gloves and foot-wear - all made of suitable materials
2. Spinning	Suitable aprons, gloves and footwear

3. Process involving or likely to involve contact with viscose solution	Suitable gloves and footwear
4. Handling of sulphur	Suitable chemical goggles
5. Any other process involving contact with hazardous chemicals	Protective equipment as may be directed by the Chief Inspector by an order in writing

1 (2) A suitable room, rooms or lockers shall be provided exclusively for the storage of all the protective equipment supplied to workers and no such equipment shall be stored at any place other than the room, rooms, or lockers so provided.

1 9. Breathing apparatus:
2 (1) There shall be provided in every factory where fume process is carried on, sufficient supply of
3 (a) breathing apparatus
4 (b) oxygen and suitable appliances for its administration and
5 (c) life belts
6 (2)
7 (i) The breathing apparatus and other appliances referred to in subparagraph (1) shall be maintained in good condition and kept in appropriate locations so as to be readily available.
8 (ii) The breathing apparatus and other appliances referred to in clauses (a) and (b) of sub-paragraph (1) shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person.
9 (iii) A record of the maintenance and of the condition of the breathing apparatus and other appliances referred to in sub-clause (I) shall be entered in a register provided for that purpose which shall be readily available for inspection by an Inspector.

1 (3) Sufficient number of workers shall be trained and periodically retrained in the use of breathing apparatus and administering artificial respiration so that at least 2 such trained persons would be available during all the working hours in each room in which fume process is carried on.
2 (4) Breathing apparatus shall be kept properly labelled in clean, day, light- proof cabinet and if liable to be affected by fumes, shall be protected by placing them in suitable containers.
3 (5) No person shall be employed to perform any work specified in subparagraph (1) for which breathing apparatus is necessary to be provided under that sub-paragraph unless he has been fully instructed in the proper use of that equipment.
4 (6) No breathing apparatus provided in pursuance of sub-paragraph (1) which has been worn by a person shall be worn by another person unless it has been thoroughly cleaned and disinfected since last being worn and the person unless it has been thoroughly cleaned and disinfected since last being worn and the person has been fully instructed in the proper use of that equipment.
5 10. Electric fittings: All electric fittings in any room in which carbon-di-sulphide is produced, used or given off or is likely to be given off into the work environment, other than a

spinning room, shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conducts or be lead-sheathed.

6 11. Prohibition relating to smoking, etc.: No person shall smoke or carry matches, fire naked light or other means of producing a naked light or spark in a room in which fume process is carried on. A notice in the language understood by the majority of the workers shall be posted in prominent locations in the plant prohibiting smoking and carrying of matches, fire or naked light or other means of producing naked light or spark into such rooms; Provided that fire, naked light or other means of producing a naked light or spark may be carried on in such room only when required for the purposes of the process itself under the direction of a responsible person.

7 12. Washing and bathing facilities:

8 (1) There shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the processes covered by the schedule, adequate washing and bathing under cover at the rate of one such place for every 25 persons employed.

9 (2) The Washing places shall have standpipes placed at intervals of not less than one meter.

10 (3) Not less than one half of the total number of washing places shall be provided with bathrooms.

11 (4) Sufficient supply of clean towels made of suitable materials shall be provided: Provided that such towels shall be supplied individually for each worker if so ordered by the Inspector.

1 (5) Sufficient supply of soap and nail brushes shall be provided.

2 13. Rest room:

3 (1) A rest room shall be provided for the workers engaged in doffing operations of filament yarn spinning process.

4 (2) Such rest room shall be provided with fresh air supply and adequate seating arrangement.

5 14. Cautionary notice and instructions:

6 (1) The following cautionary notice shall be prominently displayed in each fume process room.

CAUTIONERY NOTICE

1 1. Carbon di-sulphide (CS) and Hydrogen (H2S) which may be present in this room are hazardous to health.

2 2. Follow safety instructions.

3 3. Use protective equipment and breathing apparatus as and when required.

4 4. Smoking is strictly prohibited in this area. This notice shall be in a language understood by the majority of the workers and displayed where it can be easily and conveniently read. If any worker is illiterate, effective steps shall be taken to explain carefully to him the contents of the notice so displayed.

5 (2) Arrangements shall be made to instruct each worker employed in any room in which a fume process is carried on regarding the health hazards connected with their work and the

preventive measures and methods to protect themselves. Such instructions shall be given on his first employment and repeated periodically.

(3) Simple and special instructions shall be framed to ensure that effective measures will be carried out in case of emergency involving escape of carbon disulphide and hydrogen sulphide. These instructions shall be displayed in the concerned areas and workers shall be instructed and trained in the actions to be taken in such emergencies.

15. Medical facilities and records of examinations and tests:

(1) The occupier of each factory to which this schedule applies, shall

(a) employ a qualified medical officer for medical surveillance of the workers employed in the fume process whose employment shall be subject to the approval of the Chief Inspector of Factories; and

(b) provide to the said medical officer all the necessary facilities for the purpose referred to in clause (a).

(2) The record of medical examination and appropriate tests carried out by the said medical officer shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

16. Medical Examination by the certifying Surgeon:

(1) Every worker employed in the fume process shall be examined by a certifying surgeon within 15 days of his first employment. Such examination shall include tests for estimation of exposure co-efficient (iodineazide test on urine), and cholesterol, as well as electrocardiogram (ECG) and Central Nervous System (CNS) tests. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified for such employment by the certifying Surgeon.

(2) Every worker employed in the fume process shall be re-examined by a Certifying Surgeon at least once in every twelve calender months. Such examination shall, wherever the certifying surgeon considers appropriate, include all the tests as specified in sub-paragraph (1).

(3) The Certifying Surgeon after examining a worker, shall issue a certificate of fitness in Form 28. The record of re-examination carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.

(4) The certificate of fitness and the health register shall be kept readily available for inspection by the Inspector.

(5) If at any time the certifying surgeon is of the opinion that a worker is no longer fit for employment in the fume process on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry for which he considers that the said person is unfit for work in the fume process.

(6) No person who has been found unfit to work as said in sub-paragraph (5) shall be reemployed or permitted to work in the fume process unless the Certifying Surgeon, after further examination again certifies him fit for employment in such process.

9 17. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion in of the certifying surgeon, in which case the person affected shall be suitably rehabilitated.
10 18. Exemption._ If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes or for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may, by a certificate in writing, which

1 he may at his discretion, revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.]

[SCHEDULE XXIX
HIGHLY FLAMMABLE LIQUIDS AND FLAMMABLE COMPRESSED GASES
1 1. Application: These rules will be applicable to all factories where highly flammable liquids or flammable compressed gases are manufactured, stored, handled or used.
2 2. Definitions for the purpose of this schedule
3 (a) “highly flammable liquid” means any liquid including its solution, emulsion or suspension which when tested in a manner specified by Sections 14 and 15 of the Petroleum Act, 1934 (30 of 1934) given off flammable vapor’s at a temperature less 32 degrees centigrade.
4 (b) “flammable compressed gas” means flammable compressed gas as defined in Section 2 of the Static and Mobile Pressure Vessels (unfired) Rules, 1981 framed under the Explosives Act, 1880.
5 3. Storage:
6 (1) Every flammable liquid or flammable compressed gas used in every factory shall be stored in suitable fixed storage tank, or in suitable closed vessel located in a safe position under the ground, in the open or in a store room of adequate fire resistant construction.
7 (2) Except as necessary for use, operation or maintenance, every vessel or tank which contains or had contained a highly flammable liquid or flammable compressed gas shall be taken to contain or immediately drain off to a suitable container any spill or leak that may occur.
8 (3) Every container, Vessel, tank, cylinder, or store room used for storing highly flammable liquid or flammable compressed gas shall be clearly and in bold letters market” Danger-highly Flammable Liquid” or Danger-Flammable Compressed Gas.”
9 4. Enclosed systems for conveying Highly Flammable Liquids: Wherever it is reasonably practicable, highly flammable liquids shall be conveyed within a factory in totally enclosed systems consisting of pipe lines, pumps and similar appliances from the storage tank or vessel to the point of use. Such enclosed systems shall be so designed, installed, operated and maintained as to avoid leakage or the risk of spilling.
10 5. Preventing Formation of Flammable Mixture with Air: Where there is a possibility for leakage or spill of highly flammable liquid or flammable compressed gas from an equipment pipe line, valve, joint or other part of a system, all practicable measures shall be taken to contain, drain off or dilute such spills or leakage as to prevent formation of flammable mixture with air.

11 6. Prevention of Ignition: In every room, work place or other location where highly flammable liquid or flammable combustible gas is stored, conveyed, handled or sued

1 or where there is danger of fire or explosion from accumulation of highly flammable liquid or flammable compressed gas in air, all practicable measures shall be taken to exclude the sources of ignition. Such precautions shall include the following:
2 (a) All electrical apparatus shall either be, excluded from the area of risk or they shall be of such construction and so installed and maintained as to prevent the danger of their being a source of ignition;
3 (b) effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;
4 (c) No person shall wear or be allowed to wear any foot wear having iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction
5 (d) smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited;
6 (e) transmission belts with iron fasteners shall not be used;
7 (f) all other precautions, as are reasonably, practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flames, frictional sparks, overheated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat.
8 7. Prohibition of smoking: No person shall smoke in any place where highly flammable liquid or flammable compressed gas is present in circumstances that smoking would give rise to a risk of fire. The occupier shall take all practicable measures to ensure compliance with this requirement including display of a bold notice indicating prohibition of smoking at every place where this requirement applies.
9 8. Fire fighting: In every factory where highly flammable liquid or flammable compressed gas is manufactured, stored, handled and used, appropriate and adequate means of fighting a fire shall be provided. The adequacy and suitability of such means which expression includes the fixed and portable fire extinguishing systems, extinguishing. material, procedures and the process of fire fighting, shall be to be standards and levels prescribed by the Indian Standards applicable, and in any case not inferior to the stipulations under Model Rules 69.
10 9. Exemptions.— If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances as or infrequency of the processes or for any other reasons for protect the provisions of this schedule other reasons, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may; by a certificate in writing, which he may, at his discretion, revoke at any time, exempt such factory from all or any of such provisions subject to such conditions, if any as he may specify therein.]

[SCHEDULE XXX
OPERATIONS IN FOUNDRIES

1 1. Application: Provisions of this schedule shall apply to all factories where any of the following operations or processes are carried on:

2 (A) the production of iron castings or, as the case may be, steel castings by casting in moulds made to send, loam, moulding composition or other mixture of materials, or by shell moulding, or by centrifugal casting and any process incidental too such production:

3 (B) the production of non-ferrous castings by casting metal in moulds made of sand, loam, metal, moulding composition or other material or mixture of materials, or by shell mouldings, discasting (including pressure discasting centrifugal casting or continuous casting and any process incidental to such production: and

4 (C) the melting and casting of non-ferrous metal for the production of ingots, billets, slab or other similar products; and the stripping thereof; but shall not apply to

5 (a) any process with respect to the smelting and manufacture of lead and the Electric accumulators;

6 (b) Any process for the purposes of a printing works; or

7 (c) any smelting process in which metal is obtained by reducing operation or any process incidental to such operation;

8 (d) the production of steel in the form of ingots; or

9 (e) any process in the course of the manufacture of solder of any process incidental to such manufacture; or

10 (f) the melting and casting of lead or any lead-based alloy for the production of ingots, billets, slabs or other similar products or the stripping thereof, or any process incidental to such melting, casting or stripping.

11 2. Definitions: for the purpose of this schedule

12 (a) “(a) approved respirator” - means a respirator of a type approved by the Chief Inspector;

13 (b) “cupola or furnace” includes a receiver associated therewith;

14 (c) “dressing or fettling” operations includes stiping and other removal of adherent sand, cores, runners, risers, flash and other surplus metal from a casting and the production of reasonably clean and smooth surface, but does not include(s) the removal of metal from a casting when performed incidentally in connecting with the machining or assembling of castings after they have been dressed or fettled, or any operation which is a knockout operation within the meaning of this schedule;

15 (d) “foundry” means those parts of a factory in which the production of iron or steel or non-ferrous castings (not being the production of pig iron or the production of steel in the form of ingots) is carried on by casting in moulds made of sand,

loam, moulding composition or other mixtures of materials, or by sheel moulding or by centrifugal casting in metal moulds lined with sand, or die casting including pressure die castings, together with any part of the factory in which any of the following processes are carried on as incidental processes in connection with and in the course of such production, namely, the preparation and mixing of materials used in foundry process, the preparation of moulds and cores, knock out operations and dressing or fettling operations;

(e) “knock-out operations” means all methods of removing castings from moulds and the following operations, when done in connection therewith, namely, stripping, coring our and the removal of runners and risers;
(f) “pouring aisle” means as aisle leading from main gangway or directly from a couple or furnace to where metal is poured into moulds.

1 3. Prohibition of use certain materials as parting materials:
2 (1) A material shall not be used as a parting material if it is a material containing compounds of silicon calculated as silica to the extent more than 5 per cent by weight of dry material;

Provided that this prohibition shall not prevent the following being used as a parting material if the material does not contain an admixture of any other silica
(a) Zirconium silicate (Zircon)
(b) Calcined china clay
(c) Calcined aluminous fireclay
(d) Sillimanite
(e) Calcined or fused alumina
(f) Olivine
(g) Natural sand
(2) Dust or other matter deposits from a flattering or blasting process shall not be used as a parting material or as a constituent in a parting material.
4. Arrangement and storage: for the purpose of promoting safety and cleanliness in workrooms the following requirements shall be observed:
(a) moulding boxes, frames, boards, box weights, and other articles shall be so arranged and placed as to enable work to be carried on without unnecessary risk;
(b) Suitable and conveniently accessible racks, bins or other receptacles shall be provided and used for the storage of other gear and tools;

(c) Where there is bulk storage of sand, fuel, metal scrap or other materials or residues, suitable bins, bunkers or other receptacles shall be provided for the purpose of such storage.
5. Construction of floors:
(1) Floors of indoor work-places in which the processes are carried on, other than parts which are of sand, shall have an even surface of hard material
(2) No part of the floor of any such indoor workplace shall be of sand except there this is necessary by reason of the work done.
(3) All parts of the surface of the floor of any such indoor workplace which are of sand shall, so far as practicable, be maintained in an even and firm condition.
6. Cleanliness of indoor workplaces:
(1) All accessible parts of the walls of every indoor workplace in which the processes are carried on and of everything affixed to those wall shall be effectively cleaned by a suitable method to a height of not less than 4-2 meters from the floor at least once in every period of fourteen months. A record of the carrying out of every such effective cleaning in pursuance of this

paragraph including the date (which shall be not less than five months not more than nine months after the last immediately preceding washing cleaning or other treatment).
(2) Effective cleaning by a suitable method shall be carried out at least once every working day of all accessible parts of the floor of every indoor workplace in which the processes are carried on, other than parts which are of sand; and the parts which are of sand shall be kept in good order
7. Manual operations involving molten metal:
(1) There shall be provided and properly maintained for all persons employed on manual operations involving molten metal with which they are liable to be splashed, a working space for that operation.
(a) Which is adequate for the safe performance of the work, and
(b) which, so far as reasonably practicable, is kept free from obstruction.
(2) Any operation involving the carrying by hand of a container holding molten metal shall be performed on a floor all parts of which were any person walks while engaged in the operation shall be on the same level:

Provided that, where necessary to lendable the operation to be performed without undue risk, nothing in this paragraph shall prevent the occasional or exceptional use of a working space on a different level from the floor, being a space provided with a safe means of access from the floor for any person while engaged in the operation.
1 8. Gangways and pouring aisle:

1 (1) in every workroom to which this paragraph applies constructed, reconstructed or converted for use as such after the making of this schedule and, so far as reasonably practicable, in every other work room to which this paragraph applies, sufficient and clearly defined main gangways shall be provided and properly maintained which
2 (a) shall have every surface of hard material and shall, in particular, not be of sand or have on them more sand than is necessary to avoid risk of flying metal from accidental spillage;
3 (b) shall be kept, so far as reasonably practicable, free from obstruction;
4 (c) if not used for carrying of molten metal shall be
5 (i) where truck ladles are used exclusively, at least 600 millimeters wider than the overall width of the ladle;
6 (ii) where hand shanks are carried by not more than two men, at least 920 millimeters in width;
7 (iii) where hand shanks are carried by more than two men, at least 1.2 meters in width; and
8 (iv) where used for simultaneous travel in both directions by men carrying hand shanks, at least 1.8 meters in width.
9 (2) In workroom to which this paragraph applies constructed, reconstructed or converted for use as such after the making of this schedule, sufficient and clearly defined pouring aisles shall be provided arid properly maintained which
10 (a) shall have an even surface or hard material and shall in particular, not be of sand or have on them more sand them is necessary to avoid risk of flying metal from accidental spillage;
11 (b) shall be kept so far as reasonably practicable free from obstruction;

12 (c) if molten metal is carried in hand ladles or bull ladles by not I more than two men per ladle, shall be at least 460 millimeters wide, but where any moulds alongside the aisle are more than 510 millimeters above the floor of the aisle, the aisle shall be not less than 600 millimeters wide;
13 (d) if molten metal is carried in hand ladles or bull ladles by more than two, 1 man per ladle, shall be least 760 millimeters wide;
14 (e) if molten metal is carried in crane, trolley or truck ladles, shall be of a width adequate for the safe performance of the work.
15 (3) Requirements of sub-paragraph (1) and (2) shall not apply to any workroom or part of a work-room if, by reason of the nature of the work done therein, the floor of that workroom or, as the case may be, that part of a workroom has to be of sand.

1 (4) In this paragraph workroom to which this paragraph applies means a part of a ferrous or non-ferrous foundry in which molten metal is transported or used, and a work room to which this paragraph applies shall be deemed for the purposes of this paragraph to have been constructed, reconstructed or converted for use as such after the making of this schedule if the construction, reconstruction or conversion thereof was begun after the making of this schedule.
2 9. Work near cupola as and furnaces: No person shall carry out any work within a distance of 4 meters from a vertical line passing through the delivery and of any spout of cupolas or furnace, being a spout used for delivering molten metal, or within a distance of 2.4 meters from a vertical line, passing through the nearest part of any ladle which is in position at the end of such a spout, except, in either case, where it is necessary for the proper use of maintenance of a cupola or furnace that work should be carried out within that distance of that work is being carried out at such a time and under such conditions that there is no danger to the person carrying it out from molten metal which is being obtained from the cupola or furnace or is in a ladle in position at the end of the spout.
3 10. Dust and fumes:
4 (1) Open coal coke or wood fires shall not be used for heating or drying ladles inside a workroom unless adequate measure are taken to prevent, so far as practicable, fumes or other impurities from entering into or remaining in the atmosphere of the workroom.
5 (2) No open coal, coke or wood fires shall be used for drying moulds except in circumstances in which the use of such fires is unavoidable.
6 (3) Mould stoves, core stoves and annealing furnaces shall be so designed, constructed, maintained and worked as to prevent so far as practicable, offensive or injurious fumes from entering into any workroom during any period when a person in employed therein.
7 (4) All knock-out operations shall be carried out
8 (a) In a separate part of the foundry suitably partitioned off, being a room or part in which, so far as reasonably practicable, effective and suitable local exhaust ventilation are provided; or
9 (b) In an area of the foundry in which so far as reasonably practicable effective and suitable local exhaust ventilation is provided, or where compliance with this requirement is not reasonably practicable, a high standard of general ventilation is provided.
10 (5) All dressing or fettling operations shall be carried out-

11 (a) in a separate room or in a separate part of the foundry suitably partitioned off; or

(b) in an area of the foundry set apart for the purpose; and shall, so far as reasonably practicable be carried out with effective and suitable local exhaust ventilation or other equally effective and suitable local exhaust ventilation or other equally effective means of suppressing dust, operating as near as possible to the point of origin of the dust.

11. Maintenance and examination of exhaust fan:

(1) All ventilation plant used for the purpose of extracting, suppressing or controlling dust or fumes shall be properly maintained.

(2) All ventilating plant used for the purpose of extracting, suppressing or controlling dust or fumes shall be examined and inspected once every week by a responsible person. It shall be thoroughly examined and tested by a competent person at least once in every period of twelve months; and particulars of results of every such examination and test shall be entered in an approved register which shall be available for inspection by an inspector. Any defect found on any such examination and test shall be immediately reported in writing by the person carrying out the examination and test to the occupier or manager of the factory.

12. Protective equipment:

(1) The occupier shall provide and maintain suitable protective equipment specified for the protection of workers.

(a) suitable gloves or other protection for the hands for the workers engaged in handling any hot material likely to cause damage of the hands by bum, scald or scar, or in handling pig iron, rough castings or other articles likely to cause damage to the hands by cur or abrasion;

(b) approved respirators for workers carrying out any operations creating a heavy dust concentration which cannot be dispelled quickly and effectively by the existing ventilation arrangements.

(2) No respirator provided for the purpose of clause (6) has been worn by a person shall be worn by another person if it has not since been thoroughly cleaned and disinfected.

(3) Persons who for any of their time:

(a) work at a spout of or attend, to a cupola or furnace in such circumstances that material there from any come into contact with the body, being material at such a temperature that its contact with the body would cause a burn; or

(b) are engaged in, or in assistant with, the pouring of molten metal; or

(c) carry by hand or move by manual power any ladle or mould Contrining molten metal; or

(d) are engaged in knocking cut operations involving material at such a temperature that its contact with the body would cause a burn; shall be provided with suitable footwear and gainters which worn by them prevent, so far as reasonably practicable, risk of burns to his feet and ankles.

(4) Where appropriate, suitable screens shall be provided for protection against flying materials (including splashes of molten metal and sparks and chips thrown off in the course of any process).

(5) The occupier shall provide and maintain suitable accommodation for the storage and make adequate arrangements for cleaning and maintaining of the protective equipment supplied in pursuance of this paragraph.

(6) Every person shall make full and proper use of the equipment provided for this protection in pursuance of sub-paragraph (1) and (4) and shall without delay report to the occupier, manager or without delay report to the occupier, manager or other appropriate person any defect in, or less of, the same.

1 13. Washing and bathing facilities:
2 (1) There shall be provided and maintained in clean state and good repair for the use of all workers employed in the foundry
3 (a) a wash place under cover with either
4 (i) a through with impervious surface fitted with a waste pilled without plug, and of sufficient length to allow at least 60 centimeters for every 10 such persons employed at any one time and having a constant supply of clean water from taps or jets above the through at intervals of not more than 60 centimeters; or
5 (ii) at least tap or stand pipes for every 10 such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 1.2 meters apart and
6 (b) not less than one half of the total number of washing places provided under clause (a) shall be in the form of bath rooms.
7 (c) a sufficient supply of clean towels made of suitable material changed daily with sufficient supply of nail brushes and soap.
8 (2) The facilities provided for the purposes of sub-paragraph (1) shall be placed in charge of a responsible person or persons and maintained in a clean and orderly condition.
9 14. Disposal of dress and skimming's: Dress and skimming's removed from molten metal or taken from a furnace shall be placed forthwith in suitable receptacles.

1 15. Disposal of waste: Appropriate measures shall be taken for the disposal of all waste products from shell moulding (including waste) burnt sand as soon as reasonably practicable after the castings have been knocked out.
2 16. Material and equipment left out of doors: All material and equipment left out of doors (including material and equipment so left only temporarily or occasionally) shall be so arranged and placed as to avoid unnecessary risk. There shall be safe means of access to all such material and equipment and, so far as reasonably practicable, such access shall be by roadways or pathways shall have a firm and even surface and shall, so far as reasonably practicable be kept free from obstruction.
3 17. Medical facilities and records of examination and tests:
4 (1) The occupier of every factory to which the Schedule applies shall
5 (a) employ a qualified medical practitioner for medical surveillance of the workers employed therein whose employment shall be subject to the approval of the Chief Inspector of Factories; and
6 (b) Provide to the said medical practitioner shall all the necessary facilities for the purpose referred to in clause (a).
7 (2) The record of medical examinations and appropriate tests carried out by the said medical practitioner shall be maintained in a separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.

8 18. Medical examination by Certifying Surgeon:

9 (1) Every worker employed in a foundry shall be examined by a certifying Surgeon within 15 days of his first employment. Such medical examination shall include pulmonary function tests and chest X-ray. No worker shall be allowed to work after 15 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon.

10 (2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every twelve months. Such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests as specified in sub-paragraph (1) except chest X-ray which will be once in 3 years.

11 (3) The certifying Surgeon after examining a worker shall issue a certificate of fitness in Form 28. The record of examination and re-examinations carried out shall be entered in the certificate and the certificate shall be kept in the custody of the manager of the factory. The record of each examination carried out under sub-paragraphs (1) and (2), including the nature and results of the tests, shall also be entered by the certifying surgeon in a health register in Form 29.

12 (4) The certificate fitness and the health register shall be kept readily available for inspection by the Inspector.

1 (5) If at any time the certifying Surgeon is of the opinion that a worker is no longer fit for employment in the said processes on the ground that continuance therein would involve special danger to the health of the worker, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in those documents should also include the period for which he considers that the said person is unfit for work in the said processes. The person so suspended from the process shall be provided with alternate placement facilities unless he is fully incapacitated in the opinion of the Certifying Surgeon in which case the person affected shall be suitably rehabilitated.

2 (6) No person who has been found unfit to work as said in sub-paragraph (5) above shall be re-employed or permitted to work in the said processes unless the Certifying Surgeon, after further examination, again certifies him fit for employment in those processes

3 19. Exemption:— If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the processes of for any other reason, all or any of the provisions of this schedule is not necessary for protection of the workers in the factory, the Chief Inspector may be a certificate in writing, which he may at his discretion revoke any time; exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.]

167[SCHEDULE XXXI

FIRE WORKS MANUFACTORIES AND MATCH FACTORIES

1 1. Application: Provision of this Schedule shall apply to all manufactories and process incidental thereto carried on in any fireworks manufactory or a match works and shall be in addition to and not in derogation of any provisions of Factories Act, 1948 and the Telangana Factories Rules, 1950 or any other Act or Rules that are applicable to fireworks manufactories and match factories

2 2. Definition:

3 (a) "Fire Works Manufactory" means any factory or such parts of any factory wherein the following chemicals or combination of chemicals and materials are being used for the manufacture of crackers, sparkles, caps, fuses, blasting powder and fire works

4 (i) Saltpeter

5 (ii) Pyrotechnic aluminium Powder

6 (iii) Barium Nitrate

7 (iv) Charcoal

8 (v) Potassium Chloride

9 (vi) Red Phosphorus

i (vii) Gum

ii (viii) Dextrin

iii (ix) Strontium Nitrate

iv (x) Magnesium Powder

v (xi) Copper Coated Wires

vi (xii) Steel filings of iron filings

vii (xiii) G.I. Wire

viii (xiv) Gun Powder (Black Powder)

ix (b) "Match Works" means any establishment which manufactures safety matches or colour matches by the use of chemicals mentioned in cl.(a).

x (c) "Breathing apparatus" means a device covering mouth or nose with necessary connections by means of which a person using it in a poisonous asphyxiating or irritant atmosphere breaths ordinary air or any other suitable apparatus approved in writing by the Chief Inspector in this behalf.

xi 3. Buildings:

xii (a) The building of any fireworks manufactory or match factory shall conform to the standards prescribed under the Indian Explosives Act, 1884 (Central Act IV of 1884) and the height of such buildings shall at no time be less than 3 meters.

xiii (b) no building inside a fireworks manufactory shall have a first floor at any time.

xiv (c) in Match works, provided with a first floor, there shall be 2 staircases leading from the first floor to the ground floor irrespective of the number of persons employed in the first floor and one of the staircases shall be of masonry construction of non-inflammable materials.

xv (d) all doors shall open outwards and all the doorways shall be kept free from obstructions.

xvi (e) all doors of workrooms shall not be less than 1.2 meters in width or less than 2 meters in height.

xvii (f) the floors of all work rooms including mixing sheds shall be completely covered by a rubber sheet having a smooth surface and having a thickness of at least 3 m.m. If the floor cannot be covered by a single rubber sheet, more than one rubber sheet may be used, so that each sheet is overlapped by the other at least 150 m.m., and

xviii (g) mixing sheds shall be 30.5 meters away from all other sheds and be separately by baffle walls opposite each exist of the mixing shed.

xix 4. Housekeeping:

(a) every part of ways, works, machinery and plant shall be maintained in a clean and tidy condition.
(b) any spillage of materials shall be cleaned without delay; and
(c) close platforms, passages and gangways shall be kept free of temporary obstructions.
5. Electrical Equipment:
(a) if at any time use of electricity is allowed in the factory, all leads, etc., shall be in conduits with flame-proof junctions.
(b) electrical supply shall never be through a lamp even with a non, conducting handle.
6. Protective Clothing:
(a) Under no circumstances clothes made of artificial fiber like terelene, etc., be allowed inside the factory.
(b) all workers shall be supplied with asbestos aprons specially to cover the chest, gonads and thighs.
(c) breathing apparatus shall be used in mixing sheds to avoid workers inhaling poisonous fumes in the event of an untoward reaction.
(d) in mixing sheds where aluminium and magnesium powders are used "antistatic" foot-ware to combat static electricity shall be supplied; and
(e) all protective equipment's shall be maintained in an efficient condition and also be maintained in a clean and hygienic condition.
7. Match Factories: In Match Factories:
(i) the residue of the head composition shall not in any way be mixed with the residue of the friction composition.
(ii) the rooms comprising the two mixing departments namely,
(a) head composition, and
(b) friction composition shall be entirely separated from each other and the drains from these two departments shall be kept entirely separate.
(iii) rubbish containing the residues of the head composition and friction composition shall be kept and burnt separately.
(iv) department in which completed matches (matches with heads on are stored shall be separated from all other departments by means by fire-proof walls and doors providing adequate means of escape in case of fire: Provided that the Chief Inspector may, subject to such conditions, as he may deem necessary, exempt any factory in existence on the first January, 1935, from the provisions of this clause.

i (v) splints, veneers and other materials in excess of the quantity required for the day's manufacture shall be kept in separate rooms of the factory where no manufacturing process is carried on. No manufactured material shall be stored anywhere in the factory compound for more than five days after the manufacture except in the storage godowns:

Provided that nothing contained in this clause shall apply to veneers in cases stored in peeling and box making departments.
i (vi) store room for matches shall have entirely separated by fire-proof walls and walls from the buildings used for manufacture.

ii (vii) the racks in the dipped splints room shall have sides top and the rear part provided with non-inflammable materials.
iii (viii) the process of packing shall be done in an area away from the place of manufacture to the satisfaction of the Inspector; and
iv (ix) no child shall be employed or permitted to work directly connected with the manufacturing process up to final production of match sticks.
v 8. Precaution to be taken in connection with manufacture of fuses used in crackers etc.:
vi (a) bundles of fuses shall be handled by carrying and not dragging them on the floor.
vii (b) drying of fuses after wrapping shall be carried out on platforms away from workrooms.
viii (c) cutting shall be done by experienced workers employed only for this purpose and under proper supervision.
ix (d) cutting shall be done on a large masonry platform covered with a tarpaulin and kept free from grit and pebbles.
x (e) cutting shall be done on a raised platform so that workers can work standing. Cutting must be done by placing the fuse on wooden sleepers kept over blocks of wood. Brick shall not be used beneath the wooden reapers; and
xi (f) workers, while on dangerous operations, shall not wear clothing sewn with ferrous or steel buttons, buckles or attachments. They shall not carry on their persons, iron knives, keys etc.
xii 9. Employment of women and children: Women workers and young persons shall not be employed operation where chemicals mixed and where fuses are cut. Children shall not be employed or permitted to work in the manufacturing process or any work or operation or process connected therewith or incidental thereto in fireworks manufactory.
xiii 10. General:

(a) no person other than a factory worker and/or an inspecting officer or others connected with the manufacturing process shall be allowed to enter the working area.
(b) cardboard containers and trays without steel nails shall be used for storage and day-to-day working purposes.
(c) during the manufacture of fuses only brass or non-ferrous knives shall be used and drying of fuses shall be away from all workrooms.
(d) door mats shall be provided outside the workroom and near all drying platforms and where fuses are cut for the workers to clean their feet.
(e) at no time mixing materials shall exceed the quantity that is required for the manufacture of mixing for half an hour operation only.
(f) for filling up chemicals in the inner tubes of crackers, only aluminium or plastic rings shall be used and not galvanized iron rings.
(g) buckets, containers, hoops, locks, nails, screws, bolts, nuts, knives scissors, etc., made up of iron shall not be used within the factory premises'.
(h) wooden racks without iron nails shall be used for drying paper Cap sheets, in amrocess factories.
(i) wooden racks used for drying paper cap sheets shall be provided with asbestos or other fire resistant sheets on the three sides leaving the front side open.

(j) dried paper cap sheets shall be carried in wooden trays with four compartments (partitions) each compartment (partition) carrying a single sheet.
(k) each manufacturing shed of a firework shall have at least two doors facing each other. The doors provided to the worksheets of adjacent rows shall not face each other. (1) not more than four persons shall be employed or allowed at any one time in any one building in which explosive is being manufactured.
11. Display of notices: The following notices in the local language understood by the majority of workers shall be displayed at a conspicuous place in the factory.
(a) Smoking is strictly prohibited.
(b) no one shall carry matches or other igniting materials into the factory.
(c) no worker shall be in a workroom or area where no work has been assigned to him.
(d) if anything untoward happens in any shed all workers shall dash to the gates which serve as out gates of the factory and in no circumstances be curious to see what has happened in the affected shed.
(e) any spillage of materials should be cleaned without any delay.

(f) wearing clothes made of artificial fiber like terrene, terelene, etc., is prohibited. Clothing's sewn with ferrous or steel buttons or buckles or attachments should not be worn.
(g) foot wears with iron nails should not be used.
(h) workers should not carry with themselves iron knives and iron key etc.
12. First-aid boxes:
(a) the materials required under Rule 65 shah be kept in the First-Aid Box. In addition, four stretchers shall be available for every twenty persons employed in the premises.
(b) adequate amount of burn dressings and 24 ounces of coconut oil t° be used as the first remedy for burns shall be kept in the first-aid box.
(c) persons who are in charge of First-Aid Boxes shall be those who possess the certificate granted by the Saint John's Ambulance Association for rendering first-aid.
13. Exemption: If the Chief Inspector is satisfied in respect of any factory or any process that owing to the special conditions or special methods of work or by reason of the frequency of the process or for other reason the application of all or any of the provisions of the schedule to the factory or process, or for the persons employed in such factory or process, is not necessary, he may be order in writing exempt such factory or part of the factory or process or any part of the factory or person from all or any of these provisions subject to such conditions as he may deem expedient to ensure safety and health of the workers

The Chief Inspector may at any time in his discretion, revise such order without assigning any reason.]
168[SCHEDULE XXXII
(a) Handling and Processing of Coir Fiber
1. Application This schedule shall apply to all factories or part of factories in which any of the following operations involving coir fiber is carried on.
(a) Hammering
(b) harvesting
(c) defibering/decortication

(d) spinning/curling
(e) bleaching
(f) dyeing
(g) spooling and bailing
(h) PVC tufting

(i) Weaving
(j) Shearing
(k) rubber hacking
(l) latex backing
(m) stenciling
(n) flocking
2. Definition
(a) Dangerous chemical: Any chemical used in any of the operations listed in clause 1 shall be considered as dangerous chemical for the purpose of this Schedule.
3. Declaration of operations as dangerous: Harvesting, defibering, bleaching, dyeing, fulling, rubber hacking, shearing, stenciling, flocking and latex backing of coir are declared to be dangerous operations when carried out in any factory.
4. Prohibition of Employment of women and young persons:
(a) No young person shall be employed or permitted to work in any operation specified in clause 1.
(b) No woman shall be employed or permitted to work in any operation specified in clause 3.
5. Storage and Handling of dangerous of chemicals: Whenever any dangerous chemical is handled, stored or used, all necessary steps shall be taken to prevent inhalation, ingestion or absorption of this chemical by workers while engaged in operations specified in clause 1.
6. Seating arrangement: Suitable seating arrangements shall be provided for the workers engaged in manual defibering and manual hammering operations.
7. Ventilation: Bleaching and dyeing operation shall be carried out separately 'away from other operations. Effective arrangements shall be made to prevent escape of fumes in the work environment.
8. Escape of dust and fumes: Suitable and adequate arrangements Wor1(shall be made for Preventing escape of dust and fumes environment.
9. Personal Protective Equipment.
(a) The occupier shall provide the following for free of cost and maintain in good condition for use of all persons engaged in the operations mentioned in the Clause 3:
(i) suitable gloves of durable quality the both hands.
(ii) rubber boots of durable quality for both legs.
(iii) Goggles

i (iv) nose mask
ii (v) any other appliances, which in the opinion of Chief Inspector shall be necessary for protection of the workers.
iii (b) All persons engaged in operations specified in clause 3, while at work in these operations make use of the material and appliances provided. 10. Food and drink:

iv 10. Food and drink
v (i) No food or drink shall be brought into any room in which any of the operations specified in clause 3 is carried on.
vi (ii) No food or drink shall be consumed in any room in which any of the operations specified in clause 3 is carried on.
vii 11. Floor of workrooms: The floor of every room in which any of the operations specified in clause 3 is carried on shall be:
viii (i) of cement or similar material so as to be smooth and impervious.
ix (ii) maintained in sound condition; and
x (iii) provided with suitable and adequate arrangements for drainage.
xi 12. Washing facilities:
xii (a) The occupier shall provide and maintain for the use of all persons employed in operation specified in clause 3, suitable washing facilities consisting of
xiii (i) water tank capable of holding sufficient water and having taps at the rate of one tap for every ten persons employed at any one time. The floor around the tank and below the taps shall be cement plastered and maintained in sound and clean conditions. Suitable and adequate arrangements for drainage shall be provided around the tanks and the taps; and
xiv (ii) sufficient supply a nail brushes, soap or other suitable cleaning material and clean towels. kb) The facilities so provided shall be placed under the charge of a responsible person and shall be kept clean.
xv 13. Medical Examination:
xvi (a) All persons employed in operations under Clause 1 shall he medically examined by a Certifying Surgeon within 14 days of their first employment in such process; and thereafter shall he examined by the Certifying Surgeon at intervals or not more than six months; and record of such examinations shall he entered by the Certifying Surgeon in the health register in Form No. 27C.

(b) Health Register in Form No. 27C containing the names or all persons employed in the operations under Clause I shall be kept. (c) No persons after suspension shall be employed unless the certifying surgeon, after re-examination, again certifies him to be fit for employment.
14. Exemptions: The Chief Inspector of Factories may grant exemption from the operation of any clause of the Schedule to the extent he deems suitable, where he is satisfied that their observations are not necessary for safeguarding the health of the workers.

SCHEDULE XXXIII
Handling and Processing of Cotton
1 1. Application: This Schedule shall apply to all factories or part of factories in which any of the following processes are carried on:
2 (a) Opening of cotton bale
3 (b) Carding
4 (c) Combing of cotton
5 (d) Spinning of cotton yarn
6 (e) Cleaning of waste cotton

7 2. Definition: For the purpose of this Schedule,

"Efficient exhaust draught" means localized ventilation by mechanical means, for the removal of cotton dust so as to prevent dust from escaping into the air of any place in which work is carried on.
Explanation: No draught shall be deemed to be efficient which fails to control dust produced at the source.
1 3. Exhaust Draught Examination and Test:
2 (1) An efficient exhaust draught shall be provided and maintained by the occupier for the following processes and machines to trap cotton dust or fluff at the source of origin and those in air:
3 (a) bale breaking and mixing of cotton
4 (b) blow room machinery, cards, combing, spinning, winding machines:
5 (c) machines used for processing waste cotton; and
6 (d) any other process in which cotton dust is given off into the work environment.
7 (2) All equipment for extraction of cotton dust or fluff shall be examined and tested by competent person at least once in every six months and any defects disclosed by such examination and tests, shall be rectified. A register about such examination and test shall be maintained by the occupier.

1 4. Protective appliances: The occupier shall make arrangements for:
2 (a) supply of a suitable personal protective appliance to all workers likely to be exposed to cotton fluff or dust.
3 (b) supply of these appliances on individual basis
4 (c) maintaining these appliances in working condition by cleaning and replacement;
5 (d) storage of these appliances in hygienic condition;
6 (e) education of workers to use appliances and
7 (f) proper supervision to ensure whether the workers are using these appliances in working process.

1 5. Medical Examination:
2 (1) The occupier shall arrange for medical examination of workers by a qualified medical practitioner having adequate experience in treatment of person affected by lung ailments at least once in a period of 6 months. Such medical examinations shall include lung function test, immunoglobulin test and any other test or tests which may be found necessary to detect the cases of above referred disease.
3 (2) The occupier shall keep a continuous medical surveillance so that susceptible workers may be detected and transferred out of the exposure before irreversible damage cause to the health of the workers.
4 6. Environment Monitoring: The occupier of the factory shall ensure that:
5 (a) cotton dust in the ambient air of the workroom or any other place where cotton is processed or handled shall not exceed concentration 0.2 mg./m
6 (b) environment in those areas shall be regularly monitored and results shall be made available to the Chief Inspector of Factories on demand.

7 7. Control Measures: Without prejudice to the other methods as stated above for prevention of above referred disease, the Occupier shall adopt such other control measures like adoption of vacuum stripping of cards instead of brush stripping cleaning of the workroom by vacuum cleaners instead of brooms, etc., or any, other measures as the Chief Inspector of Factories may suggest' at any time.

8 8. House Keeping: A high standard or housekeeping shall provide and maintained by the occupier.

9 9. Exemption: If in respect of any factory, the Child Inspector Factories is satisfied that owing to exceptional circumstance or any of the provisions of this schedule are not necessary the protection of the workers of the factory, the Chief inspector of Factories may certify in writing (which at his discretion revoke at any time) exempt such factory

1 from all or any of such provision', of his schedule subject to such conditions, if any, as he may specify therein).]

96. Notification of accidents and dangerous occurrences:

1 (1) When any accident which results in the death of any person or which results in such bodily injury to any person as likely to cause his death, or any dangerous occurrence specified in the Schedule takes place in a factory. the manager of the factory shall forthwith send a notice thereof by telephone. special messenger or telegram to the Inspector, 169[and Deputy Chief Inspector]. 170[x x x]

2 (2) 171[Any notice given as required under 172[sub-rule (1)] shall be confirmed by the manager of the factory to the authorities mentioned in these sub-rules within 12 hours of the accident or the dangerous occurrence by sending them a written report 142[by way of a copy of the accident report prescribed under Employees State Insurance Regulations or Form No. 18] in the case of an accident or dangerous occurrence causing death or bodily injury to any person and in Form No.18-A in the case of a dangerous occurrence which has not resulted in injuries to any person.

3 (3) 173[When any accident or dangerous occurrence specified in the Schedule takes place in a factory and it causes such bodily injury to any person as prevents the person injected from working for a period of 48 hours or more immediately following the accident or the dangerous occurrence, as the case may be, the manager of the factory shall send a report thereof to the Inspector 174[by way of a copy of the accident report prescribed under Employees State Insurance Regulations or Form No. 18] within 24 hours after the expiry of 48 hours from the time of the accident or the dangerous occurrence:

Provided that if in the case of an accident or dangerous occurrence, death occurs of any person injured by such accident or dangerous occurrence after the notices and reports referred to in the foregoing sub-rules have been sent, the Manager of the factory shall forthwith send a notice thereof by telephone, special messenger or telegram to the authorities and person mentioned in 175[sub-rule (1)] and also have this information confirmed in writing within 12 hours of the death:

Provided further that, if the period of disability from working for a period of 48 hours or more referred to in sub-rule (4) does not occur immediately following the accident, or the dangerous

occurrence, but later, or occurs in more than one spell the report referred to shall be sent to the Inspector [176][by way of a copy of the accident report prescribed under Employees State Insurance Regulations or Form No. 18] within 24 hours immediately following the hour when the actual total period of disability from working resulting from the accident or the dangerous occurrence becomes 48 hours.

SCHEDULE

The following clauses of dangerous occurrence, whether or not they are attended by personal injury or disablement

(a) bursting of a plant used for containing or supplying steam under pressure greater than atmospheric pressure.
(b) collapse or failure of a crane, derrick, with hoist or other appliances used in raising or lowering persons or goods, or any part thereof, or the overturning of a crane,
(c) explosion, fire bursting out, leakage or escape of any molten metal, or hot liquor or gas causing bodily injury to any person or damage to any room or place in which persons are employed or fire in rooms of cotton pressing factories when a cotton opener is in use,
(d) explosion of a receiver or container used for the storage at pressure greater than atmospheric pressure or any gas or gases (including air) or any liquid or solid resulting from the compression of gas,
(e) Collapse or subsidence of any floor, gallery, roof, bridge, tunnel, chimney, wall, building or any other structure.

97. Notice of poisoning or disease

A notice in Form No. 19 should be sent forthwith both to the Chief Inspector and to the certifying Surgeon, by the manager of factory in which there occurs a case of lead, phosphorus, mercury, manganese, arsenic, carbon disulphide or benzene poisoning; or poisoning by nitrous fumes, or by halogens derivatives of the hydrocarbons of the aliphatic series or of chrome ulceration, anthrax, silicosis, toxic anemic, toxic jaundice, primary opitheliomatous cancer of the skin, or pathological manifestations due to radium or other radio-actives substance or X-rays.

CHAPTER X

SUPPLEMENTAL

98. Procedure in appeals

1 (1) An appeal presented under Section 107 shall lie to the Chief Inspector or in cases where the order appealed against is an order passed by that officer, to the State Government or to such authority as the State Government may appoint in this behalf and shall be in the form of a memorandum setting forth concisely the grounds of objection to the order and bearing court-fee stamp in accordance with Article 3 of Schedule II to the Andhra Court Fees and Suits Valuation Act, 1956 (Andhra Act VII of 1956) and shall be accompanied by a copy of the order appealed against certified correct and attested by the Inspector concerned and duly stamped under the same Act.

Note: Under Articles 3 and 9 of Schedule II to the Andhra Court Fees and Suits Valuation Act, 1956(Andhra Act VII of 1956), the scale of Court- Fees stamps to be affixed to an appeal is Rs. 5 and in respect of certified copy of the order, Real for every 360 words or fraction of 360 words.
1 (2) Appointment of assessors: On receipt of the memorandum of appeal, the appellate authority, shall if it thinks fir or if the appellant has requested that the appeal should

1 be heard with the aid of assessors, call upon the body declared under sub-rule (3) to be representative of an industry concerned, to appoint an assessor within a period of 14 days. If an assessor is nominated by such body, the appellate authority shall appoint a second assessor itself. It shall then fix a date for the hearing of the appeal and shall give due notice of such date to the appellant and to the Inspector whose order is appealed against and shall call upon the two assessors to appear upon such date to assist in the hearing of the appeal.
2 (3) The appellant shall state in the memorandum presented under sub- rule (1) whether he is a member of one or more of the following bodies. The body empowered to appoint the assessor shall:
3 (a) if the appellant is a member of one such bodies, be that body;
4 (b) if he is a member of such bodies, be the body which the appellant desires should appoint such assessor; and
5 (c) if the appellant is not a member of any of the aforesaid bodies or if he does not state in the memorandum which of such bodies he desires should appoint the assessor, be the body which the appellate authority considers as the best fitted to represent the industry concerned.
6 (1) The Southern India Chamber of Commerce
7 (2) The Kakinada Chamber of Commerce
8 (3) The Andhra Chamber of Commerce
9 (4) The Adoni Factory Owners Association
10 (5) The South India Mill Owners Association
11 (6) The South Indian Tanners and Dealers Association
12 (7) Employers Federation of Southern India, Madras
13 (8) The Hindustan Chamber of Commerce, Madras
14 (9) The South Indian Sugar Mills Association
15 (10) Institution of Plant Engineers
16 (11) Federation of Telangana Chambers of Commerce and Industry
17 (12) All India Manufacturers Organization.
18 (4) Remuneration of Assessors: An assessor appointed in accordance with provisions of sub-rules (2) and (3) shall receive for the hearing of the appeal, a fee to be fixed by the appellate authority, subject to a maximum of fifty-rupees per diem. He shall also receive the actual travelling expenses, the fees and travelling expenses shall be paid to the assessor by Government: but where assessors have been appointed at the request of the appellant and the appeal has been decided wholly or partly against him, the appellate authority may direct that the fees and travelling expenses of the assessor shall be paid, whole or in part by the appellant.

99. 177 [x x x]
100. 178[Returns

The manager of every factory shall furnish to the Inspector having jurisdiction over the area where the factory is located, the annual return in the prescribed Form AR on or before the 31St January of the year subsequent to that to which the return relates:
Provided that such return shall be deemed to have furnished to the Inspector if sent by registered post or otherwise acknowledged by the Inspector in writing.]

100-A. [179]**[x x x]**

101. Service of notices

The dispatch by post under registered cover of any notice or order shall be deemed sufficient service on the occupier, owner or manager of a factory of such notice or order.

102. Information required by the Inspector

The occupier, owner or manager of factory shall furnish any information that an Inspector may require for the purpose of satisfying himself whether any provision of the Act has been complied with or whether any order of an Inspector has been duly carried out. Any demand by an Inspector for any such information, if made during the course of an Inspection, shall be complied with forthwith if the information is available in the factory, or, if made in writing, shall be complied with within seven days of receipt thereof.

102-A.

The registers, records and notices maintained and exhibited under the provisions of these rules shall always be available at or as near as practicable to the site of employment and shall be produced or caused to be produced for inspection at all reasonable hours by any Inspector having jurisdiction over the factory.

102-B. Permissible levels of certain chemical substances in work environment

Without prejudice to the requirements in any other provisions in the Act or the rules, the requirements specified in the following Schedule shall apply to all factories.

SCHEDULE

1 1. Definitions: For the purpose of this Schedule,

2 (a) “mg/m3” means milligrams of a substance per cubic meter of air;

3 (b) “mppcm” means million particles of a substance per cubic meter of air;

4 (c) “ppm” means parts of vapour or gas per millions parts of air by volume at 25 C and 760 mm of mercury pressure;

5 (d) “Time weighted average concentration” means the average concentration of substance in the air at any work location in a factory computed from evaluation of adequate number of air samples taken at the location, spread over the entire shift on any day, after giving weightage to the duration for which each such

sample is collected and the concentration prevailing at the time of taking the sample.

Time weighted average concentration C1T1+C2T2+CnTn…. T1+T2+…. Tn

Where C1 represents the concentration of the substance for duration T1 (in hours); C2 represents the concentration of the substance for duration T2 (in hours); and Cn represents the concentration of the substance for duration Tn (in hours)

(e) “work location” means a location in a factory at which a worker works or may be required to work at any time during any shift on any day.

2. Limits of concentrations of substances at work locations:

(1) The time weighted average concentration of any substance listed in Table-i or Table-2 of Schedule, at any work location in a factory during any shift on any day shall not exceed the limit of the permissible time weighted average concentration specified in respect of that substance.

Provided that in the case of a substance mentioned in Table-i in respect of which a limit in terms of short term maximum concentration is indicated, the concentration of such a substance may exceed the permissible limit of the time weighted average concentration for the substance for short period not exceeding 15 minutes at a time, subject to the condition that,
(a) Such periods during which the concentration exceeds the prescribed time weighted average concentration are restricted to not more than 4 per shift;
(b) The time interval between any two such periods of higher exposure shall not be less than 60 minutes; and
(c) at no time the concentration of the substance in the air shall exceed the limit of short term maximum concentration.
(2) In the case of any substance given in Table-3, the concentration the substance at any work location in a factory at any time during any day shall not exceed the limit of exposure for that substance specified in the table.
(3) In the case where the work "skin" has been indicated against certain substance mentioned in Tables-i and 3, appropriate measures shall be taken to prevent absorption through cutaneous routes particularly skin mucous membrane, and eyes as the limits specified in these tables are conditions where the exposure is only through respiratory tract.
(4)
(a) In case, the air at any work location contains a mixture of substances mentioned in Table 1,2 or 3, which have similar toxic properties the time weighted concentration of each of these substances during the shift should be such, that when this time weighted concentration divided by

the respective permissible time weighted average concentration specified in the above mentioned tables, and the functions obtained are added together, C1 C2……. Cn should not exceed unity. when C1 C2……Cn are the time weighted concentration of toxic substances1 …. n respectively, determined after measurement at work location; and L1 L2 Ln are the permissible time weighted average concentrations of the toxic substances 1,2. and n respectively.
(b) In case the air at work location contains a mixture of substances mentioned in Table 1,2, or 3, and these do not have similar toxic properties, then the time weighted concentration of each of these substances shall not exceed the permissible time weighted average concentration specified in the above mentioned tables, for that particular substance.
(c) The requirement in clauses (a) and (b) shall be in addition to the requirements in paragraphs 2(1) and 2(2).
3. Sampling and evaluation procedures:
(1) Notwithstanding the provisions in any other paragraphs, the sampling and the evaluation procedures to be adopted for checking compliance with the provisions in the Schedule shall be as per standard procedures in vogue from time to time.

(2) Notwithstanding the provisions in paragraph 5, the following conditions regarding the sampling and evaluation procedures relevant to checking compliance with the provisions in this schedule are specified.
(a) For determination if the number of particles per cubic meter in item 1(a) (i) (1) in Table 2, samples are to be collected by standard or mid-get impinge and the counts made by light filed technique.
(b) The percentage of quartz in the 3 formulae given item I (a) (i) of Table 2 is to be determined from airborne samples.
(c) For determination of number of fibers as specified in item 2 (a) of Table 2, the membrane filter method [180][at 430 x magnification (4 mm objective)] with phase contract illumination should be used.
(d) Both for determination of concentration and percentage of quartz for use of the formula given in item 1 (a) (1) (2) of Table 2, the fraction passing through a size selector with the following characteristics should only be considered.

Aerodynamic diameter (unit density sphere)	Percentage allowed by size-collector
2.0 2.5	90 75

3.5 5.0 10.0	50 25 0

1 4. Power to require assessment of concentration of substances.
2 (1) An Inspector may, by an order in writing, direct the occupier or manager of a factory to get before any specified date, the assessment of the time weighted average concentration at any work location, of any of the substances mentioned in Table 1,2 or carried out.
3 (2) The results of such assessment as well as the method followed for air sampling and analysis for such assessment shall be sent to the Inspector within 3 days from the date of completion of such assessment and also a record of the same kept readily available for inspection by an Inspector.

Exemption:— If in respect of any factory or a part of a factory, the Chief Inspector is satisfied that, by virtue of the pattern of working time of the workers at different work locations or on account of other circumstances no worker is exposed, in the air at the work locations, to a substance or substances specified in Tables 1,2 or 3 to such an extent as is likely to be injurious to his health, he (the Chief Inspector) may by an order in writing exempt the factory or a part of the factory from the requirements in paragraph 2 subject to such conditions, if any, as he may specify therein.
TABLE – 1

Substance			Permissible Limits of Exposure	
Time-Weighted average concentration			**Short-term maximum concentration**	
1	**2**			**3**
ppm	**mg/rn3**		**ppm**	**mg/rn3**
Acetic Acid	10	25	15	37
Acrelein	0.1	0.25	0.3	0.8
Aldrin-skjn	..	0.25	..	0.75
Ammonia	25	18	35	27
Aniline-skin	2	10	5	20
Anisidins (0-P-is omers) – skin	0.1	0.5	..	..
Arsenic & compounds (as As)	..	0.2	..	..

Benzene	10	30	..	..
Bromine	0.1	0.7	0.3	2
2 Butanone (Methylethyl)(Ketenemek(MEK)	200	590	30	885
n-Butyl acetage	150	710	200	950
Cadmium-dust and salts (as Cd)	205	950	250	1190
Sec/tert.Butyl acetate	..	0.05	..	0.2
Calcium Oxide	..	2	..	..
Carbaryle (Sevin)	..	5	..	10
Carbofuran (Furadan)	..	0.1	..	..
Carbon disulfide-skin	20	60	30	90
Carbon monoxide	50	55	400	440
Carbon tetrachloride —skin	10	65	20	130
Carbonyl Chloride (Phosgene)	0.1	0.4	..	..
Chloridana-skin	..	0.5	..	2
Chlorobenzene (mono chlorobenzene)	75	350	..	..
Chlorine	1	3	3	9
bis-chloromethyl ether	0.001	..	[	..

Chrornic acid and chrornates (as Cr)	..	0.05	..	..
Chromium, Sel. Chromic Chromous salts (as Cr)	..	0.05	..	..
Copper fume	..	0.2	..	..
Cotton dust, raw	..	0.2	..	0.6
Cresol, all isomers -skin	5	22	..	..
Cyanides, (as CN)-skin	..	5	..	..
Cyanogen	10	20	..	..
DDT (Dichiorodiphenyl	..	1	..	1
-trichioroethane)	..	1	..	3
Demeten-skin	0.01	0.1	0.03	0.3
Dibutyl puthalata	..	5	..	10
Dichlorves (DDVPO-Skin)	0.1	1	0.3	3
Dieldrin-skin	..	0.25	..	0.75

Dinitrobenzene (all isomers)	0.15	1	0.5	3
Dinitrotoluene-Skin	..	1.5	..	5
Diphenyl	0.2	1.5	..	5
Endosulfan (Thiodan)-Skin	..	0.1	..	0.3
Endrin-skin	..	0.1	..	0.3
Ethyl-acetate	400	1000	..	..
Ethyl alcohol	1000	1900	..	..
Ethyl amine	10	18	..	..
Flourides (as F)	..	2.5	..	..
Fluorine	1	2	2	4
Hydrogen Cyanide-skin	10	11	15	16
Hydrogen suiphide	10	.15	15	27
Iron Oxide fume (Fe 203 as Fe)	..	5	..	10
Ispamyl acetate	100	525	125	655
Isoamyl Alcohol	100	360	125	450
Isobutyl Alcohol		50		150
Loead, inerg, fumes and dusts (as Pb)	..	0.15	..	0.45
Lindane-skin	..	0.5	..	1.5

Malathin-skjn	..	10	..	..
Manganese fume (as Mn)	..	1	..	3
Mercury	..	0.05	..	0.15
Mercury (alkyl compounds skin-(as Hg)	0.001	0.01	0.003	0.03
Methyl alcohol (Methanol-skin)	200	260	250	310
Methyl cellolose-skin (2-metheg)	25	80	35	..
Methyl Isobutyl ketene skin	100	410	125	10
Napthalene	10	50	15	45
Nickel carbonyl (as Ni)	0.05	0.35	..	10
Nitric acid	2	5	4	10
Nitric Oxide	25	30	35	45
Nitrobenzene-skin	1	5	2	10
Oil mist, mineral	..	5	..	10
Parathion-skin	..	0.1	..	0.3
Phenol-skin	5	19	13	38
Pharate (Thimet-skin)	..	0.05	..	0.2
Chloride)	0.1	0.4	..	..
Phosphine	0.3	0.4	1	1
Phosphorus (Yellow)	..	0.1	..	0.3
Phosphorus pentachioride	..	I	..	3
Phosphorus trichioride	3.5	3	..	..
picric acid-skin	..	0.1	..	0.3
Pyridine	5	15	10	30
Silance (Silicon Tetrahydride)	0.5	0.7	1	1.5
Styrene, monomer (Phonyle-thylene)	100	420	125	525
Sulfur dioxide	5	13	..	..
Sulfuric acid	0.1	..	..	
Toluene (Tuluol)-skin	..100	375	150	560
O-Toludine	5	22	10	44
Trichioro ethylene	100	535	150	800

TABLE—2

Substance	Permissible time weighted average Concentration
1	2
1. Silica (a) Crystalline (i) Quartz (8) In terms of dust count	1060 ----------mppcm % Quartz+ 10
(2) In terms of respirable dust	10 ----------mg/m_3 % respirable Quartz+ 2
(3) In terms of total dust	30 ----------mg/m_3 %Quartz+ 3
ii) Cristobalite (iii) Fridymite (iv) Silica fused	Half the limits given against quartz. Half the limits given against quartz. Same limit as for quartz.
(v) Tripoli (a) Amorphous	Same limit as in formula in item 2 given against quartz. [705 mppcm
2. Silica having less than 1% free silica by weight	
(a) Asbestos-fibres longer than microns	
i) Amosite (ii) Cyrysotile (iii) Crocidelite (iv) Other form (b) Mica (c) Mineral Gool fibre (d) Perlite (e) Portland cement (f) Soap stone (g) Table (conabosti form) (h) Talc (fibrous) (i) Tromolit	..0.5 fibre cubic centimetre ..3 fibres/centimetre ..0.2 fibre/cubic centrimetre ..2 fibres/cubic centimetre ..705 mpum ..10mg/m3 ..1060 mppcm ..1060 mppcm ..705 mppcm ..705 mppcm ..Same limit as for asbestos ..Same limit as for asbestos

3. Coal dust	
1) for airborne dust having less than 5% silicon dioxide by weight	5 mg/m3
(2) For airborne dust having over 5%	Same limit as prescribed by formula in item (2) against Quartz

TABLE -3

Substance	**Permissible limit of exposure**	
1	**2**	
Pum	**mg/m2**	
Acetic anydride	5	20
O-Dichlorobenzene	50	300
Fnrm dehyde	2	7
Hydrogen Chloride	5	7
Manganese & Compounds (as mn)	..	5
Nitrogen Dioxide	..	9
Nitroglycerin-skin Potassium hydroxide	0.2	2
Sodium hydroxide	..	2
2,4,6-Trinitrotaluenc e (TNT)	..	0.5

103. Muster Roll

1 (1) The manager of every factory shall maintain a muster roll of all the workers employed in a factory in the prescribed From No. 25 or an attendance record showing the following information.

2 (a) The name of the worker

3 (b) The ticket number or token of the worker, if any;

4 (c) The group if any, in which he is included and the relay to which he is allotted

5 (d) The record of his attendance for each working day indication the days of annual leave, National and festival holidays allowed, compensatory holidays, leave on Medical grounds and any other leave with wages that he may be allowed;

6 (2) The attendance record may be in the form of an attendance sheet or a register or a card for each worker or any monthly abstract obtained from any electronic or other acquisition of relevant data.

7 (3) In any factory where workers below the age of 18 years are employed, a separate attendance record of such workers shall be maintained showing additionally the age of the

person and indicating whether or not a certificate of fitness has been obtained in respect of that particular worker.]

103-A. [x x x]
104. [x x x]
105. [x x x]
106. [x x x]
107.
1 (1) The maximum number of workers who may be employed in each work-room or work-hall shall be posted prominently by means of a notice painted on the internal wall in each such room or hail. When determining the maximum number of persons permissible in addition to the breathing space required to be provided by Secion 16(2), floor space of 25 square feet in the case of existing factories and 36 square feet in factories built after the commencement of the Act, shall also be provided for each worker working at any one time in the room, but such floor space shall be exclusive of the space occupied by machinery, fixtures and materials in the room.
2 (2) The Chief Inspector may for reasons to be recorded in writing, relax the provisions of this rule to such extent as he may consider necessary, wherein in his opinion, such

1 Adapted to state of Telangana Vide .G.O. Ms. No.39 L,E,T & F (Lab) Dept, dt. 30-12-2015 (see page (iii) 2. In the Andhra Pradesh Factories Rules, 1950 (i) Throughout the rules, for the words "Andhra Pradesh" (occurring otherwise than in a citation or description or title of other laws including the Rules as the case may be), the word "Telangana" shall be substituted
2 Sub-rules (1) and (2) substituted and sub-rule (3) omitted by G.O.Ms No.978, dt.4-5-1960
3 Clause (k) omitted by G.O.Ms. No. 152 (F&B), dated 20.4.1989
4 Clause (k) omitted by G.O.Ms. No. 152 (F&B), dated 20.4.1989
5 Ins by G.O Ms.No 26, LET & F Lab II, dt 7-6-1999
6 Ins by G.O Ms.No 26, LE T & F Lab II, dt 7-6-1999
7 Ins by G.O Ms.No 57 LE T & F Lab II, dt 19-11-2004
8 Vide G.O Ms.No.39 L,E,T &F (lab) Dept. dt 30-12-2015
9 Ins by G.O Ms.No 57 LE T & F Lab II, dt 19-11-2004
10 Subs for "and intimation" by errata in Memo No.3370/Lab-II/A2/2005-1, LE T&F, Lab-II, dt 24-06-2005
11 Ins by G.O Ms.No 57 LE T & F Lab II, dt 19-11-2004
12 Ins by G.O Ms.No 57 LE T & F Lab II, dt 19-11-2004
13 Ins by G.O Ms.No 26, LET & F Lab II, dt 7-6-1999

1 relaxation can be made having regarding to the health of the persons employed in any room.

108. Intimation of intended closure of factory
The occupier or manager of every factory shall report to the Inspector, any intended closure of the factory or any Section or Department thereof immediately it is decided to do so, intimating:
i (i) the reason for the closure;
ii (ii) the number of workers on the register on the date of the report;
iii (iii) the number of workers likely to be affected by the closure; and
iv (iv) the probable period of the closure.
v (v) the information as to the particulars and quantity of stored chemicals and action taken or proposed to be taken to ensure safety from those chemicals while in storage during such closure shall also be furnished along with the report of intended closures.]

An intimation shall also be sent to the Inspector before the factory or section or Department thereof, as the case may be, starts working again.

109. Language in the registers and records

The registers and records maintained in a factory under the provisions of the Act and Rules shall be either in English language or any language understood by the majority of the workers in the factory.

[Rs. 2/- Court fee stamp to be affixed]

14 Ins by G.O Ms.No 57 LE T & F Lab II, dt 19-11-2004
15 Vide G.O Ms.No.39 L,E,T &F (lab) Dept. dt 30-12-2015
16 Subs by vide G.O.Rt.No.63, Labour Employment Training & Factories (Labour) Department, Dt.21.01.2016
17 Subs. By G.O Ms.No 26, L, E T & F Lab II, dt 7-6-1999
18 Subs. By G.O Ms.No 26, L, E T & F Lab II, dt 7-6-1999
19 Subs. For the expression "Rule 6" by Ibid
20 The words "or renewed" omitted by Ibid
21 Subs for the expression "Twenty five" by Ibid
22 Subs. By G.O Ms.No 26, L, E T & F Lab II, dt 7-6-1999
23 Subs. By G.O Ms.No 26, L, E T & F Lab II, dt 7-6-1999
24 Subs. By G.O Ms.No 26, L, E T & F (Lab II), dt 7-6-1999
25 Subs. By G.O Ms.No 26, L, E T & F (Lab II), dt 7-6-1999
26 Rule 12-B omitted by Ibid
27 Added by G.O Ms.No 144, E & F (F&B), dt 12-7-1994
28 Rule 12-C renumbered as 12-B by G.O Ms.No 26, L,E, T &F (Lab II), dated 7-6-1999
29 Inserted by G.O.Ms.No.101, L,E,T&F (Lab II), dated 20-10-2007
30 Rule 13 re-numbered as sub-rule (1), sub-rule (2) and (3) added by G.O.Ms.No978, dt 49-5-1980
31 Sub-rule (4) added by G.O.Ms. No 412 dt.27-3-1972
32 Subs.by G.O Ms.No 144, E & F (F&B), dt 12-7-1994
33 Omitted by G.O.Ms.No 26, L,E, T&F (Lab-II), dated 7-6-1999
34 Rules 14-A to 14-C added by G.O.Ms.No787, dt 4-7-1973
35 Subs by G.O.Ms.No 26, L,E, T&F (Lab-II), dated 7-6-1999
36 Omitted by Ibid
37 Subs by G.O Ms. No. 152 (F&B), dated 20-4-1989
38 Subs by G.O Ms. No. 152 (F&B), dated 20-4-1989
39 Subs by G.O Ms. No. 152 (F&B), dated 20-4-1989
40 Subs by G.O Ms. No. 152 (F&B), dated 20-4-1989
41 Subs by G.O Ms. No. 152 (F&B), dated 20-4-1989
42 Rules 17-B & 17-C substituted by G.O.Ms. No 621, dt 26-8-1980
43 Rules 17-C & 17-D inserted by G.O.Ms No 152 (F&B), dt 20-4-1989
44 Subs by ibid
45 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
46 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
47 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
48 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
49 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
50 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
51 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
52 Sub-rule (1) and the proviso subs, by G.O.Ms.No 808, dt 17.11.1980
53 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
54 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989

55 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
56 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
57 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
58 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
59 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
60 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
61 Deleted by G.O.Ms No.144 (F&B), dt. 12-7-1994
62 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
63 Subs. By G.O Ms.No 26, L, E T & F Lab II, dt 7-6-1999
64 The wprds"approved by the Health Officer" omitted by G.O.Ms.No 26 L&E, T & F (Lab-II), dated 7-6-1999
65 Subs by Ibid

66 Omitted by G.O.Ms.No 26, L,E, T&F (Lab-II), dated 7-6-1999
67 Added by G.O.Ms No.144 (F&B), dt. 12-7-1994
68 Subs by Ibid
69 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
70 Subs by G.O.Ms.No 26, L,E, T&F (Lab-II), dated 7-6-1999
71 Subs by G.O.Ms.No 26, L,E, T&F (Lab-II), dated 7-6-1999
72 Omitted by G.O.Ms.No 26, L,E, T&F (Lab-II), dated 7-6-1999
73 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
74 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
75 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
76 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
77 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
78 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
79 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
80 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
81 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
82 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
83 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
84 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
85 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
86 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
87 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
88 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
89 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
90 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
91 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
92 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
93 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
94 Added by G.O.Ms No.144 (F&B), dt. 12-7-1994
95 Omitted by G.O.Ms.No 26, L,E, T&F (Lab-II), dated 7-6-1999

96 Subs by Ibid
97 Subs by G.O.Ms No 152 (F&B), dt 20-4-1989
98 Subs by G.O.Ms No.144 (F&B), dt. 12-7-1994
99 Subs by G.O.Ms No.144 (F&B), dt. 12-7-1994
100 Subs for the words"Pressure Plant" by G.O.Ms. 144 d.12-7-1994
101 Schedule Amended by G.O.Ms.No.52,LE,T&F(Lab-II),dept, dt 30-09-1997
102 Subs.by.G.O.Ms.No.17,LE, T&E (Lab-II) Dept, dt 8-3-2001
103 Subs. By G.O.Ms.No.63,, LET & F (Lab.II) Dept, dt.15.06.2012
104 Added by G.O.Ms.No.1766, Home (Lab-II),dt 20-9-1963, pub in Gazette dt 10-10-1963 RS to Pt. 1
105 Subs. For "ten feet" by G.O.Ms.No.73,LE,T&F (Lab-II),dt 6-8-2007
106 Subs for "two inches" by Ibid
107 Inserted by G.O.Ms No 152 (F&B), dt 20-4-1989
108 Inserted by G.O.Ms No 152 (F&B), dt 20-4-1989
109 Added by G.O.Ms No.144 (F&B), dt. 12-7-1994
110 Added by G.O.Ms No.144 (F&B), dt. 12-7-1994
111 Inserted .O.Ms No.144 (F&B), dt. 12-7-1994
112 Ins. By Go.Ms.No 70 LET & F (Lab.II),dt. 03-12-1999
113 Ins. by GO Ms.No 152 (F&B), dt 20-4-1989
114 Ins. by GO Ms.No 152 (F&B), dt 20-4-1989
115 The words "or dispensary" omitted by GO Ms.No 152 (F&B), dt 20-4-1989
116 Added by G.O.Ms.No.26, L,E,T&F,(Lab-II), dt 7-6-1999
117 Omitted by G.O.Ms.No.26666, L,E,T&F (Lab-II) dt 7-6-1999
118 Subs for the words "the state Government may, by a notification in this behalf" by G.O Ms No 152 (F & B) dt. 20-4-1989
119 Certainn sentence deleted by GO Ms.No 152 (F&B), dt 20-4-1989
120 Added by G.O.Ms.No.26, L,E,T&F,(Lab-II), dt 7-6-1999
121 Clause (ee) inserted by GO.MS.No152 (F&B), dt 20-4-1989
122 Sub-rule (3) of Rule 72 added by Ibid
123 Sub-rule (7) renumbered as (8) a new sub rule (7) inserted by G.O Ms.No 410,dt 18-6-81. Vide R.S to part II AP gazette, dt.3-9-1981
124 The words "of child being age" omitted by GO.Ms.No.8, dt 1-1-1983, vide Rs. To part II A.P gazatee, dt 10-3-1983 page 436
125 The original Rule 76-A which was inserted by GO Ms No 978 dt 4-5-1960 was renumbered as ruke 76-B and new Rule 76-A inserted by GO Ms No 532 dt. 31-7-1979
126 Subs by GO.Ms.No 6 LET &F (Lab II) Dept, dt 17-19-1988
127 Added by G.O Ms.No.41 L&E,T&F (lab-II),dt 11-8-1998
128 The words "commissioner of labour and " omitted by GO Ms.No.867 (F&B), dt 7-11-1990

129 Subs by GO Ms No 43, LET&F,dt 15-10-1996
130 Subs by GO Ms No 43, LET&F,dt 15-10-1996
131Subs by G.O.Ms. No 26, L,Et&M (Lab-II), 7th June 1999
132Addedby G.O.Ms.No.26, L,E,T&F (Lab-II),dt.7th June 1999
133 Omitted by Ibid
134 Subs by G.O.Ms.No.26, L,E,T&F (Lab-II),dt.7th June 1999
135 Added by Ibid

136 Subs by G.O.Ms.No.26, L,E,T&F (Lab-II),dt.7th June 1999
137 Subs by G.O.Ms.No.26, L,E,T&F (Lab-II),dt.7th June 1999
138 Omitted by G.O.Ms.No.26, L,E,T&F (Lab-II),dt.7th June 1999
139 G.O Ms.No 59,LET&F (ab.II) dept, dt 27-12-2013
140 Subs by G.O.Ms.No.26, L,E,T&F (Lab-II),dt.7th June 1999
141 Subs by G.O.Ms.No.26, L,E,T&F (Lab-II),dt.7th June 1999
142 Omitted G.O.Ms.No.26, L,E,T&F (Lab-II),dt.7th June 1999
143 Added by G.O.Ms No.144 (F&B), dt. 12-7-1994
144 Omitted by G.O MS.No 144 (F7B), dt 12.7.1994
145 Omitted by G.O Ms. No 144 (F&B), dt 12-7-1994
146 Subs by Go MS. No 144(F&B), dt 12-7-1994
147 Added Go MS. No 144(F7B), dt 12-7-1994
148 Subs by Go MS. No 144(F&B), dt 12-7-1994
149 Added by G.O Ms. No.144 (F&B), dt 12-7-1994
150 Subs by Go MS. No 144(F&B), dt 12-7-1994
151 Subs by Go MS. No 144(F&B), dt 12-7-1994
152 Substituted by Go.Ms.No 144, dt 12-7-1994
153 Subs for the words “containers and when they are to be transported” by Go Ms. No 144 (F&B) dt 12-7-1994
154 Subs for the words” suitable titing or lifting syphon devices” by ibid
155 Sub by GO Ms No 144 (F&B) Dt, 12-7-1994
156 Words” and should be suitable for use in areas where hexane or similar types of solvents or vapours are likely to exit” added by G.O.Ms.No.694, dt 3-9-1974 again omitted by G.O Ms. No 419,dt 12-6-1980
157 Subs by GO. MS.No 152 (F&B), dt 20-4-1989
158 Subs by GO. MS.No 152 (F&B), dt 20-4-1989
159 Amended by G.O Ms. 886, dt 19-8-1978
160 Amended by G.O Ms. 886, dt19-8-1978
161 Omitted by G.O.Ms.No 144 (F&B), dt, 12-7-1994
162 Subs by GO.MS.No 144 (F&B), dt 12-7-1994
163 The original sub-paras (a) (b) and (c) renumbered as (b) (c) and (d) and new sub-para (a) ins. By G.O Ms.No 152 (F&B) dt. 20-4-1989
164 Sub by G.O Ms.No 144, dt 12-07-1994
165 Added bt ibid
166 Subs by G.O Ms.No.144 (F&B) dt, 12-7-1994
167 Added by GO.Ms.No15,LET&F(Lab-II),dt 14.3.2005
168 Addedby G.O MS.No 73, LE, T&F (Lab-II),dt 6-8-2007
169 Subs. For the words “the chief Inspector and Regional Inspector” by GO Ms. No.26 LET&F (lab-II), dated 7th June 1999
170 Sub-rile (2) mitted by Ibid.
171 Sub-rule (3) renumbered as sub-rule (2) by Ibid
172 Subs for expression “sub-rule (1) and (2)” by ibid
173 Sub-rule (4) renumbered as sub-rule (3) by GO.Ms.No.26 , LET&F (Lab-II), dated 7th june1999
174 Subs for the expression “in form No 18” by G.O Ms.No 26, Labour, ET&F(Lab-II), dated 7th june 1999
175 Subs. For the expression “sub-rule (1) and (2) by ibid

176 Subs. For the expression “in Form No. 18” by G.O.Ms. No. 26, labour, Employment, Training & Factories (Lab-II), dated 7th June, 1999
177 Omitted by G.O Ms.No 26 LE&F (Lab-II), dated 7th June 1999
178 Sunstituted by Ibid
179 Omitted by G.O Ms.No 26 LE&F (Lab-II), dated 7th June 1999
180 Substituted for the figures and words “ at 430 x phase contract” by GO.Ms No 144 (F&B), dt 12-7-1994