THE HARYANA FACTORIES RULES, 1952

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[1][THE HARYANA FACTORIES RULES,1952

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CHAPTER 1
PRELIMINARY
1. Short Title, Extent and Commencement
(1) These rules may be [2][called] as the Punjab Factory Rules, 1952
(2) [3][They shall extend to the territories which immediately before the 1st November 1956, were comprised in the States of Punjab and Patiala and East Punjab States Union.]
(3) Except as hereunder provided with respect to certain rules these rules shall come into force at once.

Rules 31 to 35 (Artificial Lighting)	Six months after the enforcement of these Rules
Rule 55 (Safety Precautions)	Six months after the enforcement of these Rules
Rule 68 (Washing Facilities)	Three months after the enforcement of these Rules
Rule 70 (Ambulance Room)	Three months after the enforcement of these Rules
Rule 71 to 77 (Canteens)	Nine months after the enforcement of these Rules
Rule 78 (Shelters, etc.)	Six months after the enforcement of these Rules.
Rules 79—82 (Creches)	Nine months after the enforcement of these Rules
Rule 102 (Special provision dangerous operations).	Six months after the enforcement of for these Rules

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 [4][26 degrees] or more shall not be deemed to be artificial humidification.
(d) "Belt" includes any driving strap or rope.
(e) "Degrees of temperature" means degrees on the Fahrenheit [5][Celsius]' scale.
(f) "Fume" includes gas or vapour.

(g) “Form” means form appended to these rules.
(h) “Health Officer” means the Municipal Health Officer or District Health Officer or such other official as may be appointed by the State Government in that behalf.
(i) “Hygrometer” means an accurate wet and dry bulb hygrometer conforming to the prescribed conditions as regards constructions and maintenance
(j) “Inspector” means an officer appointed under Section 8 of the Act and includes, “Chief Inspector”, Additional Inspector and the District Magistrate.
(k) “Maintained” means maintained in an efficient state, in efficient working order and in good repair
(l) “Manager” means the person responsible to the occupier for the working of the factory for the purposes of the Act.
(m) “Family” means the wife, son, daughter, father, mother, brother and sister of the owner of any place wherein a manufacturing process is carried on who lives with or is dependent on such owner.

[6][2-A. Competent person
(1) The Chief Inspector may recognise any person as a ‘Competent Person’ within such area and for such period as may be specified for the purposes of carrying out tests, examinations, inspections and certification for such buildings, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure plant, confined space, ventilation system 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:

Provided that the Chief Inspector may relax the requirements of qualifications in respect of a Competent Person, if such a person is exceptionally experienced and knowledgeable, but not the requirements in respect of the facilities at his command:
Provided further that where it is proposed to recognise a person employed under the Chief Inspector as a ‘Competent Person’, concurrence of the State Government shall be taken and such a person after being so recognised, shall not have powers of an ‘Inspector’

Provided further that the ‘Competent Person’ recognised under this provision shall not be above the age of 62 years and shall be physically fit for the purpose of carrying out the tests, examination and inspection.
(2) The Chief Inspector may recognise an institution of repute, having persons possessing qualifications and experience as set out in the schedule annexed to sub-rule (1) for the purposes of carrying out tests, examinations, inspections and certification for buildings, dangerous machinery, hoists and lifts, lifting machines and lifting tackles, pressure plant, confined space, ventilation system and such other process or plant and equipment as stipulated in the Act and the Rules made thereunder, as Competent Person within such area and for such period as may be specified.
(3) The Chief Inspector on receipt of an application in the prescribed form from a person or an institution intending to be recognised as a ‘Competent Person’ for the purposes of this Act and the Rules made thereunder, shall register such application and within a period of 60 days of the

date of receipt of application and after having satisfied himself as regards competence and facilities available at the disposal of the applicant either recognise the applicant as a 'Competent Person' and issue a certificate of competency in the prescribed form or reject the application specifying the reasons thereof.
(4) The Chief Inspector may, after giving an opportunity to the competent person of being heard, revoke the certificate of competency,
(i) If he has reason to believe that a competent person
(a) has violated any condition stipulated in the certificate of competency, or
(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 the Rules made thereunder; or has omitted to act as required under the Act and the Rules made thereunder;
(ii) Explanation: For any other reason to be recorded in writing. For the purpose of this rule an institution includes an organisation.
(5) The Chief Inspector may, for reasons to be recorded in writing, require recertification of lifting machinery, lifting tackles, pressure plant or ventilation system as the case may be, which has been certified by a competent person outside the state.

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

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

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

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:
Declaration by the Institution (if employed)
I, _____ certify that Shri_____ whose details are furnished above is in our employment and nominate him on behalf of the organisation for the purposes of being declared as a Competent Person under the Act. I also undertake that I will
(a) Notify the Chief Inspector in case the Competent Person leaves our employment;

(b) Provide and maintain in good order all facilities at his disposal as mentioned above ;
(c) Notify the Chief Inspector any change in the facilities (either addition or deletion)

Signature_____
Designation_____
Telephone No._____
Official Seal
7[Email I.D.]
Date _____

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

1. Name and full address of the organization_____
2. Organisation's status _____

(specify whether government, autonomous, co-operative, corporate or private)
3. Whether the organization has been declared as competent person under this or any other status. If so, give details _____
4. Purpose for which competency certificate is sought (specify section(s) of the Act)_____
5. Particulars of persons employed and possessing qualification and experience as set out in Schedule annexed to rule 2-A

Sr. No	**Name and Designation**	**Qualification**	**Experience**	**Section(s) and the Rules under which competency is sought for**
1. 2.				

6. Details of facilities (relevant to item 3 above and arrangements made for their maintenance and periodic calibration)
7. Any other relevant information.
8. Declaration:

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

Form or certificate of competency issued to a person or an institution in pursuance to Rule 2A made under Section 2(CA)

I,_____ in exercise of the powers conferred on me under Section 2 (ca) of the Act and rules made thereunder, hereby recognise_____(name of the institution) Shri_____(name of the person) employed in_____(name of the organisation) to be Competent Person for the purpose of carrying out tests, examination, inspections and certification for such buildings, dangerous machinery, lifts and hoists, lifting machines and lifting tackles, pressure plants, confined space, ventilation system and process or plant and equipment as the case may be, used in a factory located in _____, under Section _____and the Rules made thereunder.

This certificate is valid from_____to_____

This certificate is issued subject to the conditions stipulated hereunder:

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

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

(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.

(v)

(vi)

Station: Official Seal Signature of the Chief Inspector
Date:

Note: A separate certificate should be issued under each relevant section. A person or an institution may be recognised competent for the purpose of more than one section of the Act.

SCHEDULE

[Rule 2A (1) and (2)]

Sr. No	Sections or Rules under	Qualifications	Experience for the purpose	Facilities at his Disposal
1	2	3	4	5

1.	Rules made under Section 6 and section 112 certificate of stability for buildings	Degree in Civil or structural Engineering or its equivalent	(i) Minimum 10 years in design or construction or testing or repair of structures. (ii) Knowledge of 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; and (iii) an ability to arrive at a reliable conclusion with regard to the safety of the structure or the building.
2.	Rules made under Section 21(2) Dangerous machines	Degree in Electrical or Mechanical or Textile Engineering or its equivalent	i) Minimum 7 years' experience in (a) design, operation or maintenance or (b) testing, examination & 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 the failure; and (c) An ability to arrive at a reliable conclusion with regard to the proper functioning of Safety devices and appliances and machine guards.

3.		Section 28 lifts and Hoists		(a) design or erection or maintenance; or (b) Inspection and test procedure of hoists and lifts. ii) He shall be – (a) conversant with the current and relevant codes of practices and test procedures; (b) conversant with other statutory requirements covering the safety of hoists and lifts; and (c) able to identify defects and arrive at a reliable conclusion and with regard to safety of hoist & lifts
4.	Section 29- Lifting Machines and lifting tackles	Degree in Electrical or Mechanical or Metallurgical Engineering or its equivalent	Testing, examination and inspection of lifting machinery, chains, ropes and lifting tackles (ii) Should be-	Facilities for load testing, tensile testing heat-treatment equipment or gadgets for measurement,

(A) conversant with relevant codes of practice and test procedures that are current; (B) conversant with structure mechanics and metallurgy of the material of construction; (C) Conversant with Heat-treatment/ stress relieving techniques as applicable to stress bearing components and parts of lifting machinery and lifting tackles. (D) capable of identifying defects and arriving at a reliable conclusion with regard to safety of lifting machinery, chains, ropes and lifting tackles.	gauges and any such other equipment required for determining the safe working conditions of the lifting machines and tackles.

5.	Section 31- Pressure plant	Degree in chemical or Electrical or Mechanical or Metallurgical Engineering or its equivalent.	(i) A minimum experience of 10 years in , (a) design or erection or maintenance; (b) testing, examination and inspection of plants (ii)He shall be- (A) conversant with and relevant codes of practice and test procedures relating to pressure vessels; (B) conversant with other Statutory requirements concerning the safety of unfired pressure vessels and equipment's operating under pressure.	Facilities for carrying hydraulic tests, non-destructive tests,guages.

(C) conversant with non-destructive testing techniques as are applicable to pressure vessels; (D) able to identifying defects and arriving at a reliable conclusion and with regard to safety of pressure vessels.

6.	(i) Section 36 Precautions against fumes, (ii) Rules made Section 41 and 112	Master degree in chemistry or degree in Chemical Engineering.	(i) a minimum of 7 years' experience in collection and analysis of environmental samples and calibration of monitoring equipment's, He shall- (a) Be conversant with the hazardous preparation of chemicals and their permissible limit values; (b) Be conversant with current techniques of sampling and analysis of environmental contaminants; and (c) able to arrive at a reliable conclusion as regards the safety in respect of entering and carrying out hot work	meters, instruments & devices duly calibrated and certified for carrying out the tests and certification of safety in working in confined spaces.
7.	Ventilation system as required under various schedules framed under section 87 such as schedule on	degree in mechanical or electrical engineering or equivalent	(i) a minimum of seven years' experience in the design, fabrication, testing of ventilation system and system used for extraction and collection of dust, fumes and vapours and other ancillary equipment.	facilities for testing the ventilating system instruments and gauges for testing Effectiveness of extraction system for dusts, vapours & fumes and any other

(i) grinding or glazing metals and processes incidental thereto (ii) cleaning or smoothing, roughening etc. of articles by jet of sand, metal shot or grit or other abrasive propelled by a blast of compressed air or steam. (iii) handling and processing of Asbestos (iv) manufacture of Rayon by Viscose Process (v) Foundry operations	(ii) he shall be conversant with relevant codes of practice and test procedures that are current in respect of ventilation and extraction system for fumes and shall be able to arrive at a reliable conclusion with regard to effectiveness of the system	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 system

3. 8[Submission of plans

The State Government or the Chief Inspector may require, for the purposes of the Act submission of plans of any factory which was either in existence on the date of commencement of the Act or which has not been constructed or extended since then. Such plans shall be drawn to scale showing

(a) the site of the factory and immediate surroundings including adjacent building and other structures, road, drains, 9[sewerage] etc.;

(b) the plan elevation and necessary cross-sections of the factory buildings indicating all relevant details relating to natural lighting, ventilation and means of escape in case of fire, and the position of the plant and machinery, aisles and passage- ways; and

(c) such other particulars as the State Government or the Chief Inspector, as the case may be, may require."

10**[3 A. Approval of plans**

(1) No building shall be constructed on any site on which a factory is to be situated or for the extension or use as a factory or a part of a factory after the date of the commencement of these rules, unless previous permission in writing is obtained from the Chief Inspector of Factories.

(2) Application for such permission shall be made in Form No. 1 which shall be accompanied by the following documents 11[in triplicate] duly supported by plans and specifications certified by persons possessing the qualifications as hereinafter provided:

(a) A flow chart of the manufacturing process supplemented by a brief description of the process in its various stages.

(b) Plan drawn to scale showing;

(i) the site of the factory and immediate surroundings including adjacent buildings and other structures, road, drains, etc.;
(ii) the plan elevation and necessary cross-sections of the various buildings indicating all relevant details relating to natural lighting, ventilation and means of escape in case of fire. The plans shall also clearly indicate the position of the plant and machinery, aisles and passage ways.
(c) Form No. 1-A
(d) Reply to the questionnaire annexed to Form No. 1-A;
(e) Such other particulars as the Chief Inspector may require in relation to the application:

Provided that the occupier of the premises in use as a factory on the date of the commencement of these rules shall submit such application within thirty days of such commencement.

(f) [12][In case of stone crusher declared as factory, attested or Photostat copies of "No objection Certificate" for the premises to be used as a factory, from the Deputy Commissioner of the District in whose jurisdiction the premises of factory fails.]
(3) If the Chief Inspector is satisfied that the plans are in consonance with the requirements of the Act, he shall, subject to such conditions as he may specify, approve them by signing and returning to the applicant one copy of each plan or he may call for such other particulars as he may require to enable such approval to be given.
(4) The plans and specifications herein required shall be certified by a person possessing the qualification prescribed for a certificate of stability.

4. Certificate of stability
(1) No manufacturing process to be carried on with the aid of power shall be begun, or carried on in any building or part of a building until a certificate of stability of the building or part of the building in Form No. 1-B signed by a person possessing the qualifications prescribed in sub-rule has been delivered to and accepted by the Chief Inspector. No extended portion of any factory wherein manufacturing process is being carried on with the aid of power shall be used as a part of the factory any time after the extension, nor plant or machinery shall be added in any factory nor brought into use any time, after such addition until such a certificate in respect of such extension or plan has been delivered to and accepted by the Chief Inspector of Factories.
(2) [13][The person competent to certify the plans and specification or to sign Form No.1-B shall possess the qualification and experience as prescribed at serial number 1 of the Schedule annexed to rule 2-A.
(3) [14][If on an application for the acceptance of the stability certificate in form 1B, submitted to the State Government or Chief Inspector, no order is communicated to the applicant within forty five days from the date of its receipt, the said application shall be deemed accepted.]

Note: The competent person to give the certificate of stability shall possess:
(i) Degree in Civil or Structural Engineering or its equivalent;
(ii) A minimum of 10 years' experience in the design or construction or testing or repair of structures;

(iii) Knowledge of 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; and
(iv) Ability to arrive at a reliable conclusion with regard to the safety of the structure or the building."]

5. Authority to sign certificate of stability

No person excepts in the case of building owned by any Government shall be authorised to sign a certificate of stability or to certify plans and specifications who is in the employment of the owner or builder of the building in respect of which the certificate is given.

6. Internal height of work-rooms

(i) The internal height of a work-room shall be not less than 4.5 metres measured from the floor level to the lowest part of the roof and if the roof is of corrugated iron which is neither covered with tiles nor has an inner ceiling or lining of heat resisting material with an air space of at least 10 cms between it and the corrugated iron, the internal height shall be not less than 5m [15][:]

Provided that in the case of building having a brick or concrete roof or a combination of the two, the minimum height may be 3.75 metre, if approved by the Chief Inspector of Factories;
[16][Provided further that in the case of all the factories employing any numbers of workers, the Chief Inspector may, where he is satisfied that the conditions of work are reasonably good, (where no fumes/smoke or dangerous vapours are produced and where the facilities of air conditioning/cooling is provided) exempt such factories from the provisions of this sub-rule.]
(ii) There shall be provided at all times for each person employed in any room of a factory where mechanical or electrical power is used, at least 36 square feet(3.35 square metres) of floor space exclusive of that occupied by machinery and a breathing space of at least 500 cubic feet (14cubic metre).
(iii) Particulars of each work-room of the factory (except the factory declared and defined as such under Section 85 of the Act) in which persons are regularly employed shall be entered in Form 1-A which shall be shown to the Inspector when required.

The provisions of sub-rule (1) of the Rule 6 shall not apply to rooms intended for storage, godowns and like purposes and also rooms intended solely for office purpose where only clerical work is done.

7. Application for registration and grant of licences

(1) The occupier of every factory shall submit to the Chief Inspector an application in Form No.2 [17][in triplicate] for the registration of the factory and for the grant of licence [18][***][19][:]

[20][Provided that if on an application for the grant of Licence submitted to the State Government or Chief Inspector, no order is communicated to the applicant within forty-five days from the date of its receipt, the said application shall be deemed approved.]
(2) The responsibility under this rule shall entirely lie with the occupier himself of the factory.

8. [21][Grant of licence

(1) A licence for a factory shall be granted by the Chief Inspector or any other officer appointed under sub Section 2A of section 8 of the Act and specially empowered in this behalf by the State Government, In Form No. 4 prescribed for the purpose, for a period of one year or five years [22][or ten years] as may be requested in application for the registration and grant of licence and on payment of the fees specified in Sub-rule (2).

Provided that in case an application is made for a period of five years [23][or ten years], the fee payable shall be five times [24][or ten times as the case may be] of the fee specified in the Schedule.**]**

(2) Every licence granted or renewed shall remain in force up to the 31st of December of the year for which the licence is granted or renewed.

(3) [25][Registration fee for the grant of a licence shall be charged at the rates given in the Schedule below

[26][REGISTRATION FEE

SCHEDULE

Maximum number of workers to be employed on any day during the year

Quantity of H.P. installed (Maximum H.P.)	Up to 20 Rs.	From 21 to 40	From 41 to 150	From 151 to 250	From 251 to 500	From 501 to 1000	From 1001 to 2000	From 2001 to 3000	From 3001 and above
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
Nil	1500	3000	4500	6000	7500	9000	10500	12000	13500
Upto 10	3000	6000	9000	12000	15000	18000	21000	24000	27000
Above 10 but not above 50	4500	9000	13500	18000	22500	27000	31500	36000	40500
Above 50 but not above 100	6000	12000	18000	24000	30000	36000	42000	48000	54000
Above 100 but not above 500	7500	15000	22500	30000	37500	45000	52500	60000	67500
Above 500 but not above 1000	9000	18000	27000	36000	45000	54000	63000	72000	81000

Above 1000 but not above 2000	10500	21000	31500	42000	52500	63000	73500	84000	94500
Above 2000	12000	24000	36000	48000	60000	72000	84000	96000	108000

Provided that in the case of a licence for a factory wherein dangerous operations as specified in Rule 102, are carried on, an additional registration fee at the rate of 30 rupees per worker shall be charged.

9. Amendment of licence

(1) A licence granted under Rule 8 may be amended by the Chief Inspector.

(2) A licensee who desires to have his licence amended shall submit it to the Chief Inspector with an application stating the nature of the amendment and reasons therefore[27][:]

[28][Provided that if on an application for the amendment of the License submitted to the State Government or Chief Inspector, no order is communicated to the applicant within forty-five days from the date of its receipt, the said application shall be deemed approved.]

(3) The fee for the amendment of a licence shall be [29][three hundred] rupees plus 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 fee originally paid for the licence.

(4) The occupier of a factory, wherein the quantity of horse-power or the number of persons employed exceeds or a change of the name of the occupier or location of the factory, as given in the original licence, takes place, shall apply for amendment of the current licence within a month of such an increase or change.

[30]Provided that where the occupier of a factory fails to apply for the amendment of the licence as laid down in sub-rule (4), the Chief Inspector may levy an excess fee to the extent of 25 percent of the fee chargeable for the amendment of the licence.

10. 31Renewal Of Licence

(1) A Licence shall be renewed by the Chief Inspector on payment of the same fee which is charged for the grant of a licence [32][for a year or five years for which application has been received].

(2) Occupier of every factory shall submit application in Form No.2 [33][in triplicate], for the renewal of licence, accompanied by a treasury receipt showing that [34][the renewal fee including additional registration fee wherein dangerous operations as specified in Rule 102 are carried on] has been deposited, so as to reach the Chief Inspector of Factories by the 1st of December, of the preceding year, for which licence is to be

renewed, and if the application is so made the premises shall be held to be duly licensed until such date as Chief Inspector of Factories renews the licence. [35][If on an application for the renewal of License submitted to the State Government or Chief Inspector, no order is

communicated to the applicant within forty-five days from the date of its receipt, the said application shall be deemed approved.]
(3) If the application is not made before the specified period referred to in sub-rule (2), an additional fee equal to 25 percent of the licence fee shall be payable by the licensee:

Provided that Chief Inspector of Factories may, if satisfied that the delay was unavoidable and beyond the control of the occupier or manager reduce or remit the payment of the additional fee as he thinks fit
(4) [36][while submitting an application in Form No. 2 for the renewal of licence under sub-rule (2), licence granted for the previous year shall also be forwarded along with the application.]

11. Transfer Of Licence
(1) The holder of a licence may, at any time before the expiry of the licence, apply for permission to transfer his licence to another person.
(2) Such application shall be made to the Chief Inspector, who shall, as soon as the formalities of transfer are completed, enter upon the license under his signature, and endorsement to the effect that the license has been transferred to the person named[37][:]

[38][Provided that application for the transfer of the License submitted to the State Government or Chief Inspector, no order is communicated to the applicant within forty-five days from the date of its receipt, the said application shall be deemed approved.]
(3) A fee of [39][thirty] rupees shall be charged on each such application.

12. Procedure on death or disability of license
If a licensee dies or becomes insolvent, the person carrying on the business of such licensee shall not be liable to any penalty under these rules 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 Rule 9 in his own name for the unexpired portion of the original licence.
13. Loss of licence
Where a licence granted under these Rules is [40][lost or accidentally destroyed, or defaced] a duplicate may be granted on payment of a fee of rupees [41][three hundred].
[42][Provided that if on an application for the grant of duplicate License submitted to the State Government or Chief Inspector, no order is communicated to the applicant within forty-five days from the date of its receipt, the duplicate licence shall be deemed granted.]

14. Payment of fees
(1) [43][Every application under these rules shall be accompanied by a treasury receipt showing that the appropriate fee has been paid into the local treasury under the head of account "0230-Labour & Employment-104 Fees realised under the Factories Act, 1948 [44][or e-payment can be made in the favour of Chief Inspector of Factories, Haryana, Chandigarh] [45][***]
(2) If an application for the [46][grant, transfer, renewal] or amendment of licence is rejected, the fee paid shall be refunded to the applicant.

[47]**[14-A. Prohibition of use of premises as factory without valid licence**,
An occupier of a factory shall not use any premises as a factory or carry on any manufacturing process in a factory unless a licence has been issued in respect of such premises and the same is in force for the time being:
Provided that if a valid application for grant of licence or renewal of licence has been submitted and the required fee has been paid, the premises shall be deemed to be fully licensed until such date as the Chief Inspector grants or renews the licence or refuses in writing to grant or renew licence.

15. Notice of occupation

The notice of occupation required to be given to the Chief Inspector under sub-section (1) of Section 7 shall be in [48] [Form No. 2] and shall be submitted [49][in triplicate]

[50]**[15-A. Notice of occupation of manager.**

The notice of change of manager required to be given under sub-section (4) of Section 7 of the Act shall be in Form 2-A

CHAPTER II

THE INSPECTING STAFF

16. [51][Qualifications of Inspector [Section 8]

No person shall be appointed as an Inspector for the purposes of the Act, unless he possesses the qualifications specified for Factory Inspectors in the [52][Haryana Labour Department (Group A) Service Rules, 1996 and Haryana Labour Department (Group B) Service Rules, 1987].

[53]**[16-A. Powers of Inspectors.**

An Inspector shall, for the purpose of the execution of the powers assigned to him under the Act within the local limits of his jurisdiction have power to do all or any of the following things that is to say.
(a) to photograph, [54][video record] 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 prescribed 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 proceedings arising under the Act, or in discharge of his duties as an Inspector:

Provided that the powers of district magistrates and such other public officers as are appointed to be Additional Inspectors shall be limited to the inspection of Factories for the purpose notified under sub-section (5) of Section 8.

[55]**[16.B Guidelines, Instructions and Records**

(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) The occupier shall maintain such records, as may be prescribed by the Chief Inspector in respect of monitoring of working environment in the factory."

17. Duties of Certifying Surgeon

(1) For purposes of the examination and certification of young persons who wish to obtain certificates of fitness, the Certifying Surgeon shall arrange a suitable time and place for the attendance of such persons and shall give previous notice in writing of such arrangement to the managers of factories situated within the local limits assigned to him. He [56][shall] also arrange where possible to get the women workers examined by a Lady Doctor.

(2)

(a) The Certifying Surgeon shall issue his certificates in Form No. 5**.** The foil and counterfoil shall be filled 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 of fitness is granted. The foil so delivered shall be the certificate of fitness granted under Section 69 of the Act. All counterfoils shall be kept by the Certifying Surgeon for a period of at least 2 years after the issue of the certificate [57][:]

[58][Provided that in case of different abled persons where left hand thumb impression is not possible, the impression of any finger/palm as recommended by the Certifying Surgeon shall be taken on the foil and counterfoil.]

(b) On the request of an Inspector, Certifying Surgeon or medical practitioner authorised under Section 10(2) of the Act shall examine any person produced

before him and issue certificate regarding his age and fitness. No fee shall be charged for such examination or for the grant of certificate in pursuance thereof.

(c) A Certifying Surgeon revoking a certificate under sub-section 4 of Section 69 of the Act, shall stamp the word "Revoked" in a red ink on the foil and counterfoil.

(d) If a Certifying Surgeon refuses to grant to any person a certificate under this rule, no fresh application for certificate shall be made on behalf of that person until a period of three months has elapsed, unless the Certifying Surgeon when he refused to grant the certificate, gives permission in writing, for an application to be made at an earlier date.

(e) Every practitioner authorised under sub-section (2) of Section 10 of the Act to exercise provisionally the powers of a Certifying Surgeon shall grant certificates in the manner provided under this rule. Certificates issued by him shall be valid for a period of 6 months unless countersigned by the Certifying Surgeon. The word "Provisional" shall be printed or stamped in red ink at the top of each foil and counterfoil.

(f) When a person to whom a certificate under Section 69(2) has been granted loses such certificate, he may apply to the Certifying Surgeon for a copy of the certificate, and the Certifying Surgeon, after making such enquiry from his employer if he is unemployed from his last employer and from such other sources as he deems fit, may grant a duplicate thereof. The word "Duplicate" shall be clearly written in red ink across such certificate and initialled by the

Certifying Surgeon. The counterfoil in the bound book of forms shall be similarly marked "Duplicate" and initialled.
(g) For every copy of a certificate granted under Clause (f) of this rule, a fee of [59][25 paise] which shall be credited to Government, shall be charged. The Certifying Surgeon shall maintain a register of all fees paid for the issue of copies of certificates and shall initial each entry made therein.
(h) No duplicate of a certificate granted under Section 69 of the Act shall be granted to any person otherwise than in accordance with the provisions of this rule.
(i) No child, adolescent or a young person shall be certified as fit to work in a factory unless he or she
(i) is free from organic disease;
(ii) has a good physique;
(iii) is capable of enduring of the kind of work that has to be performed in the factory;
(iv) is mentally sound; and
(v) is protected against small pox by vaccination.

(j) The examination of children and adolescents under the Act shall be carried out by the Certifying Surgeon free of charge in cases where such examination is required either by Factory Inspector or by the manager or occupier of the factory where the candidate concerned is either already employed or accepted for employment:

Provided that usual fees shall be charged from candidates brought for examination for purposes of the Act by the candidate's guardians or from candidates appearing on their own.
(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
(a) cases of illness have occurred which it is reasonable to believe are due to the nature of the manufacturing process carried on or other conditions of work prevailing therein; or
(b) by reason of any change in the manufacturing process carried on, or in the substances used therein, or by reason of any new manufacturing process or of any new 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 are 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 processes 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.

CHAPTER III
HEALTH
18. Record of white-washing etc.
The record of dates on which white-washing, colour washing, varnishing, etc., are carried out shall be entered in a register maintained in Form No. 7.

19. Disposal of trade waste and effluents

(1) In the case of factory where the drainage system is proposed to be connected to the public sewerage system, prior approval of the arrangements made shall be obtained from the local or other authority maintaining such system.

(2) In the case of a factory situated in a place where no public sewerage system exists, prior approval of the arrangements made for the disposal of trade wastes and effluents shall be obtained from the Public Health Authorities or such authority as the State Government may appoint in this behalf

[60][19-A. Limits of temperature and air movement [under Section 13(1)]

In any factory the maximum wet-bulb temperature of air in a work-room at a height of 1.5 metres (5 feet) above the floor level shall not exceed 30°C (86°F) and an adequate air movement of at least 30 metres per minute (100 feet per minute) shall be provided; and in relation to dry-bulb temperature, the wet-bulb temperature in the work-room at the said height shall not exceed that shown in the Schedule given 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:

[61][LIMITS OFTEMPERATUREANDAIR MOVEMENT

SCHEDULE

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	(81.9)
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 inserted in a hollow globe of 15 cm (6 in.) discoated mat black outside and kept in the environment for not less than

20 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 that 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 be correspondingly exceeded to the same extent:
Provided further that the said 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 temperatures referred to in Clause (ii) of sub-section (1) of Section 13 to which workers are exposed for short periods of time not exceeding one hour followed by an interval of sufficient duration in thermal environments not exceeding those otherwise laid down in this rule:
Provided further that the Chief Inspector, having due 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 foregoing requirement, in so far as restricting the thermal conditions within the limits laid down in the above schedule are concerned to the extent that he may consider necessary subject to such conditions as he may specify.

19-B. Provision of Thermometers [under Section 13(2)]

(1) If it appears to the Inspector that in any factory, the temperature of air in a workroom is sufficiently high and is likely to exceed the limits prescribed in Rule 19-A, he may serve on the manager 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 reading in each such work-room shall be recorded at such positions as approved by the Inspector twice during each working shift by a person especially nominated for the purpose by the manager and approved by the Inspector.
(2) If the Inspector has reason to believe that 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 provision to Rule 19-A 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.

19-C. Ventilation [under section 13(2)]

(1) In every factory the amount of ventilating opening in work-room below the caves shall, except where mechanical means of ventilations required by sub-rule (2) are provided, be of an

aggregate area of not less than 15 per cent of the floor area and so located as to afford a continued supply of fresh air:

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

Provided further that this requirement shall not apply in respect of workrooms of factories
(i) covered by Section 15; or
(ii) in which temperature and humidity are controlled by refrigeration.
(2) Where in any factory owing to special circumstances as situation with respect to adjacent buildings and such height of the building with respect to floor space, the requirements of ventilation openings under sub-rule (1) cannot be complied with or in the opinion of the Inspector, the temperature of air in a work-room is sufficiently high and is likely to exceed the limits prescribed in Rule 19-A, 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.
(3) The amount of fresh air supplied by mechanical means of ventilation in an hour shall be equivalent to at least six times of 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.
(4) In regions where in summer (15th March-15th July) dry-bulb temperatures of outside air in the shade during most part of the day exceed 35°C (95°F) and simultaneous wet-bulb temperatures are 25°C (67F) 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 15 percent or more, the Inspector may serve on the manager of the factory an order to have 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 provided by mechanical means through ducts in a plenum system, by means of central air-washing plants.

20. When Artificial Humidification Not Allowed
There shall be no artificial humidification in any room of a cotton spinning or weaving factory.
(a) By the use of steam during any period when the dry-bulb temperature of that room exceeds 85 degrees.
(b) at any time when wet-bulb reading of the hygrometer is higher than that specified in the Schedule annexed hereto in relation to the dry-bulb reading of the hygrometer at that time; or as regards a dry-bulb reading intermediate between any two dry-bulb readings indicated consequently 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:

SCHEDULE

Dry bulb	Wet bulb	Dry bulb	Wet bulb	Dry bulb	Wet bulb
60.0	58.0	77.0	75.0	94.0	86.0
61.0	59.0	78.0	76.0	95.0	87.0
62.0	60.0	79.0	77.0	96.0	87.5
63.0	61.0	80.0	78.0	97.0	88.0
64.0	62.0	81.0	79.0	98.0	88.5
65.0	63.0	82.0	80.0	99.0	89.0
66.0	64.0	83.0	80.5	100.0	89.5
67.0	65.0	84.0	81.0	101.0	90.0
68.0	66.0	85.0	82.0	102.0	90.0
69.0	67.0	86.0	82.5	103.0	90.5
70.0	68.0	87.0	83.0	104.0	90.5
71.0	69.0	88.0	83.5	105.0	91.0
72.0	70.0	89.0	84.0	106.0	91.0
73.0	71.0	90.0	84.5	107.0	91.5
74.0	72.0	91.0	85.0	108.0	91.5
75.0	73.0	92.0	85.5	109.0	92.0
76.0	74.0	93.0	86.0	110.0	92.0

Provided, however, that Clause (b) shall not apply when the difference between the wet-bulb temperature as indicated by the hygrometer in the department concerned and the wet-bulb temperature taken with a hygrometer outside in the shade is less than 3.5 degrees.

21. Provision of Hygrometer

In all departments of cotton spinning and weaving mills wherein artificial humidification is adopted hygrometer 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 departments: One hygrometer for department of less than 8400 cubic metre capacity and one extra hygrometer for each 5600 cubic metre or part thereof in excess of this.

(c) One additional hygrometer shall be provided and maintained outside each cotton spinning and weaving factory wherein artificial humidification is adopted and in a

position approved by the Inspector for taking hygrometer for each 5600 cubic metre or part thereof hygrometer shade readings.

22. Exemption from Maintenance of Hygrometers

When the Inspector is satisfied, that the limits of humidity allowed by the schedule to Rule 20 are never exceeded, he may, for any department other than the weaving department, grant exemption from the maintenance of the hygrometer. The Inspector shall record such exemption in writing.

23. Copy of Schedule to Rule 18 to be Affixed near every Hygrometer

A legible copy of the Schedule to Rule 20 shall be affixed near each hygrometer.

24. Temperature to be Recorded at Each Hygrometer

At each hygrometer maintained in accordance with Rule 21, correct wet and dry-bulb temperature 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. between 11 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 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.

25. Specifications of Hygrometer

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

(2) Two wet-bulbs shall be closely covered with a single layer of muslin kept wet by means of a 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) No part of the wet-bulb shall be within 7.62cm from the dry-bulb or less than 2.54 cm. 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) The bulb shall be spherical and of suitable dimensions and shall be freely exposed on all sides to the air of the room.

(5) The bores of the stems shall be such that the position of the top of the mercury column shall be readily distinguishable at a distance of 0.6 m.

(6) Each thermometer shall be graduated so that accurate readings may be taken between 50 and 120 degrees.

(7) Every degree from 50 degrees up to 120 degrees shall be clearly marked by horizontal lines on the stem, each fifth and tenth degree shall be marked by longer marks than the intermediate degrees and the temperature marked opposite each tenth degree i.e., 50, 60, 70, 80, 90, 100, 110 and 120.

(8) The markings as above shall be accurate, that is to say, at no temperature between 50 and 120 degrees shall be indicated readings be in error by more than two-tenths of a degree.

(9) A distinctive number shall be indelibly marked upon the thermometer.

(10) The accuracy of each thermometer shall be certified by the National Physical Laboratory, London, or some competent authority appointed by the Chief Inspector and such certificate shall be attached to the Humidity Register.

26. 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 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 rainwater 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.

27. An Inaccurate Thermometer Not To Be Used Without Fresh Certificate

If any inspector gives notice in writing that a thermometer is not accurate it shall not, after one month from the date of such notice, 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.

28. Hygrometer not to be affixed to wall, etc., unless protected by wood.

(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 2.5cm from the bulb of each thermometer.

(2) No hygrometer shall be fixed at a height of more than 1.65 m. from the floor to the top of thermometer stem or in the direct draughts from a fan, window or ventilating opening.

29. 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

30. How to introduce steam for humidification.

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

(a) The diameter of such pipes shall not exceed two inches and in the case of pipes installed after 1st day of January 1949, the diameter shall not exceed 2.5 centimeter.

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

(c) All hangers supporting such pipes shall be separated from the bare pipes by an efficient insulator not less than (12mm) in thickness.

(d) No uncovered jet from such pipe shall project more than (11.25 cm) beyond the outer surface of any cover.

(e) The steam pressure shall be as low as practicable and shall not exceed 4.9 k.g. per square centimeter.

(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 minimise the amount of heat radiated by them into the department.

31. [62]Lighting-Application And Commencement

These rules shall apply to factories in which persons are being regularly employed in a manufacturing process or processes for more than 48 hours a week, or in shifts; provided that nothing in these rules shall be deemed to require the provision of lighting of a specified standard in any building or structure so constructed that, in the opinion of the Chief Inspector, it would not be reasonably practicable to comply with such requirement.

32. Lighting Of Interior Parts.

(1) The general illumination over the interior parts of a factory where persons are regularly employed, shall be not less than [63] [Six feet candles] measured in the horizontal plane at a level of three feet above the floor.

Provided that in any such parts in which the mounting height of the light source for general illumination necessarily exceeds 25 feet measured from the floor or where the structure of the room or the position of construction of the fixed machinery or plant prevents the uniform attainment of this standard, the general illumination at the said level shall be not less than [64][two feet candles] and where work is actually being done the illumination shall not be less than [65] [six feet candles.]

(2) The illumination over all other interior parts of the factory over which persons employed pass shall when and where a person is passing, be not less than 0.5 foot candles at floor level.

(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.

33. Prevention Of Glare.

(1) Where any source of artificial light in the factory is less than 480cm. above floor level, no part of the light source or of the lighting fitting having a brightness greater than 10 candles per square inch shall be visible to person whilst normally employed within 33 metres of the source or part of the fitting as the case may be excess 20 degrees.

(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 therefrom.

34. 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 the foregoing rules for suitable lighting is inappropriate 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.

35. Exemption from rule 30.

(1) Nothing in Rule 33 shall apply to the parts of factories specified in Part 1 of the Schedule annexed hereto.
(2) Nothing in sub-rule (1) of Rule 33 shall apply to the factories or parts of factories specified in Part II of the schedule hereto annexed.

SCHEDULE
PART I
Parts of factories in which light sensitive photographic materials are made or used in an exposed condition.
PART II
Cement works
Works for the crushing and grinding of limestone
Gas works
Coke oven works
Electrical stations
Flour mills
Malting and breweries
Parts of factories in which the following processes are carried on:
Concrete or artificial stone making
Conversion of iron into steel

Smelting of iron ore
Iron or steel rolling
Hot rolling or forging, tempering or annealing of metals
Glass blowing and other working in molten glass
Tar distilling
Petroleum refining and blending
36. Quantity of drinking water.
The quantity of drinking water to be provided for the workers in every factory shall be minimum of 5 litres per worker per day and shall be readily available at all times during working hours. The Chief Inspector may, however, allow variation in the quantity of drinking water if local conditions so warrant.
37. Source of supply.
The water provided for drinking shall be supplied.
(a) [66] [from a public water supply system; or
(b) from any other source approved in writing by the Health Officer.

38. 67[Means Of Supply.
If drinking water is not supplied directly from a public water supply system or from any other water supply system of the factory approved, by the Health Officer, it shall be kept in suitable vessels, receptacles or tanks fitted with 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 in a day. All practicable measures shall be taken to ensure that the water is free from contamination.]

39. Cleanliness of well or reservoir.

(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.

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

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

40. 68[Report From Health Officer.

The Inspector may by order in writing direct the manager to obtain, at such time or at such interval as he may direct, a report from the Health Officer as to the fitness for human

consumption of the water supplied to the workers and in every case to submit to the Inspector a copy of such report as soon as it is received from the Health Officer.]

41. 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, from 69[15th April to the 15th September], every year be cooled, so that the temperature of drinking water is below [26-degree C]:

Provided that if ice is placed in the drinking water for purpose of cooling, the ice shall be clean and wholesome and shall be obtained only from a source approved in writing by the Health Officer.

(b) The cooled drinking water shall be supplied in every canteen, lunchroom and rest-room and also at convenient accessible points throughout the factory which for the purpose of these Rules shall be called “Water Centres”.

(c) The water centres 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:

Provided that in the case of 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 one for every 500 persons thereafter.

(e) Every “water centre” shall be maintained in a clean and orderly condition.

(f) It shall be in charge of a suitable person who shall distribute the water. Such person shall be provided with clean clothes while on duty.

Clause (f) shall not apply to any factory in which suitable mechanically-operated drinking water refrigerating units are installed to the satisfaction of the Chief Inspector.

42. Latrine Accommodation

Latrine accommodation shall be provided in every factory on the following scale:
(a) where females are employed, there shall be at least one latrine for 25 females.
(b) where males are employed, there shall be at least one latrine for every 25 males: provided that, where the number of males employed exceeds 100, it shall be sufficient if there is one latrine for every 25 males up to the first 100 and one for every 50 there-after.

In calculating the number of latrines required under this rule, any odd number of workers less than 25 or 50, as the case may be, shall be reckoned as 25 or 50, and the number of workers to be considered shall be maximum number employed at any time during the day.

43. Latrines to conform to public health requirements.

Latrines, other than those connected with an efficient water borne sewerage system shall comply with the standard laid down by the Public Health Authorities with respect of the designs, air space and fixations, and use of disinfectants.

44. Privacy Of Latrines.

Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings and of the design approved by the Chief Inspector.

45. Signboards to be displayed.

Where workers of both sex 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.

46. Urinal accommodation.

Urinal accommodation shall be provided for the use of male workers and shall not be less than 0.6 metre in length for every 50 males: Provided that where the number of males employed exceeds 500, it shall be sufficient if there is one urinal for every 50 males up to the first 500 employees 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 any odd number of workers less than 50 or 100, as the case may be, shall be reckoned as 50 or 100 and the number of workers to be considered shall be the maximum employed at any time during the day.

47. Urinals To Conform To Public Health Requirements

Urinals, other than those connected with an efficient water borne sewerage system, and urinals in a factory wherein more than two hundred and fifty workers are ordinarily employed shall comply with the standard laid down by the Public Health Authorities with respect to designs, and use of water and disinfectants for flushing’s.

48. Certain; Latrines And Urinals To Be Connected To Sewerage System

(a) When any general system of underground sewerage with an assured water supply for any particular locality is provided in a municipality, all latrines and urinals of a factory situated in such locality shall, if the factory is situated within 33 metres of an existing sewer, be connected with that sewerage system.

(b) When no underground sewerage system exists, the design of latrines and urinals will take into account the problem of disposal either by way of sewerage pits or by sanitary receptacles

contents of which can be disposed of without causing any insanitary or unhygienic condition in the locality.

49. White-Washing, Colour-Washing Of Latrines And Urinals

The walls, ceilings and partitions of every latrine and urinal shall be white-washed and the white-washing shall be repeated at least once in every period of four months. The dates on which the whitewashing is carried out shall be entered in the prescribed Register in Form No. 7: Providing that this rule shall not apply to latrines and urinals, the walls, ceilings or partitions of which are laid in glazed tiles or otherwise finished to provide a smooth, polished impervious surface and that they are washed with suitable detergents and disinfectants suitable intensity at Least once in every period of four months.

50. Construction and maintenance of drains.

All drains carrying waste or sullage water shall be constructed with impermeable material suitably surfaced to ensure smoothness and stance to wearing away and shall be regularly flushed and the effluent disposed of by connecting such drains with a suitable drainage line without causing unsanitary or unhygienic condition in the locality:
Provided that where there is no such drainage line the effluent shall be deodorised and rendered innocuous and then disposed of in a suitable manner to the satisfaction of the Health Officer.

51. Water-taps and latrines.

(1) Where piped water-supply is available a sufficient number of water-taps conveniently accessible shall be provided in or near such latrine accommodation.
(2) If piped water-supply is not available, sufficient quantity of water shall be kept stored in suitable receptacles near the latrines.

52. Number and location of spittoons.

The spittoons in each factory shall be located in a manner that would not violate the sanitary requirements and their numbers will be according to such standard laid down for the locality and nature of industry as the Health Officer may determine for each factory.

53. Type of spittoons.

The spittoons shall be of the approved designs and either of the following types:
(a) a galvanised iron container with a conical funnel shaped cover. A layer of suitable disinfectant liquid shall always be maintained in the container;
(b) a container filled with dry, clean sand, and covered with a layer of suitable thickness of Lime or bleaching powder;
(c) any other type approved by the Health Officer.

54. Cleaning of spittoons.

The spittoons mentioned in Clause (a) of Rule 53 shall be emptied, cleaned and disinfected at least once every day; and the spittoon mentioned in Clause (b) of Rule 53 shall be cleaned by scraping out the top layer of sand as often as necessary or at least once every day.

CHAPTER IV

SAFETY

55. Further safety precautions.

(1) without prejudice to the provision or sub-section (1) of Section 21 of the Act in regard to the fencing of machines the further precautions specified in Schedules [70][I to VII][71] annexed hereto shall apply to the machines noted in each Schedule.

SCHEDULE I

Textile Machinery Except Machinery Used In Jute Mills

1. Application: The requirements of this Schedule shall apply to machinery in factories engaged in manufacturing 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. Definitions: For the purposes of this Schedule.

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

(b) "embossing calender" means a calender with two or more rolls, one of which is engaged 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 each other so that fibres in staple from may be separated into individual relationship. The speed of the cylinders and their direction of rotation varies. The finished product is delivered as a silver. Cards of different types are the revolving flat card, the roller and cleaner card , etc.;

(d) "Card clothing" means the material with which the surfaces of the cylinder, Doffer flats, etc. of a card are covered and consists of a thick foundation material made of either textile fabrics, through which 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 whereof 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, 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 lengths;

(h) "Garnett machine" means any number of types of machines for opening hard twisted waste of wool, cotton, silk, etc., Essentially such machines consist of a licker-in; one or more cylinders each having a complement worker and stringer rolls, and a fancy roll and doffer. The action of such machines is somewhat like that of a wool card, but it is much more severe in that the various rolls are covered with garnett wire instead of card clothing;

(i) "Gill box" means a machine used in the worsted system of manufacturing yarns. Its functions is to arrange fibres in parallel order. Essentially, it consists of a pair of feed rolls and a series of follower where the followers move at a faster surface speed and perform a combine 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 a machine or the machine itself while the guard, cover or door provided to safeguard against danger is open or un-locked, and which will also hold the guard, cover or door closed and locked- while the machine or the dangerous part thereof is in motion;
(l) “Kier” means large metal vat, usually a pressure type, in which fabrics may be boiled out, bleached etc.
(m) “Ribbon lapper” means a machine or a part of a machine used to prepare laps for feeding a cotton comb; it’s 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 part of a machine in which a number of parallel card silvers are drafted slightly, side laid 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 yarns crossing one another at right angles. The warp yarns are wound on a warp beam and pass through needless and reeds. The filling is shot across in a shuttle and settled in place by reeds and slay and the fabric is wound on a 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 at 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 form 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 its carries the spindles which draft and the spin and roving the yarn. 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 nipping hazard;
(t) “Openers and pickers” means a general classification of machinery, which includes breaker pickers, intermediate pickers, finishers pickers, single process pickers, multiple process pickers, willow machines, care and pickers waste cleaners, thread extractors, shredding machines, roving waste openers, shoddy pickers, bale breakers, feeders, vertical openers, lattice cleaners horizontal cleaners and any similar machinery equipped with either cylinder, screen section, calender section, rolls or beaters used for the preparation of stock for further processing;
(u) “Paddler” means a trough for a solution and two or more squeeze rollers between which cloth passes after being passed through a mordent or dye bath;
(v) “Platting machine” means a machine used to lay cloth into folds of required length for convenience of subsequent process or use;
(w) “Roller printing machine” means a machine consisting of a large 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 of fabrics.

(x) “Continuous bleaching range” means a machine used for bleaching of cloth in rope or open-width form with the following arrangement. The cloth after wetting out, passes through a squeeze roll into a saturator containing a solution of caustic soda and then to an enclosed J-Box. AV-shaped arrangement is attached to the front part of J-Box for uniform and rapid saturation of the cloth, with steam before it is racked down in the J-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 arm so that the cloth is rapidly saturated with steam at this point; the J-Box capacity is such that cloth wiIl remain hot for a sufficient time to complete the scouring 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 be applied to open-width cloth;
(y) “Mercerizing range” means a 3 bowl mangle, a tenter frame, and a number of boxes for washing and scouring. 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 close contact with a fixed ladger blade. There may be from one to six such rollers on a machine;

(ab) “Singeing machine” means a machine which comprises of a heated roller, plate, or an open gas flame. The cloth or yarn is rapidly passed over the roller or the plate or through the open gas flame, to remove fuzz of hairiness by burning;
(ac) “Slasher” means a machine used for applying a size mixture to warp yarns. Essentially, it consists of a stand for holding section beams, a size box, one or more cylindrical dryers or an enclosed hot air dryer, and a beaming end for winding the yarn on the loom beams;
(ad)“Tenter frame” means a machine for drying cloth under tension. Its essentially consists of a pair of endless traveling chains fitted with clips of fine pins and carried on tracks. The cloth is firmly held at selvages by the two chains which diverge as they move forward so that the cloth is brought to the desired width;
(ae) “Warper” means a machine for preparing and arranging the yarn intended for the warp of fabric, specifically a beam warper.
3. General safety requirements
(i) Every textile machine shall be provided with individual mechanical or electrical means for starting and stopping such machines. Belt shifter on machines driven by belts and shafting should be provided with a belt shifter lock or an equivalent positive locking device.
(ii) 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 or any other part of the machine.

[72][Provided that the requirement of automatic locking device shall not apply while stripping or grinding operations are carried out;
Provided further that striping or grinding operation shall be carried 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) or section 22]
(iii) All belts, pulleys, gears, chains, sprockets wheel, and other dangerous moving parts of machinery which either form part of the machinery or are used in association with it, shall be securely guarded.
4. Openers and pickers;
(i) In all operating 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 doors or covers of openings giving access to any dangerous part of the machinery shall be provided with interlocking arrangement:

Provided that in the case of doors or covers openings giving access to any dangerous part other than beater covers, instead of the inter-locking arrangement, such openings may be so fenced by guards which prevent access to any such dangerous part and which is either kept positively locked in position or fixed in such a manner that it cannot be removed without the use of hand tools;
(ii) The feed rolls on all opening and picking machinery shall be covered with a guard designed to prevent the operator from reaching the nip while the machinery is in operation.
(iii) 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 machine cannot be started until the Cover of 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 used unless the automatic lap forming device is in efficient working order.
5. Cotton Cards.
(i) 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 later requirement in respect of automatic locking device shall not apply while stripping or grinding operations are carried out:
Provided further that stripping or grinding operation shall be carried out only by specially trained adult workers wearing tight fitting clothing whose names have been recorded in the register specified in sub-section (1) of section 22;
(ii) The licker in shall be guarded so as to prevent access to the dangerous parts.
(iii) Every card shall be equipped with an arrangement that would enable the card cylinder to be driven by power during stripping/grinding operations without having to either shift the main belt to the fast pulley of the machine or dismantle the interlocking mechanism

such an arrangement shall be used only for strip or grinding operations.
6. Garnett Machines.
(i) Garnett lickerins shall be closed
(ii) Garnett factory rolls shall be enclosed by guards. These shall be installed in a way that keeps workers rolls reasonably accessible for removal or adjustment;

(iii) The underside of the garnett shall be guarded by a screen mesh or other form of enclosures to prevent access.
7. Gill boxes.
(i) The feed end shall be guarded so as to prevent fingers being caught in the pines of the intersecting fallers;
(ii) All nips of in-running rolls shall be guarded by suitable nip guards conforming to 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 circumstances, the maximum width of the opening shall not exceed the following :

Distance of opening from nip point	**Maximum width of opening**
8 to 38 mm	6 mm
39 to 63 mm	10 mm
64 to 88 mm	13 mm
89 to 140 mm	15 mm
141 to 165 mm	19 mm
166 to 190 mm	22 mm
191 to 215 mm	32 mm

8. Silver and Ribbon Lappers (cotton) - The cylinder drums and the lap spool shall be provided with a guard to prevent access to the nip between the in-running rolls.
9. Speed frame- Jack Box wheels at the headstock shall be guarded and the guard shall have interlocking arrangement.
10. Spinning Mules- Wheels on spinning mule carriages shall be provided with substantial wheel extending to within 6 mm of the rails.
11. Warpers- Swiveled double-bar gates shall be installed on all warpers operating in excess of 410 meters/min. These gates shall have interlocking arrangements, except for the purpose of inching or jogging.

Provided that the top and bottom bars of gates shall be at least 1.05 and 0.53 meters high from the floor or working platform, and gate shall be located 38 mm from vertical tangement to the beam head.

12. Slashers-
(i) Cylinder dryers:
(a) All open nips of in-running rolls shall be guarded by nip guards conforming to the requirements in paragraph 7.

(b) When slashers are operated by control levers, these levers shall be connected to a horizontal bar on treadle located no more than 170cm above the floor to control the operation from any point.
(c) Slashers operated by push button control shall have stop and start buttons located at each of the machine and additional buttons located on 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 machines at points near the nips, except when slashers are equipped with an enclosed dryer as in paragraph (b).
(ii) Enclosed hot air dryer
(a) All open nips of the top squeezing rollers shall be guarded by nip guards conforming to the requirement in paragraph 7(2).
(b) When slashers are operated by control layers, 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.
(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 button located on both sides of the machine at intervals spaced not more than 8.83 meters from centres.
13. Looms – Each loom shall be equipped with suitable guards designed to minimize the danger from flying shuttles.
14. Valves of Kiers, tanks, and other containers:
(i) Each valve controlling the flow of steam injurious gases or liquids into a kier or 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 locking 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.
(ii) Wherever boiling tanks, caustic tanks and any other containers from which liquids which are hot, corrosive or toxic may overflow or splash, are located that the operator cannot see the contents from the floor or working area, emergency shut off valves which can be controlled from a position not subject to danger of splash shall be provided to prevent danger.
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 do not exceed 10 mm.
16. Continuous bleaching range (cotton and rayon): The nip of all in running rolls on open-width bleaching machine roll 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
(i) A stopping device shall be provided at each end of the machine.
(ii) A guard shall be provided at each end of the frame between the in running chain and the clip opener.

(iii) 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. Tenter frames:
(i) A stopping device shall be provided at each end of the machine.
(ii) A guard shall be provided at each end of the machine frame at the in-running chain and clip opener.
19. Paddlers-Suitable nip guard conforming to the requirements in paragraph 7(2) shall be provided to all dangerous in-running rolls.
20. Centrifugal extractors:
(i) Each extractor shall be provided with a guard for the basket, and the guard shall have interlocking arrangement.
(ii) 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 decating machine: - All in-running rolls shall be guarded with nip guards conforming to the requirements paragraph 7(2).
22. Sanforizing and palmer machine:
(i) Nip guards shall be provided on all accessible in-running rolls and these shall conform to the requirements in paragraph 7(2).
(ii) Access from the sides to the nips of in-running rolls should be fenced by suitable side guards.
(iii) A safety trip rod, cable or wire center card shall be provided across the front and back of all palmer cylinders extending the length of the face of the cylinders, It shall operate readily whether pushed or pulled. This 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:
(i) Splash guards shall be installed in all rope washers unless the machine is so designed as to prevent the water or liquid from splashing the operator, the floor, or working surface;

(ii) A safety trip rod, cable or wire 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. This 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:
(i) Each drying tumbler, each double cylinder shaker or clothes tumbler, and each washing machine shall be equipped with an interlocking arrangement which will prevent the power operation of the inside cylinder when the outer door on the case or shall is open and which will also prevent the outer door in the case or shall 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.
(ii) Each closed barrel shall also be equipped with adequate means for holding open the doors or covers of the inner and outer cylinders or shells while it is being loaded or unloaded.
25. Printing machine (roller type):
(i) All in-running rolls shall be guarded by nip guards conforming to the requirements in paragraph 7 (2)

(ii) The engraved roller, gears and the large crown wheel shall be guarded.
26. Calendars-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 contracted that the cloth can be fed into the rolls safely.
27. Rotary staple cutters- The cutter shall be protected by a guard to prevent hands reaching the cutting zone.
28. Platting machines- Access to the trap between the knife and card bar shall be prevented by a guard.
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 traveling beyond the vertical position should be handle slip from the operator's hand when the pawl has been released from the teeth of the take-up gear.
30. Flat-Work ironer- Each flat-work or roller iron shall be equipped with a safety bar 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 the operator or other person will stop the machine. The guard shall be such that the operator or other person cannot reach into the rolls without removing the guards. 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 not be less than 1.13 meters."

SCHEDULE II
(Cotton Ginning)
Line shaft: - The line shaft or second motion in cotton ginning factories, when below floor level shall be completely enclosed by a continuous wall or claimable 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.
SCHEDULE III
(Woodworking Machinery)
1. Definitions: -For the purposes of this Schedule:
(a) `Woodworking machine' means a circular saw, band saw, planning machine, chain mortising machine or vertical spindle moulding machine, operating on wood or cork.
(b) `Circular saw' means a circular saw working in a bench (including rack bench) but does not include a pendulum or similar saw which is moved towards the wood for the purpose of cutting operation.
(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.
(d) `Planning machine' means a machine for overhand planning or thicknessing or for both operations.
2. Stopping and starting device- An efficient stopping and starting device shall be provided on every woodworking 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.

3. Space around machine- The space surrounding every woodworking machine in motion shall be kept free from obstruction.
4. Floors- The floor surrounding every woodworking 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.
5. Training and Supervision:
(1) No person shall be employed at a woodworking machine unless he has been sufficiently trained to work that class or machine or unless he works under the adequate supervision of a person who has a thorough knowledge of the working of the machine.

(2) A person who is being trained to work a woodworking 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.
6. Circular Saws-Every circular saw shall be fenced as follows-
(a) Behind and in direct line with the saw there shall be a driving knife, which shall have a smooth Surface, shall be strong, rigid and easily adjustable and shall also conform to the following conditions:
(i) The edge of the knife nearer the saw shall form an arc of a circle having a radius of not exceeding the radius of largest saw used on bench.
(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 of the bench table the distance between the front edge of the knife and the teeth of the saw shall not exceed 12 mm.
(iii) For a saw of a diameter of less than 0.6 meter, the knife extends upwards from the bench table to within 25 mm of the top of the saw, and for a saw of a diameter of 0.6 meter or over shall extend upwards from the bench teeth of the saw shall not exceed 12 mm.
(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 driving knife to a point as low as practicable at the cutting edge of the saw.
(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 15 cm apart, and shall extend from the axis of the outwards to a distance of not less than 5cm beyond the teeth of the saw- Metal plates, if not headed, shall be of a thickness of at least 25 cm. or if headed be of a thickness of at least 125 centimetres
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.
8. Band Saws- Every band saw shall be guarded as follows
(a) Both sides of the bottom pulley shall be completely encased by sheet or expanded metal or other suitable material.
(b) The front of the top pulley shall be covered with sheet or expanded metal or other suitable material.
(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.

9. Planning Machines:

(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.
(2) Every planning machine used for overhand planning shall be provided with a “bride” 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.
(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.
10. Vertical spindle moulding machines:
(1) The cutter of every vertical spindle moulding machine shall be guarded by the most efficient guard having regard to the nature of the work being performed.
(2) The wood being moulded at vertical spindle moulding 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.
11. Chain mortising machines- The chain of every chain mortising machine shall be provided with a guard which shall enclose the cutters as far as practicable.
12. Adjustment and maintenance of guards- The guards and other appliances required under this Schedule shall be:
(a) Maintained in an efficient state.
(b) Constantly kept in position while the machinery in motion, and
(c) So adjusted as to enable the work to be done without unnecessary risk.
13. Exemption- 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. 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 85cm. above the floor or working level. Provided that in existing installations where the top of the front roll is below this height a strong rigid distance bar shall be fitted across the front of the machine in such position that the operator cannot reach the nip of the rolls.
2. Safety devices:
(1) Rubber Mills shall be equipped with

(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.
(b) Horizontal-safety trop rods or tight wire cables across both front and rear which will when pushed or pulled, operate instantly to disconnect the power and apply the brakes or to reverse the rolls.
(2) Safety trip rods or tight wire cables on rubber mills shall extend across the entire length of the face of the rolls and shall be located not more than 1.75 meter above the floor or working level.

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

SCHEDULE V
(Centrifugal Machines)

1. Definition: "Centrifugal Machines" include centrifugal extractors, separators and driers.
2. Every part of a centrifugal machine shall be
(a) Of good design and construction and of adequate strength;
(b) Properly maintained; and
(c) examined thoroughly by a competent person at regular intervals.
3. Interlocking guard for drum or basket-
(1) The cage housing, the rotating drum or basket of every centrifugal machine shall be provided with a strong lid. The design and construction of the cage as well as the lid should be such that no access is possible to the drum or basket when the lid is closed.
(2) Every centrifugal machine shall be provided with an efficient interlocking device that will effectively prevent the lid referred to in sub-paragraph (1) from being opened while the drum or basket is in motion and prevent the drum or basket being set in motion while the lid is in the open position.
4. Braking arrangement- Every centrifugal machine shall be provided with an effective braking arrangement capable of bringing the drum or basket to rest within as short a period of time as reasonably practicable after the power is cut off.
5. Operating speed: No centrifugal machine shall be operated at a speed in excess of the manufacturers rating which shall be legibly stamped at easily visible places both on the inside of the basket and on the outside of the machine casing.
6. Exceptions: Sub-paragraph (2) of para 3, para 4 and 5 shall not apply in case of top lung machines or similar machines used in the sugar manufacturing industry.

SCHEDULE VI
(Powers Presses)

1. Application- This Schedule shall apply to all types of power presses including press brakes, except when used for working hot metal.
2. Definition- For the purpose of this Schedule,
(a) "Approved" means approved by the Chief inspector;
(b) "Fixed fencing" means fencing provided for the tools of a power press being fencing which has no moving part associated with or dependent upon the mechanism of a power and includes that part of a closed tool which acts as a guard;
(c) "Power press" means a machine used in metal or other industries for moulding, pressing, blanking, raising, drawing and similar purposes;
(d) "Safety device" means the fencing and any other safeguard provided for the tools of a power press.
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 ran during tool setting, etc.

4. Protection of tool and die
(1) Each press shall be provided with a fixed guard with a slip plate on the underside enclosing the front and all sides of the tool.
(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.
(3) The design construction and mutual position of the guards referred to in sub-Para-graphs (1) and (2) shall be such as to preclude the possibility of the worker's hand or fingers reaching the danger zone.
(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 second or subsequent operations if feeding is done through a chute.
(5) Notwithstanding anything contained in sub-paragraphs (1) 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 guard is removed.
5. Appointment of persons to prepare power for use:
(1) Except as provided in sub-paragraph (4) of 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:
(a) has attained the age of eighteen;
(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 these duties in respect of the class or description of power press or the class or description of safety device as the case may be belonging and the name of every such person shall be entered in a register in Form 9.
(2) The training shall include suitable and sufficient practical instructions in the matter in relation to each type of power press and safety device in respect of which it is proposed to appoint the person being trained.
6. Examination and testing of power presses and safety devices
(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 a power press, after installation in the factory or in the power press in connection with which it is to be used.
(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 12 months.
(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.
(4) The competent person carrying out an examination and test under the foregoing provision shall make a report of examination and test containing the following particulars and every such report shall be kept readily available for inspection;

(a) Name of the occupier of the factory;
(b) Address of the factory;
(c) Identification number or 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 affecting the safe working of the power press or the safety device found during any such thorough examinations 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 safety device (as the case may be) ought not to 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 (1) of this sub-paragraph 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 notified 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 14 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 (a) of sub-paragraph (1) until the said defect has been remedied; and
(b) in the case of defect falling within clause (b) of sub-paragraph (1) after the expiration of the specified period unless 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 behalf of the occupier stating the measures by which and the date on which the defect was remedied.
8. Inspection and test of safety devices:
(1) No power press shall be used after the setting, resetting or adjustment of the tools thereon unless a person appointed or authorized 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 device remain, in the opinion of the said person aforesaid, in efficient working order.
(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.
9. Defects disclosed during an inspection and test:
(1) Where it appears to any person as a result of any inspection and test carried out by him under paragraph 8 that any necessary safety device is not in position or is not properly in position on a power press or that any safety device which is in position on a power press is not in his opinion suitable, he shall notify the manager forthwith.
(2) Except as provided in sub-paragraph (3) where any defect is disclosed in a safety device any inspection and test under paragraph 8, the person carrying out the inspection and test shall notify the manager forthwith.
(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 to the said defect until the said period has expired.
10. Identification of power presses and safety devices- For the purpose of identification every power press and every safety device provided for the same shall be distinctively and plainly marked.
11. Training the instructions to operators- The operators shall be trained and instructed in the safe method of work before starting work on any power press.
12. Exemptions
(1) If in respect of any factory, the Chief Inspector of Factories 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 or any class or description of the workers employed on any power press the Chief Inspector of Factories may by a certificate in writing (which he may in his discretion revoke at any time)exempt such factory from all or any such provisions subject to such conditions, if any, as he may specify therein.
(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 be conveniently read by the persons employed.

[SCHEDULE VII
(Shears, Slitters And Guillotine Machines)
1. Definitions-For the purpose of this schedule:
(a) “Guillotine” means a machine ordinarily equipped with straight, bevel edged blade operating Vertically against a stationery resisting edge and used for cutting metallic or non-metallic or non-metallic substances;
(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;
(c) “Slitter” or slitting machine” means a machine ordinarily equipped with circular disc type knives and used for trimming 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 slices equipped with rotary knives or cutting discs.
2. Guillotine and Shears:
(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 staring 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 from the danger zone at every descent of the blade.
(2) At the back 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.
(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 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 decent of the blade, used in conjunction with one hand starting 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 Machine:
(1) Circular disc type knives or machines for cutting metal and leather, paper, rubber, textile or other non-metallic substances shall, if within reach of operators standing on the floor of working level, be provided with guards enclosing the knife edges at all times as near as practicable to the surface of the material, 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 6 mm (1/4inch) at any time.
(2) Portions of blades underneath the tables or benches of slitting machines shall be covered by guards.

4. Index cutters and Vertical Paper Slotters: Index cutter and other machines for cutting strips from the ends of books, and for similar operations, shall be provided with fixed guards, so arranged 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 other guards equally efficient for the protection of the fingers of the workers.
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 wheel guards on horizontal machines, shall be completely enclosed with hinged guards of sheet metal not less than 1 mm (0.04 inch) in think-ness or of other material of equal strength.

[73]**[55-A.**
In every factory a register shall be maintained in Form 7-A in which name and other particulars of every such worker as may be employed or required to perform the duties specified in sub-section (1) of Section 21 shall be entered.

56. 74[Employment Of Young Persons On Dangerous Machines.
The following machines shall be deemed to be of such dangerous character that young persons shall not work at them unless the provisions of Section 23(1) of the Act are complied with-
(a) Power presses other than hydraulic presses;
(b) Milling machines used in the metal trades;
(c) Circular saws;
(d) Platen printing machines;
(e) Guillotine machines;
(f) Decorticater;
(g) Oil-expeller.]

[75] **[56-A. Water-sealed gasholder.**
(1) The expression "Gasholder" means a water-sealed gasholder which has a storage capacity of not less than 141.5 cubic metres (5,000 cft.)
(2) Every gasholder shall be of adequate material and strength, sound construction and properly maintained.
(3) Where there is more than one gasholder in the factory every gasholder shall be marked in a conspicuous position with a distinguishing number of letter.
(4) Every gasholder shall be thoroughly examined externally by a competent person at least once in a period of 12 months.
(5) In the case of gasholder of which any lift has been in use for more than 10 years, the internal state of the sheeting shall, within one year of the coming into operation of these rules and thereafter at least every period of four years, be examined by a competent person by means of electronic or other accurate devices:

Provided that if the Chief Inspector 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;
Provided further that if the above inspection raises a doubt, an internal visual examination shall be made.

(6) All possible steps shall be taken to prevent or minimise ingress of impurities in the gasholder.

(7) No gasholder 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.
(8)
(i) All sample disc cut under sub-rule (5) shall be kept readily available for inspection,
(ii) A permanent register duly signed by the occupier and manager shall be maintained in Form No. 33.
(iii) The result of examinations by a competent person carried out under sub-rules (4) and (5) shall be in Form No. 33-A.
(iv) A copy of the report in Form No. 33-A shall be kept in the register in Form No. 33 and both the register and the report shall be readily available for inspection.
(9) The Inspector of Factories shall inspect the gasholder at least once in a period of 12 months.

57.
The following Parts Of Machines Deemed To Be Guarded By The Makers For The Purpose Of Section 26(1) Of The Act
(1) Back gears, change wheels and cog drives of lathes.
(2) Back gears and level gearing of drilling machines.
(3) Gear wheels and level drives of planning, shapping, slotting and milling machines.
(4) All cog and level drives of oil expellers.

58. Register of specially trained adult workers.
Registers of workers attending to machinery as provided in sub-section (1) of Section 22 of the Act shall be in Form 7`A'.
59. Belts, etc. To be regularly examined
All belts shall be regularly examined to ensure that the joints are safe and belts at proper tension.
60. 76[Hoists and lifts.
(1) A register shall be maintained to record particulars of examination of hoists or lifts and shall give particulars as shown in Form 37.]
(2) Exemption of certain hoists and lifts-In pursuance of the provisions of sub-section (4) of Section 28 of the Act in respect of any class or description of hoists or lifts specified in the first column of the Schedule annexed hereto, the requirements of this section as specified in the second column of the said Schedule and set opposite to that class or description of hoist or lift shall not apply.

SCHEDULE

I	II

Class or description of hoist or lift	Requirement which shall not apply
Hoists or lifts mainly used for raising materials 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 (d) sub section 1(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 section 1(e)

[77]**[60-A Lifting Machines, Chains, Ropes And Lifting Tackles.**

(1) No lifting machine and no chain rope or lifting tackle, except fibre rope or fibre rope sling, shall be taken into use in any factory for the first time in that factory unless it has been tested and all parts have been thoroughly examined by a competent person and a certificate of such a test and examination, specifying the safe working load or loads and signed by the person making the test and the examination has been obtained and is kept available for inspection

(2)

(a) Every jib-crane so constructed that the safe working load may be verified by the raising or lowering of the jib shall have attached thereto either an automatic indicator of safe working loads or an automatic jib angle indicator and a table indicating the safe working loads at corresponding inclinations of the jib or corresponding radii of the load.

(b) A table showing the safe working loads of every kind and size of chain, rope, or lifting tackle in use, and in the case of multiple sling, the safe working loads at different angles of the legs, shall be posted in the store room or place where or in which the chains, ropes or lifting tackles are kept, and in the prominent position on the premises and no rope, chain or lifting tackle not shown in the table shall be used:

Provided that the foregoing provisions of this clause shall not apply in respect of such lifting tackle if the safe working load thereof, or in the case of a multiple sling the safe working load at different angles of the legs, is plainly marked upon it.

(3)

(a) A register to be maintained under sub-section (iii) of the clause (a) of sub-section (1) of Section 29 of the Act shall contain the following particulars.

(i) Name of occupier of factory,

(ii) Address of the factory.

(iii) Distinguishing number or mark, of any description sufficient to identify the lifting machine, chain, rope or the lifting tackle.

(iv) Date when the lifting machine, chain, rope or lifting tackle was first taken into use in the factory.
(v) Date and number of the certificate relating to any test and examination made under sub-rules (1) and (7) together with the name and address of the person who issued the certificate.
(vi) Date of each periodical thorough examination made under subsection (iii) of clause (a) of sub-section (1) of Section 29 of the Act and sub-rule (6) and by whom it was carried out.
(vii) Date of annealing or other heat treatment of the chain and other lifting tackle made under sub-rule (5) and by whom it was carried out.
(viii) Particulars of any defects affecting the safe working load found at any such thorough examination or after annealing and of the steps taken to remedy, such defects.
(b) The register shall be kept readily available for inspection.
(4) All rails on which travelling crane moves and every track on which the carriage of a transporter or runway moves, shall be of proper size and adequate strength and have an even running surface and every such rail or track shall be properly laid, adequately supported and properly maintained
(5) All chains and lifting tackles, except a rope sling, shall, unless they have been subjected to such other heat treatment as may be approved by Chief Inspector of Factories, be effectively annealed under the supervision of a competent person at the following intervals
(i) All chains slings, rings, hooks, shackles and swivels used in connection with molten metal or molten slag or when they are made of half inch bar or smaller, once at least in every six months.
(ii) All other chains, rings, hooks, shackles and swivels in general use, once at least in every twelve months:

Provided that chains and lifting tackles not in frequent use shall, subject to the approval of Chief Inspector, be annealed only when necessary. Particulars of such annealing shall be entered in the register prescribed under sub-rule (3).
(6) Nothing in sub-rule (5) shall apply to the following classes of chains and lifting tackles
(i) Chains made of malleable cast iron.
(ii) Plate link chains.

(iii) Chains, rings, hooks, shackles and swivels made of steels or of any non-ferrous metal.
(iv) Pitched chains working on sprocket or pecketed wheels.
(v) Rings, hooks, shackles and swivels permanently attached to pitched chains pulley blocks or weighing machines.
(vi) Hooks and swivels having screw threaded parts or ball bearing or other case hardened parts.
(vii) Socket shackles secured to wire ropes by white metal capping,
(viii) Bordeaux connections.

Such chains and lifting tackle shall be thoroughly examined by a competent person once at least in every 12 months, and particulars entered in the register kept in accordance with sub-rules (3).

(7) All lifting machines, chains, ropes and lifting tackle except a fibre rope or fibre rope sling, which have been lengthened, altered or repaired by welding or otherwise shall, before being again taken into use be adequately retested and re-examined by a competent person and a certificate of such test and examination be obtained, and particulars entered in the register kept in accordance with sub-rule (3).
(8) No person under 18 years of age and no person who is not sufficiently competent and reliable shall be employed as driver of a lifting machine whether driven by mechanical power or otherwise, or to give signals to a driver.

[78][60-B Passageways for cranes.
(1) To provide access to rail track of overhead travelling cranes suitable passageways of at least fifty centimetre (twenty inches) width with toe boards and double hand rails ninety centimetre (three feet) shall be provided alongside, and clear of, the rail track of overhead travelling cranes, such that no moving part of the crane can strike persons on the ways, and the passageway shall be at a lower level than the crane track itself. Safe access ladders shall be provided at suitable intervals to afford access to these passageways, and from passageways to the rail tracks.]
(2) [79][The Chief Inspector may, for reason to be specified in writings exempt any factory in respect of any over-head travelling crane from the operation of any provision of clause (1) subject to such conditions as he may specify.]
(3) [80][Where the Chief Inspector of Factories is satisfied that in a factory due to shut down or for any other reason it is not practicable to maintain a minimum distance of twenty feet between the person employed or working on or near the wheel track of a travelling crane and the crane, he may, on the request of the manager, reduce the distance to such an extent as he may consider necessary and also prescribe further precautions indicating appointment of suitable number of supervisors to ensure the safety of the persons while they are employed to work on or near the track."]

61. [81]Pressure Vessels Or Plants

(1) In this rule
(a) "design pressure" means the maximum pressure that a pressure vessel or plant is designed to withstand safely 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 an unfired vessel that may be used for containing, storing, distributing, transferring distilling, processing or otherwise handling any gas, vapour or liquid under pressure greater than the atmospheric pressure and include any pipeline fitting or other equipment attached thereto or used in connection there-with; and

(e) “competent person” means a person who, in the opinion of the Chief Inspector of Factories, is capable by virtue of his qualifications, training and experience of conducting a thorough examination and pressure tests, as required on a pressure vessel or plant, and of making a full report on its condition.
(2) Nothing in this rule shall apply to
(a) Vessels having internal diameter not exceeding 150 mm (6 “) and a capacity not exceeding 141.585 litres (5 cu. ft.);
(b) vessels made of ferrous materials having an internal operating pressure not exceeding 1 kg/sq. cm (15 lbs/sq. inch);
(c) steam boilers, steam and feed pipes and their fittings, coming under the purview of the Indian Boilers Act, 1923 (5 of 1923);
(d) metal bottles or cylinders used for storage or transport of compressed gases or liquified or dissolved gases under pressure covered by the Gas Cylinder Rules, 1940 framed under the Indian Explosive Act, 1884 (4 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 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 movers, feed pumps and steam traps; turbine casing; compressor cylinders; steam separators or dryers; steam strainers; steam de-super heaters; oil separators; air receivers for fire sprinkler installations; air receivers of monotype machines, provided the maximum

working pressure of the air receiver does not exceed 1.33 kg/sq. cm. 2(201 Ibs/sq. in.) 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 appliance, such as cylinders and piston assemblies used for operating relays and inter-locking 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.
(3) Every pressure vessels or plant used in a factory shall be:
(a) properly designed on sound engineering practice;
(b) of good construction, sound material, adequate strength and free from any patent defects; and
(c) properly maintained in a safe condition;

Provided that the pressure vessels or plant in respect of the design and construction of which there is an Indian Standard or a 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.
(4) Every pressure vessel shall be fitted with

(a) a suitable safety valve or other effective pressure relieving device of adequate capacity to ensure that the maximum permissible working pressure of the pressure vessel shall not be exceeded. It shall be set to operate at a pressure not exceeding 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 the additional device shall be set to discharge at a pressure not more than five per cent in excess of the maximum permissible working pressure;
(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 and marked with a prominent red mark at the maximum permissible working pressure of the pressure vessel;
(c) a suitable nipple and globe valve connected for the exclusive purpose of attaching a test pressure gauge for checking the accuracy of the pressure gauge referred to in clause (b);
(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 or 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 valves 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 lead, only one set of such mountings need be fitted on the pressure lead immediately adjacent to the range of pressure vessels, provided they cannot be isolated.
(5) 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 vessel with any other source of supply, shall be fitted with a suitable pressure reducing valve or other suitable automatic device to prevent the maximum permissible working pressure of the pressure vessel being exceeded.

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.
(6) No new pressure vessel or plant shall be taken into use in a 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 which has remained isolated or idle for a period exceeding 2 months or which has undergone alterations or repairs shall be taken into use in a factory unless it has been thoroughly 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 used in service when even some traces of water cannot be tolerated, shall be pneumatically tested at a pressure not less than the design pressure or 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.
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 vessel or plant so used in a factory shall be marked so as to enable it to be identified as to be pressure vessel or plant to which the certificate relates and the certificate shall be kept available for perusal by the Inspector.
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.
Note: Design pressure shall not be less than the maximum permissible working pressure and shall take into account the possible fluctuations of pressure during actual operation.
(7) Every pressure vessel or plant in service shall be thoroughly examined by a competent person:
(a) externally, once in every period of six months;
(b) Internally, once in every period of twelve months. If by reasons 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 tests once in every period of four years:

Provided that in respect of pressure vessel or 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 (8) 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), or if owing to its construction and use a pressure vessel or plant cannot be hydrostatically tested as required in clause (b) or clause (c), 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 of 1.5 times the maximum permissible working pressure whichever is less.
(8) 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 per cent 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.

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 of Factories, from the other particulars available, with the manager.
Every new and second hand pressure vessel or plant of thin walls 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 its maximum permissible working pressure.
(9) If during any examination, any doubt 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 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.

A report of the result of every examination or test carried out shall be completed in Form-8 shall be signed by the person making the examination or test, and shall be kept available for perusal by the Inspector at all hours when the factory or any part thereof is working.
Where the report of any examination under this rule specifies 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.
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 or plant or any part there-of cannot continue to be used with safety unless certain repairs are carried out or unless any other safety measure is taken.
(10) 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.

Certificates or reports of any examination, or test of any pressure vessel or plant to which sub-rules (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.
62. 82[Excessive Wages
(1) For the purpose of this rule

(a) “manual transport of loads” means any transport in which the weight of the load is wholly born by one worker, it covers the lifting and putting down of loads; and
(b) “regular manual transport of loads” means any activity which is continuously or principally devoted to the manual transport of loads, or which normally includes, even though intermittently, the manual transport of loads.
(2) No person, unaided by another person, or mechanical aid, be required or allowed to lift, put down, carry or move any load of material, articles, tools or appliances exceeding the maximum limit in weight as set out in the following Schedule:

SCHEDULE
MAXIMUM WEIGHT OFMATERIAL ARTICLE, TOOL OR APPLIANCE

S. No.	**Persons**	**Maximum weight of material article, tool or appliance**
1	**2**	**3**
(a)	Adult male	50 Kilo grams
(b)	Adult female	30 Kilo grams
(c)	Young person (male 15-18 yrs.)	30 Kilo grams
(d)	Young person (female 15-18 yrs.)	20 Kilo grams
(e)	Young person (female 14-18yrs.)	16 Kilo grams
(f)	Young person (female 14-15yrs.)	14 Kilo grams

(3) No woman or young person shall engage, in conjunction with others, lifting, carrying or moving any material, article, tool or appliance, if the weight thereof exceeds the lowest weight fixed by the Schedule to sub-rule (2) for any of the persons engaged multiple by the number of persons engaged.

(4) Taking into account all conditions in which the work is to be performed, no worker shall be required or permitted to engage any person in the manual transport of load, which, by reason of its weight, is likely to jeopardise his health or safety.
(5) Wherever reasonably practicable, suitable technical devices shall be used for the manual transport of loads.
(6) Notwithstanding the fact that workers are engaged in the regular manual transport of loads within the permissible limits as set out in sub-rule (2) they shall be subjected to medical examination prior to regular assignment and periodical examination at an interval of 12 months If the assignment of such jobs, exceeds more than 12 months.]

63. Protection Of Eyes.

Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the immediate vicinity of the following processes
(a) The processes specified in Schedule I annexed hereto, being processes which involve risk of injury to the eyes from particles fragments thrown off in the course of the process.
(b) The processes specified in Schedule II annexed hereto, being processes which involve risk of injury to the eyes by reason of exposure to excessive light [83][or infra-red or ultra violet radiations].

84[SCHEDULE - I]
(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 wheel or disc driven by mechanical power, wherein any of the foregoing cases particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.
(2) The dry grinding of surfaces of metal by applying them by hand to a wheel, disc/or hand driven by mechanical power, and of surfaces of metal by means of a portable tool driven by mechanical power.
(3) The diving into separate parts of metal, bricks, stone concrete or similar materials by means of a high speed saw driven by mechanical power or by means of an abrasive cutting off wheel or disc driven by mechanical power.
(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) Drilling by means of portable tools, where particles or fragments are liable to be thrown off towards the face of the operator in the course of the process.
(6) The welding and cutting of metals by means of an electric, oxy-acetylene or similar process.
(7) The hot fettling of steel castings by means of a flux-injected burner or air torch and the de-seaming of metal.
(8) The fettling of metal castings involving the removal of metal including runners, gates and risers, and the removal of any other material during the course of fettling.
(9) The chipping of metal and the chipping, knocking out, cutting out or cuttings off cold rivets, bolts, nuts, lugs, pins, collars, or similar articles from any structure or plant, or from part of any

structure or plant by means of a hammer, chisel, punch or similar hand tool, or by means of a portable tool driven by mechanical power
(10) The chipping or scurring of paint, scale, slag, rust, or other corrosion from the surface of metal and other materials by means of a hand tool or by a portable tool driven by mechanical power.

(11) The breaking of scrap metal by means of a hammer or by means of a tool driven by mechanical power.
(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.
(13) Work with drop hammers and power hammers used in either case for the manufacture of forgings and work by any person not working with such hammers whose work is carried on in such circumstances and in such a position that particles or fragments are liable to be thrown off towards his face during work with drop hammers or power hammers.
(14) Work at a furnace where there is risk to the eyes from molten metal.
(15) Pouring or skimming of molten metal.
(16) Work involving risk to the eyes from hot sand being thrown off.
(17) Truing or dressing of an abrasive wheel.
(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 of pressure, or otherwise), treated or designed and constructed as to prevent risk or injury.
(19) Any other process wherein there is a risk of injury to eye from articles or fragments thrown off during the course of the process.

85[SCHEDULE-II]
(1) Welding or cutting of metals by means of an electrical, oxyacetylene or similar process.
(2) All work on furnaces where there is risk of exposure to excessive light or infrared radiations.
(3) Process such as rolling, casting or forging of metals where there is risk of exposure to excessive light or infrared radiations.
(4) Any other process wherein there is a risk of injury to eyes from exposure to excessive light or ultra violet or infrared radiation.

64. 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 over-come, thereby shall 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 a circular shape, be not less than 16 inches in diameter.

65. Exemption.

The requirement of sub-section (4) of Section 37 of the Act shall not apply to the following processes carried on in any factory:
(a) The operation of repairing a water-sealed gasholder 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 gasholder containing acetylene or mixture of gases to which acetylene has been added intentionally.
(ii) Welding shall only be done by the electric welding processes and shall be carried out by experienced operatives 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 or service pipes 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, town gas, coke oven gas, producer gas, blast furnace gas, or gases other than air used in their manufacturer;
(ii) the main or service pipes shall not contain acetylene or any gas or mixture of gases to which acetylene has been added intentionally.
(iii) the operation shall be carried out by an experienced person or persons and at least 2 persons (including those carrying out the operations) experienced in work on gas mains and over 18 years of age shall be present during the operations;
(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.

66. 86[Fire Protection.
(1) Process equipment, plant, involving serious explosion and serious fire hazards

(a) All processes, storages, equipment's, plants, etc. involving serious explosion and flash fire hazard shall be located in segregated building where the equipment shall be so arranged that only a minimum number of employees are exposed to such hazards at any one time.
(b) All industrial processes involving serious fire hazard shall be located in buildings or work places separated from one another by walls of fire-resistant construction.
(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.
(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.

(e) In all work places having serious fire or flash fire hazards, passages between machines, installations or piles of material should be at least 90 cms wide. For storage piles, the clearance between the ceiling and the top of the pile should not be less than 2 cm.
(2) Access for fire fighting
(a) Buildings and plants shall be so laid out and roads, passageways etc. so maintained as to permit unobstructed access for fire fighting.
(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 fire fighting
(3) Protection against lightening.

Protection from lightening shall be provided for
(a) building in which explosive or highly flammable substances are manufactured, used, handled or stored;
(b) storage tanks containing oils, paints or other flammable liquids;
(c) grains elevators;
(d) buildings, tall chimneys or stacks where flammable gases, fumes, dust or lint are likely to be present; and
(e) sub-station buildings and out-door transformers and switch yards.
(4) Precautions against ignition.

Where there is danger of fire or explosion from accumulation of flammable or explosive substances in air

(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 source of ignition;
(b) effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;
(c) workers shall wear shoes without iron or steel nails or any other exposed ferrous materials which is likely to cause sparks by friction;
(d) transmission belts with iron fasteners shall not be used;
(e) smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited;
(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 plants, chemical or physical-chemical reaction and radiant heat.
(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 condition and should be in heaps of such capacity and separated by such passage which will prevent fire. The material susceptible to ignition and stored in the open shall be at a distance not less than 10 metres away from process or storage buildings.
(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 hot processes. The room where such cylinders are stored shall have adequate ventilation.
(7) Storage of flammable liquids.
(a) The quantity of flammable liquids in any workroom 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 20°C or less shall be kept or stored in any work-room.
(b) Flammable liquids shall be stored in closed containers and limited quantities in well-ventilated room of fire-resisting construction which are isolated from the remainder of the building by fire walls and self closing fire doors.
(c) Large quantities of such liquids shall be stored in isolated adequately ventilated building of 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 limits.
(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) In this 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 distances an occupant 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 a 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 suitably illuminated with suitable arrangement, wherever 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 rung 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 egress 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 30 metres.
(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 to separate directions from any point in the areas served.
(m) The unit of exit width 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 for doors.
(o) For determining the exits required, the occupant load shall be reckoned on the basis of actual number of occupants 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 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 doorway shall open into an enclosed stairway, horizontal exit on a corridor or passageway providing continuous and protected means of egress.
(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 a stairway or landing to less than 90 cm. Overhead or sliding doors shall not be installed for this purpose.
(v) An exit door shall not open immediately upon a flight of I stairs. A landing at least 1.5 m x 1.5 m in size shall be j provided in the stairway to each doorway. The level of I landing shall be the same as that of the floor which it serves.
(w) The exit doorways shall be openable from the side which they serve without the use of a key.
(x) Exit corridors and passageways shall be of a width not less than the aggregate required width or 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 metres.

(aa) A staircase shall not be arranged round a lift shaft unless the later 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 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 platform such as balconies and terraces to allow escape or pause. A spiral staircase shall not be less than 300 cm 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 meters 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 1 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 1 in 10 may be substituted for the requirements of staircase. For all slopes exceeding 1 in 10 and wherever the use is 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 fire fighting arrangements
(a) In every factory there shall be provided and maintained adequate and suitable fire-fighting equipment's for fighting fire in early stages, those being referred to as first-aid-fire-fighting equipment's in this rule.
(b) The types of first-aid fire-fighting equipment's to be provided shall be determined by considering the different types of fire risks which are classified as follows:
(i) Class A fire. —Fire due to combustible materials such as wood, textiles, paper, rubbish and the like.
1. Light hazard—Occupancies like offices, assembly halls, canteens, rest rooms, ambulance rooms and the like.
2. Ordinary hazard—Occupancies like saw mills, carpentry shop, small timber yards, bookbinding shops, engineering workshop and the like.
3. 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) Class B fire—Fire in flammable liquids like oil, petroleum products, solvents, grease, paints etc.
(iii) Class C fire—Fire arising out of gaseous substances.
(iv) Class D fire—Fire from reactive chemicals, active metals and the like.
(v) Class E fire—Fire involving electrical equipment and machinery and the like.

(c) The number and types of first-aid fire fighting 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 12 shall be provided in addition to that given in Schedule I.
(d) The first-aid fire-fighting equipment shall conform to the relevant Indian Standards.
(e) As far as possible the first-aid fire-fighting equipment shall all be similar in shape and appearance and shall have the same method of operation.
(f) All first-aid fire-fighting 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 or normal routes of escape.
(g) All water buckets and bucket pump type extinguishers shall be filled with clean water. All sand buckets shall be filled with clean, dry and fine sand.
(h) All other extinguishers shall be charged appropriately in accordance with the instructions of the manufacturer.
(i) Each first-aid fire fighting equipment shall be allotted 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
1. Serial number
2. Date of last refilling; and
3. Date of last inspection.
(j) First-aid fire fighting equipment shall be placed on platforms or in cabinets in such a way that their bottom is 750 mm above the floor level. Fire buckets shall be placed on hooks 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 covers.

(k) All extinguishers shall be thoroughly cleaned and recharged immediately after discharge. Sufficient refill material shall be kept readily available for this purpose at all times.
(l) All first-aid fire fighting 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 provision of water supply for fire fighting 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 is 550 or more, power

driven trailer 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 metres of all floors including galleries in all building of the factory;
B = The total area in square metres of all floors and galleries including open spaces in which combustible materials are handled or stored;
C = The total area in square metres of all floors over 15 metres above ground level; and
D = The total area in square metres 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 halved.
Provided further that where the areas under B, C or D are protected by permanent automatic fire-fighting 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 kilometres 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 pump shall be housed in a separate shed or sheds which shall be sited close to a principal source of water supply in the vicinity of the main risks of 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 regards to the potential fire risks in the factory. Where piped supply is provided, the size of the main shall not be less than 15 centimetres diameter and it shall be capable of supplying a minimum of 4,500 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 fire fighting, fire drills, etc.
(a) The first aid and other fire-fighting equipment to be provided as required in sub-rules 10 & 11 shall be in-charge of a trained responsible person.
(b) Sufficient number of persons shall be trained in the proper handling of fire-fighting equipment as referred to in clause (a) and their use against the types of fire for which they are intended to ensure that adequate number of persons are available for fire fighting both by means of first-aid fire-fighting 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 (11) sufficient number of persons shall be trained in driving these vehicles to ensure that trained persons are available for driving them whenever the need arises.
(c) Firefighting 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 an inadequacy of water supply or infrequency of the manufacturing process or for any other reason, to be recorded in writing, all or any of the requirement of the rule 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 rule subject to conditions as he may by such order prescribe.

SCHEDULE I
First Aid Firefighting Equipment
1. The different type of fires and first aid fire fighting equipment's suitable for use on them are as under:

Class of Fire		**Suitable Type of Appliances**
A.	Fires in ordinary combustibles (Wood, vegetable fires, paper and the like)	Chemical Extinguishers of Soda-acid
B.	Fires in flammable liquids, paints, grease, solvents and the like.	Chemical extinguishers of foam, carbon dioxide and dry power types and sand buckets.

C.	Fires in gaseous substances under pressure.	Chemical Extinguishers of carbon dioxide and dry power type.
D.	Fires in reactive Chemicals, active metals and the like.	Special type of dry power, extinguishers. and sand buckets.
E.	Fires in electrical equipment's.	Chemical extinguishers of carbon dioxide and dry power type and sand buckets.

2. One 9 litres water buckets 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 extinguisher and two buckets per compartment of the building. Buckets may be dispensed with provided supply of extinguishers is double of that indicated above.
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 Type Extinguishers**
For one bucket	**For three buckets**		For each 9 liters (or 2 gallons) extinguishes
Dry sand	**One bucket**	**Three bucket**	-
Carbon dioxide	3 kg (07 lbs.)	9kg. (or 20 lbs.)	9kg (or 20 lbs.) (not less than extinguishers
Dry Powder	2kg (or 5 lbs.)	5 kg. (or 11 lbs.)	5 kg (or 11 lbs.) (in one or more extinguishers)
Foam Extinguishers	8 liters or 2 gallons	9 litres (or 2 gallons)	9 litres (or 2 gallon)

4. The following provision shall be complied with where Class B fires are anticipated:
(a) For rooms containing electrical transformers switchgears motors and/or other electrical apparatus only, not less than 2 kg. Dry powder or carbon-dioxide type extinguishers shall be provided within 15 m of the apparatus.
(b) Where motors and/or other electrical equipment's are installed in rooms other than those containing such equipment, only one 5 kg dry powder or carbon-dioxide extinguisher shall be installed within 15m of such equipment in addition to the requirements mentioned at (2) and

(3) above. For this purpose, the same extinguisher may be deemed to afford protection to all apparatus within 15m thereof.

(c) Where electrical motors are installed on platforms one 2 kg dry powder or carbon-dioxide type extinguisher shall be provided on or below each platforms. In case of a long platform with a 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 items (2) and (3) above.

5. The first-aid fire-fighting 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. Selection of sites for the installation of first-aid fire fighting equipment:

(a) While selecting sites for first-aid fire-fighting equipment, due consideration shall be given to the nature of the risk to be covered. The equipment shall be placed in conspicuous position 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 fire-fighting equipment's are intended only for use in incipient fires and their values may be negligible if the fire is not extinguished or brought under control in the early stages.

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

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

SCHEDULE-II

Equipment To Be Provided With Trailer Pump

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

1 Armoured suction hose of 9 metres length with wrenches
1 Metal suction strainer
1 Basket strainer
1 Two-way suction collecting head
1 suction adapter
10 Unlined or rubber line 70 mm delivery hose of 25 metres length complete with quick release couplings
1 Dividing breaching piece
2 Brach-piece with 15 mm nozzles
1 Diffuser nozzle
1 Standpipe with blank cap

1 Hydrant key
4 Collapsible canvas buckets
1 Fire hock (preventer) with cutting edge
1 25 mm manila rope of 30 metres length

1 Extension ladder of 9 metres 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

B. For large trailer pump of capacity of 1800 litres/minute

1 Armoured suction hose of 9 metres length with wrenches
1 Metal strainer
1 Basket strainer
1 Three-way suction collecting head
1 Suction adapter
14 Unlined or rubber lined 70 mm delivery hose of 25 metres length complete with quick-release couplings
1 Driving 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 key
6 Collapsible canvas buckets
1 Ceiling hook (preventor) with cutting edge
1 50 mm manila rope of 30 metres length (where necessary)
1 Extension ladder of 9 metres length (where necessary)

1 Heavy axe	1 Saw

1 Spade	1 Hurricane lamp
1 Pick axe	1 Electric Torch
1 Crow bar	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 by 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.

66. [87]**Safety Officer[Under Section 40(b)]**

1. There shall be one Safety Officer for factories employing between 1000 to 2000 workers. There shall be an additional Safety Officer for every additional 2000 workers or fraction thereof over one thousand.
2. Qualifications:
(a) A person shall not be eligible for appointment as a Safety Officer unless he
(i) possesses a recognised degree in any branch of engineering or technology and has practical experience of working in a factory in a supervisory capacity for a period of not less than two years, or possesses a recognised degree in physics or chemistry and has had practical experience of working in a factory in a supervisory capacity for a period of not less than 5 years, or possess a recognised diploma in any branch of engineering or technology and has had practical experience of working in factory in a supervisory capacity for a period of not less than 5 years;
(ii) possess a degree or diploma in industrial safety recognised by the State Government in this behalf; and
(iii) [88][has adequate knowledge of Hindi.]
(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 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 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 above said qualifications.
3. Conditions of Service
(a) Where the number of Safety Officers to be appointed in a factory [89][***] 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 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 allowances to be granted to the Safety Officers including the Chief Safety Officer and the other conditions of their service shall be the same as those of the other officers of corresponding status in the factory.
(d) d) In the case of dismissal or discharge, a Safety Officer shall have a right to appeal to the State Government whose decision thereon shall be final.
4. Duties of Safety Officers**:** The duties of Safety Officers shall be to advise and assist the factory management in the fulfilment of its obligations, statutory or otherwise, concerning prevention of personal injuries and maintaining a safe working environment. These duties shall include the following namely
(i) to advise the concerned departments in planning and organising measures necessary for the effective control of personal injuries;
(ii) to advise on safety aspect in all job studies, and to carry out detailed job safety studies of selected jobs;
(iii) to check and evaluate the effectiveness of the action taken or proposed to be taken to prevent personal injuries;
(iv) to advise the purchase and store departments in ensuring high quality and availability of personal protective equipment;
(v) to provide advice on matters relating to carrying out plant safety inspections in order to observe the physical conditions of work and the work practices and procedure followed by worker and to render advice on measures to be adopted for removing the unsafe physical conditions and preventing unsafe actions by workers;

(vi) to render advice on matters related to reporting and investigation of industrial accident and diseases;
(vii) to investigate [90][***] accidents;
(viii) to investigate the cases of industrial disease contracted and dangerous occurrence reportable under Rule 103;
(ix) to advise on the maintenance of such records as are necessary relating to accidents, dangerous occurrences and industrial diseases;
(x) to promote setting up of safety committees and act as adviser and catalyst to such committees;
(xi) to organise in association with the concerned department campaigns, competitions, contest 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) to design and conduct, either independently or in collaboration with the training department, suitable training and educational programmes for the prevention of personal injuries.
5. Facilities to be provided to Safety Officers**:** An occupier of the factory shall provide the Safety Officer with such facilities, equipment and information as are necessary to enable him to discharge his duties effectively.
6. 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 (4).

[91]**[66-A. Building and structures.**

No building, wall, chimney, bridge tunnel, road, gallery, stairway, ramp, floor, platform, staging or other structure whether of a permanent or temporary [92][nature] shall be constructed, situated or maintained in any factory in such a manner as to cause risk of life or of bodily injury

93 [66-B. Machinery and plants.

No machinery, plant or equipment shall be constructed, situated, operated or maintained in any factory in such a manner as to cause 3[risk of life or of bodily injury.]

94 [66-C. Methods of work.

No process or work shall be carried on in any factory in such a manner as to cause 3[risk of life or bodily injury.]

95 [66-D. Stacking and storing of materials etc.

No materials or requirement shall be stacked or stored in such a manner as to cause [96][risk of life or bodily injury.]

[97]**[66-E. Ovens and driers.**

1. Application: This rule shall apply to ovens and driers except those used in laboratories or kitchens of any establishment and those which have a capacity below 325 litres.

2. Definition: 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 the oven or drier is situated and in which a flammable or explosive substance is likely to be evolved within the enclosed structure, receptacle, compartment or box or part thereof on account of the article or substance which is baked, dried or otherwise processed within it.

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.

4. Design, construction, examination and testing.

(a) Every oven or drier shall be properly designed on sound engineering practice and be of good construction, sound materials and adequate strength, free from any patent defects and safe if properly used;

(b) No oven or drier shall be taken into use in a 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 system 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 kept available for inspection;

(c) All parts of an oven or drier which has undergone any alteration or repair which has effect of modifying any of the design characteristics, shall not be used unless a thorough examination and tests as have been mentioned in clause (b) 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.

5. Safety ventilation:

(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 dilution.

(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% of its lower explosive limits;

Provided that a level of concentration in air up to 50% of the lower explosive limits of the concentrated flammable substance may be permitted to exist subject to installation and maintenance of an automatic device which
(i) shows continuously the concentration of the flammable substance in air present in the oven or drier at any instant;
(ii) sounds an alarm when the concentration of the flammable substance in the air or any part of the oven or drier reaches a level of 50% its lower explosive limits; and
(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 oven or drier reaches a level of 60% of its lower explosive limits, is provided to the oven or drier and maintained in efficient working condition.
(c) No oven or drier shall be operated without its safety ventilation system working in an efficient manner.
(d) No oven or drier shall be operated with a level of dilution less than what is referred to in clause (b).
(e) Exhaust ducts of safety ventilation systems should be so designed and placed that the 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 workroom.
(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.
(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
6. Explosion panels:
(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 opening to be provided by means of such vents together with the area of openings of any recess doors which are provided with suitable arrangements for their release in case of an explosion, shall be not less than 2200 square centimeter 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 such as to secure their complete release under an internal pressure of 0.25 kg per square centimetre.
(b) The explosion releasing panels shall, as far as practicable, be situated at the roof of the oven or drier or at those portions of the walls where persons do not remain in connection with operation of the oven or drier.
7. Interlocking arrangements:

(a) In each oven or drier different inter locking arrangements shall be provided and maintained to ensure that:
(i) All ventilating fans and circulating fans whose failure would adversely affect the ventilation rate or flow pattern, are in operation before any mechanical conveyor that may be provided for feeding the articles or substance to be processed in the oven or drier is put into operation;
(ii) Failure of any of the ventilation 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 ovens and in the case of electrically heated ovens switch off the electrical supply to the heaters;
(iii) The above said mechanical conveyor is set in operation before the above said shut off valve can be energised; and
(iv) The failure of the above said conveyor will automatically close the above said shut-off valve in the case of ovens and driers heated by gas, oil or steam and deactivate the ignition system or cut off the electrical heaters in the case of electrically heated ovens or furnaces.
8. Automatic pre-ventilation: Every oven or drier heated by oil, gas, steam or electricity shall be provided with an efficient arrangement for automatic pre-ventilation consisting of at least 3 volume changes with fresh air by operation of 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 achieved and before the conveyor can be placed in position.
9. Temperature control: Every oven or drier shall be provided with an automatic arrangement to ensure that the temperature which does not exceed a safe upper limit to be decided in respect of the particular process being carried on.
10. Multistage processes: Wherever materials are to be processed in oven or driers in successive operations, suitable arrangement should be provided to ensure that the operating temperatures necessary for safe operation at each stage are maintained within the design limits.
11. Combustible substance 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.

12. Periodical examination testing and maintenance:
(a) All parts of every oven and drier shall be properly maintained and thoroughly examined and the various controls 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.
(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.
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.
14. Polymerising machines:

(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 polymerizing machines.
(b) Infra-red ray heaters of polymerising machines shall be cut off while running the prints.

[98]**[66-F. Reaction vessels and kettles.[Under Section 41]**
(1) This rule applies to reaction vessels and kettles, hereinafter referred to as reaction vessels, which normally work at a pressure not being above the atmospheric pressure but in which there is likelihood of pressure created above the atmosphere pressure due to reaction getting out of control or any other circumstances.
(2) In the event of the vessels being heated by electrical means, a suitable thermostatic control device shall be provided to prevent the temperature exceeding the safe limit.
(3) Where steam is used for heating purposes in a reaction vessel, it shall be supplied through a suitable pressure reducing valve or any other suitable automatic device to prevent the maximum permissible steam pressure being exceeded unless the pressure of the steam in the supply line itself cannot exceed the said maximum permissible pressure.
(4) A 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 safe limit. Effective arrangement shall be made to ensure that the released gases, fumes, vapours, liquids or dusts, as the case may be, are led away and disposed of through suitable pipes without causing any hazard. Where flammable gases or vapours are likely to be vented out from the vessel, the discharge shall be provided with a flame arrestor.

(5) Every reaction vessel shall be provided with a pressure gauge having the appropriate range.
(6) In addition to the devices as mentioned in the foregoing provisions, means shall be provided for automatically stopping the feed into the vessels as soon as process conditions deviate from the normal limits to an extent which can be considered as dangerous.
(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.
(8) An automatic auditory and visual warning device, shall be provided for clear warning whenever process condition exceeds the present limit. This device, wherever possible shall be integrated with automatic process correction systems.
(9) A notice pointing out the possible circumstances in which pressure 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 at a conspicuous place near the vessel.]

67. Ladders
All ladders used in replacing belts shall be specially made and reserved for that work and provided with hooks or an effective non-skid device. Ladders provided with hooks must have hooks fitted in such suitable position that they rest on the shaft when the bottom end of the ladder is resting on the floor. [99][Hydraulic ladders of such type so as it would prevent the worker from the chances of slip/falling from its platform may also be used for this purpose][100][:]

[101][Provided that hydraulic ladders and all the parts have been thoroughly examined by the Competent Person.]

[102][67-A. Safety Belts

When any person is required or allowed to work at a place from which he is liable to fall through height of more than 6 ft. he shall be provided with a safety belt fitted with leather shoulder straps of not less than 2" in width with a 'D' ring at the back and a rope fastened thereon. The other end of the rope shall be securely tied or hooked to some suitable rigid fixture to ensure the safety of the workers. It shall be the responsibility of the occupier and manager of the factory to ensure that every worker engaged on such operation shall use these belts and other safety equipment. These belts and other equipment's shall be examined and declared fit for using every six months by competent person. The record of examination of these belts and other equipment by the said competent person shall be maintained in a bound register which shall be produced on demand by an Inspector.

[103][67-B. Safety Committee

In every factory:

(a) Wherein 250 or more workers are ordinarily employed; or

(b) which carries on any process of operation declared to be dangerous under Section 87 of the Act; or

(c) which carries on hazardous process as defined under Section 2(cb) of the Act; there shall be a Safety Committee.

(1) The Safety Committee shall consist of

(a) a senior official, who by his position in the organisation can contribute effectively to the functioning of the committee and shall be the Chairman;

(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;

(c) a representative each from the production, maintenance and purchase departments;

(2) The worker's representatives of this Committee shall be elected by the workers.

(3) The tenure of the committee shall be two years.

(4) 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.

(5) Safety committee shall have the right to be adequately and suitably informed of

(a) potential safety and health hazards to which the workers may be exposed at work place;

(b) date of accidents as well as date 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 date 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.

(6) Function and duties of the Safety Committee shall include

(a) assisting and co-operating with the management in achieving the aims and objects outlined in the Health and Safety Policy of the occupier;

(b) dealing with all matters concerning health, safety and environment and to arrive at practicable solutions to problems encountered;

(c) creating safety awareness amongst all workers;
(d) undertaking educational training and promotional activities;
(e) discussing reports on safety, environmental and occupational health surveys, safety audits, risk assessment, emergency and disaster management plans and implementation of the recommendation made in the report;
(f) carrying out health and safety surveys and identifying causes of accidents;

(g) looking into any complaint made on the likelihood of an imminent danger to the safety and health of the workers and suggesting corrective measures; and
(h) reviewing the implementation of the recommendations made by it.
(7) Where owing to the size of the factory, or any other reason, the functions referred to in sub-rule (6) cannot be effectively carried out by the safety committee, it may establish sub-committee; as may be required to assist it.

CHAPTER V

104[WELFARE

68. Washing Facilities

(1) There shall be provided and maintained in every factory according to the nature of factory for the use of employed persons adequate and suitable facilities for washing, depending on the nature of the industry and its operations. It shall include suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in orderly condition.
(2) Without prejudice to the generality of the foregoing provision the washing facilities shall be of the design standard laid down by Chief Inspector in case of each industry.
(3)
(a) Every container of water for washing facilities shall have a smooth, impervious surface.
(b) Suitable provisions will be made for sanitary disposal of the washings
(4) For persons whose work involves contact with any injurious or obnoxious substance there shall be at least one tap for every 15 persons.
(5) 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 notice in 105[Hindi and English] “For Women Only” and shall also be indicated pictorially.
(6) The water supply to the washing facilities in case of industries involving contact with injurious or obnoxious substances shall be capable of yielding at least two gallons a day for each person employed in the factory and shall be from a source approved in writing by the Health Officer,Provided that where the Chief Inspector is satisfied that such a yield is not practicable he may by certificate in writing permit the supply of a smaller quantity not being less than one gallon per day for every person employed in the factory.

The quantity of water required for other industries will be as approved by Chief Inspectors of Factories.

106[68A. Facilities For Strong And Drying Clothing

All classes of factories, mentioned in the schedule annexed hereto, shall provide facilities for keeping clothing not worn during the working hours and for the drying of wet clothing. Such facilities shall include the provision of such arrangements as are ordered by the Chief Inspector of Factories, in writing.

SCHEDULE

CLASSES OFFACTORIES, TO PROVIDE FACILITIES FOR KEEPINGCLOTHINGNOT WORN DURINGTHEWORKINGHOURSAND FORTHE DRYINGOFWETCLOTHING

1. Glass Works
2. Engineering Workshops
3. Iron and Steel Works
4. Metal Foundries
5. Oil Mills
6. Chemical Works
7. Automobile Workshops
8. Dyeing Works
9. Printing Presses

69. [107]**[First-Aid Appliance**

The first aid boxes or cup boards shall be distinctively marked with a red cross on white background 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. Each first-aid box or cupboard shall contain the following equipment:

(i) Six small size sterilised dressings.
(ii) Three medium size sterilised dressings.
(iii) Three large size sterilised dressings.
(iv) Three Large size sterilised burn dressings.
(v) One (60 ml) bottle of cetrimide solution (1 per cent) or a suitable antiseptic solution.
(vi) One (60 ml) bottle of mercurochrome solution (2 per cent) in water.
(vii) One (30 ml) bottle containing salvolatile having the dose and mode of administration indicated on the label.
(viii) One pair scissors.
(ix) One roll of adhesive plaster (2 cms x 1 meter).

(x) Six pieces of sterilised eye pads in separate sealed packets.
(xi) A bottle containing 100 tablets (each of 5 grams) of Aspirin or any other analgesic.
(xii) Polythene wash bottle (1/2 Litre, i.e. 500 cc.) for washing eyes.
(xiii) A snakebite lancet.
(xiv) One (30 ml) bottle containing potassium permanganate crystals,
(xv) One copy of First Aid Leaflet issued by the Directorate General of Factory Advice Service and Labour Institutes, Government of India, Bombay.
(xvi) One set of Resuscitator (for artificial respiration).
(xvii) [108][6 sterilised cotton rolls of 5 gm each
(xviii) Band-Aid strips 12 nos.

(xix) Magnet for removing foreign body from eyes.
(xx) 100 tablets of Aspirin, Paracetamol, Paroxyn, Toxiwin
(xxi) Two kits pain-aid sprays.
(xxii) Soda bicarbonate solution.
(xxiii) Six packs electoral powder.
(xxiv) One roll of Elastoplast adhesive plaster.]
B. For factories in which mechanical power is used and in which the number of persons employed exceeds 10 but does not exceed 50. Each first-aid box or cupboard shall contain the following equipment:
(i) Twelve small size sterilized dressings.
(ii) Six medium size sterilised dressings.
(iii) Six large size sterilised dressings.\
(iv) Six large size sterilised burn dressings.
(v) Six (15 gm) packets of sterilised cotton wool.
(vi) One (120 ml) bottle of cetrimide solution (1 per cent) or a suitable antiseptic solution,
(vii) One (120 ml) bottle of mercurochrome solution (2 per cent) in water,
(viii) One (60 ml) bottle containing salvolatile having the dose and mode of administration indicated on the label,
(ix) One pair scissors.
(x) Two rolls of adhesive plaster (2 cms x 1 meter)
(xi) Eight pieces of sterilised eye pads in separate sealed packets.

(xii) One tourniquet,
(xiii) One dozen safety pins,
(xiv) A bottle containing 100 tablets each (of 5 grams) Aspirin or any other analgesic,
(xv) One polythene wash bottle (1/2 litre, i.e. 500 cc.) for washing eyes,
(xvi) A snakebite lancet.
(xvii) One (30 ml) bottle containing potassium permanganate crystals.
(xviii) One copy of the First Aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institutes, Government of India, Bombay,
(xix) One set of Resuscitator (for artificial respiration).
(xx) [109][Band Aid strips 12 nos.
(xxi) Magnet for removing foreign body from eyes.
(xxii) 100 tablets of Aspirin, Paracetamol, Paroxyn, Toxiwin.
(xxiii) Soda Bicarbonate solution
(xxiv) Six packs electoral powder.
(xxv) One roll of Elastoplast adhesive plaster.]
C. For factories employing more than 50 persons—each First-aid box or cupboard shall contain the following equipment
(i) Twenty-four small sterilised dressings.
(ii) Twelve medium size sterilized dressings.
(iii) Twelve large size sterilised dressings.
(iv) Twelve large size sterilized burn dressings.
(v) Twelve (15 gm) packets of sterilised cotton wool.

(vi) One (200 ml) bottle of cetrimide solution (1 per cent) or a suitable antiseptic solution
(vii) One (200 ml) bottle of mercurochrome (2 per cent) solution in water.
(viii) One (120 ml) bottle of salvolatile having the dose and mode of administration indicated on the label.
(ix) One pair scissors.
(x) One roll of adhesive plaster (6 cms x 1 meter).
(xi) Two rolls of adhesive plaster (2 cms x 1 meter)
(xii) Twelve pieces of sterilised eye pads in separate sealed packets.
(xiii) A bottle containing 100 tablets (each 5 grams) of Aspirin or any other analgesic.

(xiv) One polythene wash bottle (500 cc.) for washing eyes.
(xv) Twelve roller bandages 10 cms wide,
(xvi) Twelve roller bandages 5 cms wide.
(xvii) Six triangular bandages.
(xviii) One tourniquet.
(xix) A supply of suitable splints
(xx) Two packets of safety pins.
(xxi) Kidney tray.
(xxii) A snakebite lancet.
(xxiii) One (30 ml.) bottle containing potassium permanganate crystals.
(xxiv) First aid leaflet issued by the Directorate General of Factory Advice Service and Labour Institute, Bombay.
(xxv) One set of Resuscitator (for artificial respiration).
(xxvi) [110][Band Aid strips 12 nos.
(xxvii) Magnet for removing foreign body from eyes.
(xxviii) 100 tablets of Aspirin, Paracetamol, Paroxyn, Toxiwin.
(xxix) Two kits pain aid sprays. (xxx) Six packs electrol powder.
(xxx) One roll of Elastoplast adhesive plaster.]

Provided that items (xiv) to (xxi) inclusive need not to be included in the standard first-aid box or cupboard (a) where there 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.
Provided further that where the Chief Inspector is satisfied he may reduce the number of resuscitator in the first-aid boxes where Ambulance Room with Resuscitator apparatus is maintained.
D. In lieu of the dressings required under items (i) and (ii), there may be substituted adhesive wound dressing approved by the Chief Inspector of Factories and other equipment or medicine that may be considered essential and recommended by the Chief Inspector of Factories from time to time.

111[69-A. Notice regarding first aid.
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 pasted in every factory at a conspicuous place and near each such box or cupboard. The notice shall also indicate workroom 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.

[112]**[69-B. First-Aid Treatment To Injured Person**

First-aid treatment to injured person working within the precincts of the factory sustaining injury shall be given first-aid treatment by any person trained in first aid.]

70. 113[Ambulance Room

(1) The Ambulance room or dispensary shall be in the charge of a qualified medical practitioner assisted by at least one qualified nurse and such subordinate staff as the Chief Inspector may direct.

(2) There shall be displayed in the ambulance room or dispensary a notice giving the name, address and telephone number of the medical practitioner in-charge. The name of nearest hospital and its telephone number shall also be mentioned prominently in the said notice.

(3) The ambulance room or dispensary 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 and smooth, hard and impervious walls and floors shall be adequately ventilated and lighted by both natural and artificial means. An adequate supply of wholesome drinking water shall be made and the room shall contain at least:

(i) A glazed sink with hot and cold water always available.
(ii) A table with a smooth top at least 180 cms x 105 cms.
(iii) Means for sterilising instruments.
(iv) A couch.
(v) Two stretchers.
(vi) Two buckets or containers with close fitting lids.
(vii) A kettle spirit stove or other suitable means of boiling water.
(viii) Two rubber hot water bags.
(ix) Twelve plain wooden splints 900 mm x 100 mm x 6 mm.
(x) Twelve plain wooden splints 350 mm x 75 mm x 6 mm.
(xi) Six plain wooden splints 250 mm x 50 mm x 12 mm.
(xii) Six woollen blankets,
(xiii) Three pairs artery forceps.
(xiv) One bottle of spiritus Ammoniae Aromaticus (120 ml).
(xv) Smelling salts (60 gms).
(xvi) Two medium size sponges,

(xvii) Six hand towels,
(xviii) Four ‘kidney trays’.
(xix) Four cakes of toilet, preferably antiseptic soap,
(xx) Two glass tumblers and two wine glasses,
(xxi) Two clinical thermometers,
(xxii) Tea Spoons—two.
(xxiii) Graduated (120 ml) measuring glass—two.

(xxiv) Minimum measuring glasses—two.
(xxv) One wash bottle (1000 cc) for washing eyes,
(xxvi) One bottle (one litre) carbolic lotion 1 in 20.
(xxvii) Three chairs,
(xxviii) One screen,
(xxix) One electric hand torch,
(xxx) Four first-aid boxes or cupboards stocked to the standard prescribed under C of Rule 69.
(xxxi) An adequate supply of anti-tetanus toxide.
(xxxii) Injections Morphia, Pethidine, Atropine, Adrenaline, Coramine, Novocam—6 each,
(xxxiii) Corine Liquid (60 ml).
(xxxiv) Tablets antihistaminic, antispasmodic—(25 each),
(xxxv) Syringes with needles—2 cc, 5 cc, 10 cc, 50 cc.
(xxxvi) Surgical Scissors—three,
(xxxvii) Needle holder.
(xxxviii) Suturing needles and material.
(xxxix) Dissecting forceps-three.
(xl) Dressing forceps-three
(xli) scalpels-three
(xlii) Stethescope-one.
(xliii) Rubber bandage –Pressure bandage.
(xliv) Oxygen cylinder with necessary attachment.
(xlv) [114][One Blood Pressure Apparatus.
(xlvi) One stethoscope.

(xlvii) One Patellar Hammer.
(xlviii) One peak flow meter for lung function measurement.
(xlix) One stomach wash set.
(l) One E.C.G. machine]
(4) The occupier of every factory to which these Rules apply shall for the purpose of removing serious cases of accident or sickness, provide in the premises and maintain in good condition a suitable conveyance unless he has made arrangement for 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 Degrees Act, 1916, or in the Schedule to the Indian Medical Council Act, 1956.][115]
(5) [116][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 a dispensary is maintained at or within 200 metres of the precincts of the factory such arrangements are made 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 LEAF LET
(Instruction for Handling Emergencies)
Shock:
1. Lay the patient on his back.
2. Stop bleeding, if any.
3. Relieve pain by supporting injured part.
4. Keep the patient comfortable, but not hot. Do not cause sweating.
5. Fluids may be given in small amounts unless the patient is nauseated, unconscious likely to be operated on, or has an abdominal wound.
6. Reassure and cheer up the patient.

Wounds:
1. Stop the bleeding by any one of the following methods:
(a) direct pressure;
(b) direct finger pressure into the wound in case of large bleeding wounds;
(c) tourniquet (seldom needed) — use only as a last resort.
2. Avoid touching the wound with hands or unsterile material.

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.
4. Keep the patient quiet, raising the extremity if it is the bleeding part. Give no stimulants.
5. Never apply antiseptic ointment, lotion or iodine or germicide to the wound

Abdominal Wounds:
1. No time must be lost in sending the patient to the hospital.
2. Keep the patient flat.
3. Give nothing by mouth.
4. Maintain warmth.
5. If intestines protrude from the wound, do not attempt to touch or replace them
6. Apply sterile dressing and binder on the wounds.
7. Provide careful, immediate transportation to the hospital.

Eye wounds:
1. Removal may be attempted if foreign body is not embedded.
2. Do not apply oil or ointment.
3. If there is a foreign body embedded in the eyeball, send the worker immediately to the doctor after applying pad and loose bandage.

Chemical burns of the eyes:
1. Immediate washing of the eyes at least for 15 minutes is of great importance.
2. Apply sterile bandage and send the worker immediately to the doctor.
3. Neutralising agents or ointments should not be used.

Suffocation:
1. Remove the patient from the source of danger.
2. Make a rapid examination to ensure that the air passages are free and to clean them if necessary.
3. Restore natural breathing by artificial respiration, if breathing has ceased.

Electric shock:
1. Remove the patient from the source of danger.
2. Make a rapid examination to ensure that the air passages are free, and to clean them if necessary.
3. Restore natural breathing by artificial respiration, if breathing has ceased.

Insensibility:
1. Send for a doctor if possible, pending his arrival
2. Where the patient face is pale, lay him flat and face downwards with his head turned to one side. If his face is flushed or blue, raise and support the head and shoulders.
3. Control any serious bleeding.
4. Loosen any tight clothing and let him have plenty of air.
5. Do not give anything by mouth
6. If doctor is not available send the casualty to hospital

Backbone (spinal) fracture:
1. Transport on a rigid frame. This frame may be improvised by using available boards or a door.
2. The rigid frame may be placed on a stretcher for transportation.
3. If a frame cannot be improvised, transport patient on abdomen on a stretcher made of canvas or blanket.
4. In neck fracture cases it is much better to get a doctor to the scene for danger to life is great.

Bruises:
1. Cold applications at first, 24-48 hours.
2. Later heat after 24-48 hours.

Burns:
1. Act quickly.
2. Put the affected part in cold water.
3. Pour the water over burns that cannot be immersed (cold water relieves pain, reduces fluid loss).
4. Cover with a sterilised dressings.

Snake Bite:
Calm and reassure the patient. Immobilise the bitten limb by splitting it. Wash and cool the wound with soap and water. Do not cut, rub or suck the bite. Take to a doctor. Press hard over wound for up to 15 minutes. Do not remove cloth if it has been placed.

[117]**[70A. Application For Appraisal Of Sites**

(1) 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.
(2) 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 to be not relevant to the application under consideration.

Format Of Application To The Site Appraisal Committee
1. Name and address of the applicant:
2. Site Ownership Data

2.1 Revenue details of site such as Survey No., Plot No., etc.
2.2 Whether the site is classified as forest and if so, whether approval of the Central Government 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 Environmental Protection Act, 1986, if so, the nature of the restrictions.
2.4 Local authority under whose jurisdiction the site is located.
3. Site Plan

3.1 Site Plan with clear identification of boundaries and total area proposed to be occupied and showing details nearby the proposed site
(a) Historical monument, if any, in the vicinity.
(b) Names of neighbouring manufacturing units and human habitats, educational and training institutions, petrol installations, storage of LPG and other hazardous substances in the vicinity and their distances from the proposed unit.
(c) Water sources (rivers, streams, canals, dams, water filtration plants, etc.) in the vicinity.
(d) Nearest hospitals, fire stations, civil defence stations and police stations and their distances.
(e) High tension electrical transmission lines, pipelines for water, oil, gas or sewerage; railway lines, roads, stations; jatties and other similar installations.

3.2 Details of soil conditions and depth at which hard strata obtained.
3.3 Contour map of the area showing nearby hillocks and difference in levels.
3.4 Plot, plan of the factory showing the entry and exit points, roads within, water drains, etc.
4. Project Report:

4.1 A summary of the salient features of the project.
4.2 Status of the organisation (Government, Semi Government, Public or Private etc.)
4.3 Maximum number of person likely to be working in the factory.
4.4. Maximum amount of power and water requirements and source of their supply.
4.5 Block diagram of the buildings and installations, in the proposed factory.

4.6 Details of housing colony, hospital, school and other infrastructural facilities proposed.
5. Organisation structure of the proposed manufacturing unit/factory:

5.1 Organisation diagrams of
—Proposed enterprises in general
—Health, Safety and Environment Protection departments and their linkage to Operation and technical departments.
5.2 Proposed Health and Safety Policy.
5.3 Area allocated for treatment of waste and effluent.
5.4 Percentage outlay on safety, health and environment protection measures.
6. Meteorological data relating to the site:

6.1 Average, minimum and maximum of
—Temperature
—Humidity
—Wind velocities during the previous 10 years.
6.2 Seasonal variations of wind direction.
6.3 Highest water level reached during the floods in the area recorded so far.
6.4 Lightening and seismic data of the area.
7. Communications links:

7.1 Availability of telephone/telex/wireless and other communications facilities for outside communication.
7.2 Internal communication facilities proposed.
8. Manufacturing process information:

8.1 Process flow diagram.
8.2 Brief write-up on process and technology.
8.3 Critical process parameters such as pressure build up, temperature rise and runaway reactions.
8.4 Other external effects critical to the process having safety implications, such as ingress of moisture of water, contact with incompatible substances, sudden power failure.
8.5 Highlights of the built up safety/pollution control devices or measures/ incorporated in the manufacturing technology.
9. Information of hazardous materials:

9.1 Raw materials, intermediates, products and by-products and their quantities (enclose Material Safety Data Sheet in respect of each hazardous substance).
9.2 Main and intermediate storage proposed for raw materials/intermediates/ products/by products (maximum quantities to be stored at any time).
9.3 Transportation methods to be used for materials inflow and outflow, their quantities and likely routes to be followed.
9.4 Safety measures proposed for:
—handling of materials;
—internal and external transportation; and
—disposal (packing and forwarding of finished products).

10. Information on dispersal/disposal of wastes and pollutants:

10.1 Major pollutants (gas, liquid, solid) their characteristics and quantities average and at peak load).
10.2 Quality and quantity of solid wastes generated, method of their treatment and disposal.
10.3 Air, water and soil pollution problems anticipated and the proposed measures to control the same including treatment and disposal of effluents.
11. Process hazards information:

11.1 Enclose a copy of the report on environmental impact assessment.
11.2 Enclose a copy of the report on Risk Assessment study.
11.3 Published (open or classified) reports, if any on accident situations/ occupational health hazards of similar plants elsewhere (within or outside the country).
12. Information of proposed safety/occupational health measures:

12.1 Details of fire fighting facilities and minimum quantity of water, C02 and other fire fighting measures needed to meet the emergencies.
12.2 Details of in-house medical facilities proposed.
13. Information on emergency preparedness:

13.1 Onsite emergency plan.
13.2 Proposed arrangements, if any, for mutual aid scheme with the group of neighbouring factories.
14. Any other relevant information**:** I certify that the information furnished above is correct to the best of my knowledge and nothing of importance has been concealed while furnishing it.

Name and Signature of the applicant.

[118][70-B. Health And Safety Policy
(1) The occupier of every factory, except 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) All factories
(a) covered under Section 2(m)(i) but employing less than 50 workers;
(b) covered under Section 2(m)(ii) but employing less than 100 workers; are exempted from requirement of sub rule (1);

Provided that they are not covered under the First Schedule under Section 2(cb) or carrying out processes or operations declared to be dangerous under Section 87 of the Act.
(3) Notwithstanding anything contained in sub-rule (2), the Chief Inspector may require the occupiers of any of the factories or class or description of factories to comply with the requirements of sub-rule (1), if in his opinion, it is expedient to do so.
(4) The Health and Safety Policy should contain or deal with:
(a) declared intention and commitment of the top management to health, safetyandenvironmentandcompliancewithalltherelevantstatutoryrequiremens;

(b) organisational set-up to carry out the declared policy clearly assigning the responsibility at different levels; and
(c) arrangements for making the policy effective.
(5) In particular, the policy should specify the following:
(a) arrangements for involving the workers;
(b) Intention of taking into account the health and safety performance of individuals at different levels while considering their career advancement;
(c) fixing the responsibility of the contractors, sub-contractors, transporters and other agencies entering the premises;
(d) providing a resume of health and safety performance of the factory in its annual report;
(e) relevant techniques and methods, such as safety audits and risk assessments for periodical assessment of the status on health, safety and environment and taking all the remedial measures;
(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 revise the safety policy as often as may be appropriate, but it shall necessarily be revised under the following circumstances
(a) whenever any expansion or modification having implications on safety and health of person at work is made; or
(b) whenever new substance(s) or articles are introduced in the manufacturing process having implications on health and safety of persons exposed to such substances.

70-C. Collection and development and dissemination of information
(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.
(a) Every such Material Safety Data Sheet shall include the following information:
(i) The identity used on the label;
(ii) Hazardous ingredients of the substance;
(iii) Physical and chemical characteristics of the hazardous substance;
(iv) The physical hazards of the hazardous substance including the potential for fire, explosion and reactivity;

(v) The health hazards of the hazardous substance including signs and symptoms of exposure, and any medical conditions which are generally recognised as being aggravated by exposure to the substance;
(vi) The primary route(s) of entry;
(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 the said Schedule, any exposure limit used or recommended by the manufacturer, importer or occupier;

(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 of clean-up of spills and leaks;
(ix) Any generally applicable control measures, such as appropriate engineering controls, work practices, or use of personal protective equipment;
(x) Emergency and first-aid procedures;
(xi) The date of preparation of the material Safety Data Sheet, or the last change to it; and
(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 substance and appropriate emergency procedures, if necessary.
(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,
(c) An example of such Material Safety Data Sheet is given in the Schedule to this Rule.
(2) Every container of a hazardous substance shall be clearly labelled or marked to identify:
(a) the contents of the container;
(b) the name and address of the manufacturer or importer of the hazardous substance;
(c) the recommended personal protective equipment needed to work safely with the hazardous substance

SCHEDULE
MATERIALSAFETYDATASHEETSAMPLE MODEL
Section I—Material Identification and Use
Material Name/Identification:
Manufacturer's Name
.....

Address
.....
Street
.....
City: ..... State: .....

Postal Code: ..... Emergency
.....
Telephone No. .....
Supplier's Name:
.....
Address:
.....
Street .....
City: ..... State: .....
Postal Code: ..... Emergency .....
Telephone No. .....
Chemical Name: .....
Chemical Identity: .....
Trade Name and .....
Synonyms: .....
Use: .....

Section II-Hazardous Ingredients of Material

Hazardous ingredients	Approximate Concentrations	C.A.S. or UN Numbers	LD 50 (specify species and Route)
Section III-Physical Data for Material			
Physical State	Odour and appearance	Odour Threshold (PPM)	Specific Gravity
Gas/Liquid/Solid	Vapour density (Air-I)	Evaporation Rate	Boiling Freezing
Vapour Pressure (mm) Solubility in water (200 C)	PH(g/ml)	Density Water/oil	Coefficient of distribution

Section IV—Fire and Explosion Hazard of Material

Flammability ..... If yes, under what condition
Yes/No .....

Means of Extinction: .....
Special Procedures: .....

Flash point (°C) and Method	Upper Explosion Limit (% by Volume)	Lower Explosion Limit (% by Volume)
Auto-ignition Temperature (°C)	TDC Flammability Classification	Hazardous Combustion Products
Explosion Data Act Discharge	Sensitivity and Chemical Imp 127	Sensitivity to Static

Section V- Reactivity Data

Chemical Stability ……Yes ……. No	If no, under what conditions
Incompatibility to other substance …… Yes …… No	If yes, which one

Reactivity and under what conditions: .....
Hazardous Decomposition Products: .....
Material Name/Identifier: .....

Section VI—Toxicological Properties of

Route of Entry:
……Skin Contact ……Skin Absorption …. Eye Contact
……Inhalation Acute ……Inhalation Chronic …. Ingestion
Effect of Acute Exposure to material: .....
Effect of Chronic Exposure to material: .....
Exposure Limit (s) ..... Irritancy of Material .....
Sensitization to Material.....
Carcinogenicity.....
Reproductive effects.....
Teratogenicity: .....
Mutagenicity: .....
Synergistic Materials: .....

Section VII- Preventive measures

Personal Protective Equipment:
.....

Gloves (Specify): .....
Respiratory (Specify) .....
Eye (Specify): .....
Footwear (Specify): .....
Clothing (Specify): .....
Other (Specify): .....
Engineering control: .....
e.g. Ventilation, enclosed process, etc. (Please specify) .....
Leak and Spill procedures: .....
Waste .....
Handling procedures and Equipment .....
.....
Storage shipping information.....
.....

Special Requirements
.....
Section VIII—First Aid Measure
First Aid Measure.....
Sources used: .....
Additional information: .....
Section IX—Preparation Date of M.S.D.S
Prepared by (Group, Department, etc.) .....
Ph. No. ..... Date .....
Notes:
1. CAS or UN Number—Chemical Abstract Service or united nation (UN) Number.
2. LD 50— Lethal Doze—50%(LD 50—specify species and route)
3. LC 50—Lethal Concentration —50% (LC-50)—specify species and route).
4. TDG Flammability— Transport of Dangerous Goods Flammability Classification by united Nations.

[119]**[70-D. Disclosure Of Information To Workers**

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

(a) Requirements of Section 41-B, 41-C and 41-H of the Act;
(b) A list of 'hazardous processes' carried on in the factory;
(c) Location and availability of all Material Safety Data Sheets as per Rule 70-C;
(d) Physical and health hazards arising from the exposure to or handling of substances;
(e) Measures taken by the occupier to ensure safety and control of physical and health hazards;
(f) Measures to be taken by the workers to ensure safe handling storage and transportation of hazardous operation;
(g) Personal Protective Equipment required to be used by workers employed, in hazardous process or dangerous operation;
(h) Meaning of various labels and marking used on the containers of hazardous substances as provided under Rule 70C;
(i) Signs and symptoms likely to be manifested on exposure to hazardous substance and to whom to report;
(j) Measures to be taken by the workers in case of any spillage or leakage of a hazardous substance;
(k) Role of worker's vis-a-vis the emergency plan of the factory, in particular the 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 compiled 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 explained to them.

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

70-E. [120][Disclosure Of Information To General Public

1. The occupier of every factory carrying on a 'hazardous process' shall in consultation with the District Emergency Authority designated by the State Government, take appropriate steps to inform the general public who are likely to be in the area which might be affected by an accident. Such information shall include:
(a) Name of the factory and address where situated;
(b) Identification, by name and position, of the person giving the information;

(c) Confirmation that the factory has approval from the Factories Inspectorate and Pollution Control Board;
(d) An explanation in simple terms of the hazardous process(s) carried on in the premises;
(e) The common names of the hazardous substances used which could give rise to an accident likely to affect them, with an indication of their principal harmful characteristics
(f) Brief description of the measures to be taken to minimise the risk of such an accident in compliance with its legal obligations under relevant safety statutes;
(g) Salient features of the approved disaster control measures adopted in the factory;
(h) Details of the factory's emergency warning system for the general public;
(i) General advice on the action, members of the public should take on hearing the warning;
(j) Brief description of arrangements in the factory, including liaison with the emergency services; to deal with foreseeable accidents of such nature and to minimise their effects; and
(k) Details from where further information can be obtained:
2. The occupier shall also supply any further information:
(a) to general public as directed by the District Emergency Authority, from time to time;
(b) to the elected representative of the general public on request.
3. The occupier shall endeavour to enter an agreement with the District Emergency Authority for the area, within whose jurisdiction the factory is situated, for the District Emergency Authority to take appropriate steps to inform the general public outside the factory who are likely to be affected by an accident as required in sub-rule (1).
4. The information prescribed in sub-rule (1) shall be in the regional language and in English or Hindi.

70-F. [121][Disclosure Of Information To The Local Authority

The occupier of every factory carrying on a 'hazardous process' shall furnish the following information in writing to the Local Authority having jurisdiction over the area in which the factory is situated:
(a) the information furnished to general public as prescribed in Rule 70-E;
(b) a statement of the names and quantities generally stored or in process of hazardous substances included in the list of chemicals prescribed under clauses (vi) and (vii) of sub-section (2) of Section 3 of the Environment (Protection) Act, 1984.

70-G. Disclosure Of Information To District Emergency Authority

The occupier of a factory carrying on a 'hazardous process' shall intimate the District Emergency Authority designated by the State Government, all information having a bearing on preparation of onsite emergency plan and a disaster control and management plan in respect of the factory.
Without prejudice to the generality of this clause, the occupier shall furnish the District Emergency Authority the following:
(a) a report on status relating to risk assessment and environmental impact assessment and the measures taken for prevention of accidents;
(b) compilation of Material Safety Data Sheets in respect of hazardous substances used, produced or stored in the factory;
(c) a statement on all possible sources of accidents involving fire, explosion, release or leakage of toxic substances and the plan of the premises where such an accident may occur;
(d) a statement on resources and facilities available for dealing with an emergency including any agreement entered into with a neighbouring factory for and assistance in the event of an emergency;
(e) a map of the area showing the approaches to the factory, location of emergency facilities such as hospitals, police, fire service;
(f) the organisation of the management and the responsibility for safety indicating therein the persons responsible for on-site emergency action;
(g) details relating to alert system;
(h) information on availability of antidotes for poisoning resulting from an accident;
(i) any other information as may be considered relevant by the occupier or asked for by the District Emergency Authority.

70-H. 122[Disclosure Of Information To The Chief Inspector
(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, local authority, general public and the District Emergency Authority.
(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) 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.

70-I. 123[Emergency Plan
(1) The occupier of a factory carrying on a 'hazardous process' shall prepare a draft on-site emergency plan and submit it to the Chief Inspector. The Chief Inspector may

make such modification in the plan as necessary in consultation with the occupier and approve the same.
(2) The occupier will submit a copy of the approved plan to the District Emergency Authority.
(3) The occupier will intimate the workers of the provisions of the emergency plan and hold rehearsals of the plan periodically. He shall review the plan from time to time and make

necessary changes therein under intimation to the Chief Inspector and the District Emergency Authority.
(4) The Chief Inspector may issue guidelines relating to formulation of emergency plans. He may also direct modification of the emergency plan in respect of any factory as may be necessary from time to time.

70-J. 124[Disaster Control And Management Plan
(1) The occupier of every factory carrying on a 'hazardous process' shall prepare a draft disaster control and management plan in respect of his factory and submit the same to the Chief Inspector and the District Emergency Authority.
(2) The District Emergency Authority on receipt of the plan shall hold consultation with the occupier, representatives of the Chief Inspector, the State Pollution Control Board, local authority as well as police, health, fire brigade and authorities concerned and finalise the plan.
(3) The District Emergency Authority shall forward a copy of the final plan to the occupier and all authorities concerned. The occupier shall intimate the workers the contents of the plan.
(4) The occupier in consultation with the District Emergency Authority will arrange rehearsals of the plan at least once a year.
(5) The Chief Inspector may issue guidelines for formulation of disaster control and management plans. The Chief Inspector as well as the District Emergency Authority may after mutual consultation also direct modification of the disaster control and management plan in respect of a factory as may be necessary from time to time

70-K. 125[Information on industrial waste,
(1) The information furnished under Rules 70-D, 70-F, 70-G, and 70-H shall include the quantity of the solid and liquid wastes generated per day, their characteristics and the method of treatment such as incineration of solid wastes, chemical and biological treatment of liquid wastes, and arrangements for their final disposal.
(2) It shall also include information on the quality and quantity of gaseous wastes discharged through the stacks or other openings, and the arrangements such as provision of scrubbers, cyclone separators, and electrostatic precipitators or similar such arrangements made for controlling pollution of the environment.
(3) The occupier shall also furnish the information prescribed in the sub-rules (1) and (2) to the State Pollution Control Board.

70-L. 126[Review Of The Information Furnished To Workers, Etc.
(1) The occupier shall review once in every calendar year and modify, if necessary, the information furnished under Rules 70-D to 70-H to the workers, general public, local authority, Chief Inspector and the District Emergency Authority.
(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 taking place, the information so furnished shall be reviewed and modified to the extent necessary.

70-M. 127[Confidentiality Of Information

(1) The occupier of the factory carrying on 'hazardous process' shall disclose all information needed for protecting safety and health of the workers and the general public in the neighbourhood to:
(a) his workers;
(b) District Emergency Authority;
(c) And Chief Inspector.

As required under Rules 70-D, 70-G and 70-H, 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 reason 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.

70-N. Medical Examination

(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
(a) Once before employment, to ascertain physical fitness of the person to do the particular job;
(b) once in a period of six 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 workers;
(c) The details of pre-employment and periodical medical examinations carried out as aforesaid shall be recorded in the Health Register in Form 17-A.
(2) No person shall be employed for the first time without a certificate of fitness in Form 32, 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.
(3) Any findings of the Factory Medical Officer revealing any abnormality or un-suitability 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 protection, he will direct the occupier accordingly, who shall not employ the said worker in the same process. However, the worker so taken away shall be provided with alternate placement unless he is in the opinion of the Certifying Surgeon, fully incapacitated in which case the worker affected shall be suitably rehabilitated.
(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.
(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.
(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.

70-O. [128]**[Occupational Health Centre**
(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 service and facilities as per scale laid down hereunder:
(a) for factories employing up to 50 workers
(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 Rule 70-N and render medical assistance during any emergency;
(ii) a minimum of 5 persons trained in first-aid procedures amongst whom at least one shall always be available during the working period;
(iii) a fully equipped first-aid box.
(b) for factories employing 51 to 200 workers:
(i) an Occupational Health Centre having room with a minimum floor area of 15 square metres with floors and walls made of smooth and impervious

surface and with adequate illumination and ventilation as well as equipment as per the schedule annexed to this rule;
(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;
(iii) one qualified and trained dresser-cum-compounder on duty throughout the working period;
(iv) a fully equipped first-aid box in all the departments;
(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 1,000 workers or part thereof;
(ii) an Occupational Health Centre having at least two rooms each with a minimum floor area of 15 square metres with floor and walls made of smooth and impervious surface and adequate illumination and ventilation as well as equipment as per the schedule annexed to this rule;
(iii) there shall be one nurse, one dresser-cum-compounder and one sweeper-cum-ward boy throughout the working period.
(2) The Factory Medical Officer required to be appointed under sub-rule (1) shall have qualifications included in Schedules to the Indian Medical Degree Act, 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 State Government:

Provided that
(i) a person possessing a Diploma in Industrial Health or equivalent shall not be required to possess the certificate of training as aforesaid;
(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) in case of a person who has been working as a Factory Medical Officer for a period of not less than three years on the date of commencement of this rule, the Chief Inspector may, subject to the condition that said person shall obtain the aforesaid certificate of training within a period of three years, relax the qualifications
(3) The syllabus of the course Leading to the above certificate, and the organisations conducting the course shall be approved by the Directorate General of Factory Advice Service and Labour Institutes or the State government in accordance with the guidelines issued by the Directorate-General, Factory Advice Service, Labour Institute.

(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:
(a) Name and address of the Factory Medical Officer;
(b) Qualification;
(c) Experience, if any; and
(d) the sub-rule under which appointed.

Equipment for occupational health Centre in Factories
1. A glazed sink with hot and cold water always available.
2. A table with a smooth top at least 180 cm x 105 cm.
3. Means for sterilising instrument.
4. A couch.
5. Two buckets or containers with close fitting lids.
6. A kettle and spirit stove or other suitable means of boiling water.
7. One bottle of spiritus ammoniac aromatious (120 ml)
8. Two medium size sponges.
9. Two 'Kidney' trays.
10. Four cakes of toilet, preferably antiseptic soap.
11. Two glass tumblers and two wine glasses.
12. Two clinical thermometers.
13. Two teaspoons.
14. Two graduated (120 ml) measuring glasses.
15. One wash bottle (100 cc) for washing eyes.
16. One bottle (one litre) carbolic lotion 1 in 20.
17. Three chairs.
18. One screen.
19. One electric hand torch.
20. An adequate supply of tetanus toxide.

21. Coramine liquid (63 ml)
22. Tablet—Antihistaminic, Antispasmodic (25 each).
23. Syringes with needles—2 cc, 5 cc and 10 cc.
24. Two needle holders, big and small.
25. Suturing needle and materials.

26. One dissecting forceps.
27. One dressing forceps.
28. One scapels.
29. Rubber bandage—pressure bandage.
30. One stethoscope.
31. Oxygen cylinder with necessary attachments.
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
(i) For factories employing 51 to 200 workers
1. Four plain wooden splints 900 mm x 100 mm x 6 mm
2. Four plain wooden splints 350 mm x 75 mm x 6 mm
3. Two plain wooden splints 250 mm x 50 mm x 12 mm
4. One pair artery forceps.
5. Injections—morphia, pethidine, atropine, adrenaline, coramine, novocam (2 each)
6. One surgical scissors.
(ii) For factories employing above 200 workers
1. Eight plain wooden splints 900 mm x 100 mmm x 6 mm
2. Eight plain wooden splints 350 mm x 75 mm x 6 mm
3. Four plain wooden splints 250 mm x 50 mm x 12 mm
4. Two pairs artery forceps
5. Injections—morphia, pathadine, atropine adrenaline, coramine, novocam (4 each)
6. Two surgical scissors.

70-P. 129[Ambulance van.
(1) In any factory carrying on 'hazardous process' there shall be provided and maintained in good conditions, a suitably constructed ambulance van equipped with items as per sub-rule (2) and manned by a full-time Driver-cum-Mechanic and a 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 Occupation Health Centre:

Provided that a factory employing less than 200 workers, may make agreements for procuring such facility at short notice from a nearby hospital or other places, to meet any emergency.
(2) The ambulance should have the following equipment's:
(a) Genera**l**

—A wheeled stretcher with folding and adjusting devices; with the head of the stretcher capable of being tilted 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

—Falres with life of 30 minutes, flood lights;
—Flash-lights, fire extinguisher dry powder type;
—Insulated guantlets
(c) Emergency Care Equipment
(i) Resuscitation

—Portable suction unit, portable oxygen units;
—Bag-valve-mask, hand operated artificial ventilation unit;
—Airways, mouth gag, trachestomy adaptors;
—Short spine board, I.V. Fluids administration unit;
—B.P. Manometer, cuga, stethoscope.
(ii) Immobilisation

—Long and short-padded board, wire Ladder splints.
—Triangular bandage, long and short spine boards.
(iii) Dressings

—Gauze pads 4" x 46", 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.
(iv) Poisoning

—Syrup of Ipecae, activated charocal pre-packed in dozes, snake bite kit;
—Drinking water.
(v) Emergency Medicines

—As per requirement (under the advice of Medical Officer only)
70-Q. [130]**[Decontamination Facilities**
In every factory, carrying out 'hazardous process', the following provisions shall be made to meet emergency:

(a) fully equipped first aid box;
(b) readily accessible means of water for washing the workers as well as for drenching the clothing of workers who have been contaminated with hazardous and corrosive substance, and such means shall be asper the scale shown in the Table

Table

No. of Person employed at any time	No. of drenching showers
(i) UP to 50 workers	2
(ii) Between 51 to 200 workers	2 + 1 for every additional 50 or part thereof
(iii) Between 201 to 500	5+ 1 for every additional 100 or part thereof
(iv) 501 workers and above	8+1 for every additional 200 or part thereof

(c) a sufficient number or 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.

70-R. [131]**[Making Available Health Records To Workers**
(1) The occupier of every factory carrying out a '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:
(a) Once in every six months or immediately after the medical examination whichever is earlier;
(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;

(c) if the worker leaves the employment;
(d) if any one of the following authorities so direct:
(i) the Chief Inspector of Factories;
(ii) the Health Authority of the Central or State Government;
(iii) Commissioner of Workmen's Compensation;
(iv) the Director General, Employees' State Insurance Corporation;
(v) the Director, Employees' State Insurance Corporation (Medical Benefits); and
(vi) the Director-General, Factory Advice Service and Labour Institutes.

(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 workers 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.

70-S. 132[Qualifications, etc. Of supervisors

(1) All persons who are required to supervise the handling of hazardous substances shall possess the following qualification and experience:

(a)

(i) A Degree in Chemistry or Diploma in Chemical Engineering or Technology with five years' experience: or

(ii) A Master 's Degree in Chemistry or a Degree in Chemical Engineering or Technology with two 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 and the organisations conducting the training shall be approved by the Director-General, Factory Advice, Service, Labour Institute or the State Government in accordance with the guidelines issued by the Director-General, Factory Advice Service, Labour Institute.

70- T. [133][Issue Of Guidelines

For the purpose of compliance with requirements of sub-sections (1), (4) and (7) of Section 41-B or41-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 International Labour Organisation and World Health Organisation.

71. Canteens.

(1) Canteen or canteens shall be provided and maintained in all types of factories wherein more than two hundred fifty workers are ordinarily employed.

(2) The occupier of every factory wherein more than two hundred fifty workers are ordinarily employed shall provide in or near the factory an adequate canteen according to the standard prescribed in these Rules

(3) The Manager of a factory shall submit for the approval of the Chief Inspector plans and site plan, in [134][Triplicate] [Duplicate for Haryana], of the building to be constructed or adapted for use as a canteen.

(4) The canteen building shall be situated not less than 50 feet from any latrine, urinal, boiler house, coal stacks, ash dumps and any other source of dust, smoke or obnoxious fumes or anything which may be considered insanitary:

Provided that the Chief Inspector may in any particular factory relax the provisions of this sub-rule to such extent as may be reasonable in their circumstances and may require measures to be adopted to secure the essential purpose of this sub-rule.

(5) The canteen building shall be constructed in accordance with the plans approved by the Chief Inspector and shall accommodate at least a dining hall, kitchen, store-room, pantry with suitable fixtures and washing places separately for workers and for utensils.
(6) In a canteen the floor and inside wall up to a height of a 4 feet from the floor shall be made of smooth and impervious materials; the remaining portion of the inside walls shall be made smooth by cement plaster or any other manner approved by the Chief Inspector.
(7) The doors and windows of canteen building shall be of fly-proof construction and shall allow adequate ventilation.
(8) The canteen shall be sufficiently lighted at all times when any person has access to it.
(9)
(a) In every canteen:
(i) All inside walls of rooms and all ceilings and passages and staircases shall be lime-washed at least once in each year or painted once in three years dating from the period when last lime-washed or painted, as the case may be;
(ii) all woodwork shall be varnished or painted once in three years dating from the period when last varnished or painted;
(iii) all internal structural iron and steel work be painted once in three years dating from the period when last painted:

Provided that inside walls of the kitchen shall be lime or colour washed once every four months.

(b) Records of dates on which lime-washing, colour-washing, varnishing or painting is carried out shall be maintained in the Register in Form No. 7.
(10) The precincts of the canteen shall be maintained in a clean and sanitary condition. Wastewater shall be carried away in covered drains of suitable design and slope so as not to allow wastewater to accumulate and cause a nuisance. Suitable arrangements shall be made for the collection and disposal of garbage including provision of grease tarps of adequate design.
(11) [135][Before employment, medical examination for fitness of each worker employed in a canteen, including contractor or manager, who handles food stuffs, shall be carried out by the Government Medical Officer or Certifying Surgeon or Factory Medical Officer which should include the following namely
(i) routine blood examination;
(ii) routine and bacteriological testing of faeces and urine for germs of dysentery and typhoid fever;
(iii) any other examination including chest X-Ray that may be considered necessary by the Government Medical Officer or Certifying Surgeon or the Factory Medical Officer.
(12) No person who in the opinion of the Government Medical Officer or the Certifying Surgeon or the Factory Medical officer is unsuitable for employment on account of possible risk to the health of others, shall be employed in the canteen.
(13) Reports of the test shall be made available to the Inspector on demand.]

72. Dining Hall

(1) The dining hall shall normally accommodate at a time 20 per cent of the workers working at a time

Provided that**,** in any particular factory or in any particular class of factories, the Chief Inspector by an order in writing in this behalf, alter the percentage of workers to be accommodated.
(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 than8 square feet per diner to be accommodated as prescribed in sub-rule (1).
(3) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their numbers. Washing places [136][and Washrooms] for women shall be separate and screened to secure privacy.
(4) Sufficient tables, chairs or benches shall be available for the number of diners to be accommodated as prescribed in sub-rule (1).

73. Canteen equipment.

(1) There shall be provided sufficient utensils, 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 also be provided.
(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 materials. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipment.

74. Prices to be charged.
(1) Food, drink and other items served in the canteen shall be sold on a non-profit basis and the price charged shall be subject to the approval of the Canteen Managing Committee.
(2) [137][In computing the price referred in sub-rule (1), the following items of expenditure shall not be taken into consideration, but will be borne by the occupier:
(a) the rent for the land and building;
(b) the depreciation and maintenance charges of the building and equipment provided for the canteen;
(c) the cost of purchase, repairs and replacement of equipment including furniture, crockery, cutlery and utensils;
(d) the water charges and expenses for providing lighting and ventilation;
(e) the interest on the amount spent on the provision and maintenance of the building, furniture and equipment provided for the canteen;
(f) the cost of fuel required for cooking or heating foodstuffs or water; and
(g) the wages of the employees serving in the canteen and the cost of uniforms, if any, provided to them.]
(3) [138][The charges per portion of foodstuff, beverages and any other items served in the canteen shall be conspicuously displayed in the canteen]

[139][Provided that where the Canteen is managed by Co-operative Society of Workers registered under the [140][Haryana Co-operative Societies Act, 1984 (Haryana Act 22 of 1984)], it may be allowed to include in the charges to be made for the foodstuffs served, a profit up to 5 per cent on its working capital employed in running the canteen]

75. Accounts

(1) All books of accounts, registers and any other documents used in connection with the running of canteen shall be produced on demand to an Inspector.

(2) [141][The accounts pertaining to the canteen shall be audited once every 12months by registered Accountants and Auditors and 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 in such department]

[142][Provided further that where the canteen is managed by Co-operative Society registered under the [143][Haryana Co-operative Societies Act, 1984 (Haryana Act 22 of 1984)], the accounts pertaining to such canteen may be audited in accordance with the provisions of that Act].

76. Managing Committee.

(1) The manager shall appoint a Canteen Managing Committee which shall be consulted from time to time as to

(a) the quality and quantity of foodstuffs to be served in the canteen;

(b) the arrangements of the menus;

(c) times of meals in the canteen; and

(d) any other matter as may be directed by the Committee.

[144][Provided that where the canteen is managed by a Co-operative Society registered under [145][the Haryana Co-operative Societies Act, 1984 (Haryana Act 22 of 1984)], it shall not be necessary to appoint a Canteen Managing 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 1 for every 1,000 workers employed in the factory provided that in no case shall be more than 5 or less than 2 workers on the Committee.

(3) The manager shall, in consultation with the Works Committee, if any, determine and supervise the procedure for elections to the Canteen Managing Committee.

77.

The Canteen Managing Committee shall be dissolved by the manager two years after the last election, no account being taken of a bye-election.

78. Shelters, rest rooms and lunch rooms.

(1) This rule shall apply to all such factories wherein more than 150 workers are ordinarily employed.

(2) The shelters or rest rooms and lunch rooms shall conform to the following standards and the manager of factory shall submit for the approval of the Chief Inspector a site plan in duplicate of the building to be constructed or adapted:

(a) The building shall be soundly constructed and all the walls and roof shall be of suitable heat resisting materials and shall be waterproof. The floor and walls to the height of 3 feet shall be so laid or finished as to provide a smooth and impervious surface.

(b) The height of every room in the building shall be not less than 12 feet from floor level to the lowest part of the roof and there shall be at least12 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 number of workers to be accommodated,
(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 twelve square feet of floor area for each person, such reduced floor a reaper person shall be provided as may be approved in writing by the Chief Inspector.
(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.
(d) Every room shall be adequately furnished with chairs or benches with backrests
(e) Sweepers shall be employed whose primary duty is to keep the rooms, buildings and precincts thereof in a clean and tidy condition.

79. Creches
(1) In every factory wherein more than [146][thirty]women workers are ordinarily employed the creches shall be conveniently accessible to the mothers of the children accommodated therein and so far as reasonably practicable 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.
(2) The building in which the creche is situated shall be soundly constructed and all the walls and roof shall be of suitable heat resisting materials and shall be waterproof. The floor and internal walls of the creche shall be so laid or finished as to provide a smooth impervious surface
(3) The height of the rooms in the building shall be not less than 12 feet from the floor to the lowest part of the roof and there shall be not less than 20 square feet of floor area for each child to be accommodated.
(4) 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.
(5) The creche 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.

(6) A suitable fenced and shady open-air playground shall be provided for the older 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 a playground.
(7) The occupier of every factory shall provide for [147][facilities to mothers to feed their children] at regular intervals.

80. Wash-Room
(1) There shall be in or adjoining the creche a suitable washroom for the washing of the children and their clothing's. The washroom shall confirm to the following standards:
(a) That floor and internal walls of the room to the 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 creche at any one time together with a supply of water provided if practicable through taps form 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 he is in the creche.
(2) Adjoining the washroom referred to above, latrine shall be provided for the sole use of the children in the creche. The design of the latrine and the scale of accommodation to be provided shall either be approved by the Public Health Authorities, or, where there is no such authority, by the Chief Inspector of Factories.

81. Supply Of Milk And Refreshment
At least[148][quarter litre] of pure milk shall be available for each child 1[on every day] who is accommodated in the creche and the mother of such a child shall be allowed in the course of her daily work, two 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
82. Clothes For Creche Staff
The creches staff shall be provided with suitable clean clothes for use while on duty in the creche.
[149]**[82-A. Exemption From The Provision Of The Creche**
(1) In factories where the number of married women or widows employed does not exceed 15 or where the factory work for less than 180 days in a calender year, or where number of children kept in the creche was less than 5 in the preceding years,

the Chief inspector may exempt such factories form the provisions of Section48 and the Rules 79 to 82 made thereunder, if he is satisfied that alternate arrangements as stipulated under sub-rule (2) are provided by the factory.
(2)
(a) The alternate arrangements required in sub-rule (1) shall include acreche building which has a minimum accommodation at the rate of two square metres per child and constructed in accordance with the plans approved by the Chief Inspector;

(b) The creche building shall have
(i) a suitable washroom for washing of the children and their clothing;
(ii) adequate supply of soap and clean clothes and towels;
(iii) [150][one female attendant up to twenty children and additional female attendants(s) for every additional twenty children or part thereof 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 91) 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.

CHAPTER VI
WORKINGHOURS OFADULTS
83. Compensatory Holidays.
(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) 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 of the Act 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 that holiday.
(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) [151][The record' of compensatory holidays shall be maintained in Form No. 25].

84. Exemption Of Printing Presses Attached With Dailynewspapers

All printing presses attached to daily newspapers publishing more than one edition shall be exempted from the provisions of sub-section (1) of section 58 of the Act subject to the condition that the system of over lapping shifts is duly approved by the Chief Inspector of Factories beforehand and no worker is made to work more than nine hours a day subject to forty-eight hours a week as provided under section 51 of the Act.
85. Muster-Roll For Exempted Factories
(1) [152][The manager of every factory in which workers are exempted under Sections 64 or 65 from the provisions of Sections 51 or 54 shall keep a muster-roll in Form No. 10 showing the normal piece-work rate of pay, or the rate of pay per hour, of all exempted employees. [153][In this muster-roll shall correctly entered the overtime] hours of work and payment therefore of all exempted workers. The muster-roll in Form No. 10 shall always be available for inspection.
(2) [154][Period of overtime work shall also be entered in overtime slips which shall be prepared in duplicate and an overtime slip 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.]

85-A. Extra wages for overtime.

[155][For the purpose of computing 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 rates in the nearest market prevailing during the wage period in which overtime was worked and value of food grains and other articles supplied at concessional rates shall be calculated and allowed for the number of overtime hours worked]

Provided that this rule shall not apply to any Federal Railway Factory whose alternative method of computation has been approved by the State Government.]

86. 156[Notice of periods of work for adult workers.

The notice of periods of work for adult workers shall be in Form 11 provided that the notice of periods of work for adult workers employed [157][in the place declare and deemed to be a factory] under section 85 of the Act shall be, in Form 36 and shall be maintained by the occupier or manager of the factory.]

87. Register of adult workers.

The register of [158][all adult workers except those employed] [159][in the place declare and deemed to be a factory] under Section 85 of the Act] shall be in Form No. 12.

88. 160 [deleted]

89. 161 [deleted]

90. 162[deleted]

91. 163 [deleted]

CHAPTER VII

Employment Of Young Persons

92. Notice of periods of work of children

The notice of periods of work for child workers shall be in FORM No. 13

93. Register of child workers

The register of child workers shall be in Form No. 14.

CHAPTER VIII

Leave With Wages

94. Wages During Leave Period

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 at the average rates in the nearest market prevailing during the month immediately preceding his leave and the value at the concessional rates allowed of food grains and other articles he is entitled to.

For the purpose of the cash equivalent monthly average market rates of food grains and other articles shall be computed at the end of every month.

[164][94-A]. Leave with wages register.

(1) [165][The manager of every factory] except [166][the factories deemed as such] under section 85 of the Act, shall maintain a register in Form No. 15 (thereinafter called the Leave with Wages Register) and the name of each worker shall be entered in this register before the close of the next calendar month following the month, in which the worker is taken in employment:

Provided that if Chief Inspector is of the opinion that any muster roll or register or any other record maintained as part of the routine of the factory, or return made by the manager gives in respect of any or all the workers in the factory, the particulars required for the enforcement of Chapter VIII of the Act, he may, by order in writing, direct that such muster roll or register or return shall, to the corresponding extent, be maintained in place of and be treated as the register or return required under this rule in respect of the factory.
(2) The Leave with wages register shall be preserved for a period of three years after the last entry in it and shall be produced before the Inspector on demand.]

95. 167[Leave Books
(1) 168[The manager of every factory] except 169[the factories deemed as such] under Section 85 of the Act shall), provide each worker with a book in Form No. 15 (hereinafter called the leave book) within one month following the month in which the worker is taken in employment. The leave book shall be the property of the worker and the manager or his agent shall not demand it except to make relevant entries therein, whenever necessary, and shall not keep it for more than a week at a time.

(2) 170[If a worker loses his leave book, the manager shall provide him with another copy free of cost duly completed from his record, within one week.]

96. 171[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 whole or part of the period of the illness under the provisions of clause (7) c Section 79 of Chapter VIII of the Act as revised by the Factories(Amendment) Act, 1954, he shall, if required by the manager, produce a medical certificate signed by a Registered Medical Practitioner 172 [***] stating the cause of the absence and the period for which the worker is, in the opinion of such medical practitioner. 173[***] unable to attend his work or other reliable evidence to prove that the was actually ill during the period for which the leave is to be availed of.
97. Notice To Inspector Of Involuntary Unemployment
The manager shall give as soon as possible a notice to the Inspector of every case of involuntary unemployment of workers, giving numbers of unemployed and the reason for their unemployment. Entries to this effect shall be made in the 'Leave with Wages Register' and 'Leave Book' in respect of each worker concerned.
98. Notice By Workers
Before or at the end of every calendar year, a worker, who may be required to avail of leave in accordance with sub-section (8) of Section 79 of the Act 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.
99. Notice Of Leave With Wages
(1) As far as circumstances permit, members of the same family, comprising husband, wife and children shall be allowed leave on the same date.

(2) A worker may exchange the period of his leave with another worker, subject to the approval of the manager

100. Payment Of Wages If The Workers Dies

If a worker dies before he resumes work, the balance of his pay due for the period of [174][leave with wages not availed of, shall be paid to his nominee within one week of the intimation of the death of the worker. For this purpose, each worker shall submit a nomination in Form No. D annexed hereto duly signed by himself and attested by two witnesses. The nomination shall remain in force until it is cancelled or revised by another nomination.

FORM NO. D

NOMINATION FORM

I hereby require that in the event of my death before resuming work the balance of my pay due for the period of leave with wages not availed of shall be paid to.....who is my .....and resides at……

101. Register To Be Maintained In Case Of Exemption

(1) Where an exemption is granted under Section 84, the manager shall maintain a register showing the position of each worker as regard leave due, leave taken and wages granted.

(2) He 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

(3) No alteration shall be made in the Scheme approved by the State Government at the time of granting exemption under Section 84 of the Act without its previous sanction.

CHAPTER IX

Special Provisions

102. 175[Dangerous Manufacturing Process Or Operations

1. The following [manufacturing processes or operations] when carried on in any factory are declared to be dangerous operations under Section 87 of the Act:

(1) Manufacture of aerated water and processes incidental thereto.

(2) Electrolytic plating or oxidation of metal articles by use of an electrolyte containing chromic acid or other chromium compounds.

(3) Manufacture and repair of electric accumulators.

(4) Glass manufacture.

(5) Grinding or glazing of metals.

(6) Manufacture and treatment of lead and certain compounds of lead.

(7) [176][Generation of gas from dangerous petroleum.

(8) [177][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 or steam.

(9) Liming and tanning of raw hides and skins and processes incidental thereto.

(10) [178][Carrying on of certain processes of lead and lead material in Printing Presses and Type Foundries.

(11) [179][Chemical Works.

(12) Manufacture of pottery and ceramics.

(13) [180][Compression of Oxygen and Hydrogen produced by the electrolysis of water.
(14) Handling and manipulation of corrosive substances.
(15) [181][Manufacture of articles for refractory material including manufacture of refractory bricks.
(16) Handling and processing of asbestos, manufacture of any articles of asbestos and any other process of manufacture or otherwise in which asbestos is used in any form; and
(17) Manufacture or Manipulation of Carcinogenic dye intermediates.
(18) Process of extracting vegetable oils from oil cakes in solvent Extraction Plants.
(19) [182][Manufacture or manipulation of Manganese and its compounds;
(20) Manufacture and manipulation of dangerous pesticides;
(21) Carbon Disulphide plants;
(22) Protection against hazards of poisoning arising from Benzene.
(23) Operations involving High Noise Levels.
(24) Manufacture of rayon by Viscose Process.
(25) Highly flammable liquids and Flammable Compressed Gasses.
(26) Operation in Foundries.
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.
3. [183][Wherever a periodical medical examination has been prescribed under the different schedules, the occupier shall send a return in Form No. 34 to the Chief Inspector of Factories, so as to reach him on or before the 5th of every month in respect of medical examination of the workers conducted during the preceding month.
4. [184][Any register or record of medical examination and tests connected therewith required to be carried out under any of the schedule annexed hereto in respect of any worker shall be made readily available to the Inspector and shall by preserved till the expiry of one year after the worker ceases to be in employment of the factory."

SCHEDULE I
Manufacture Of Aerated Waters And Processes Incidental Thereto
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 form striking any person employed in the factory.
2. Face guards and gauntlets

(1) The occupier shall provide and maintain in good condition for the use of all persons engaged in filling bottles or siphons:
(a) suitable face guards to protect the face, neck and throat; and
(b) suitable gauntlets for both arms to protect the whole hand and arms Provided that:
(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.
(ii) Where a machine is so constructed that only one arm of the bottler at work up to it is exposed to danger, a gauntlet need not be provided for the arm which is not exposed to danger.

(2) The Occupier shall provide and maintain in good condition for the use of all persons engaged in corking, crowning, screwing, wiring, foiling, capsuling, sighting or labelling bottles or syphons
(a) suitable face-guards to protect the face, neck and throat; and
(b) suitable gauntlets for both arms to protect the arm and at least half of the palm and the space between the thumb and forefinger.
(3) Wearing of face guards and gauntlets. - All persons engaged in any of the processes specified in paragraph 2 of this schedule shall, while at work in such processes, wear the face guards and gauntlets 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 of metals such as chromium, nickel, cadmium, zinc, copper, silver, gold etc.
1. Definitions: For the purposes of this Schedule
(a) "Electrolytic process" means the electrolytic plating or oxidation of metal articles by the use of an electrolyte containing acids, bases or salts of metals such as chromium, nickel, cadmium, zinc, copper, silver, gold, etc.
(b) "Bath" means any vessel used for an electrolytic process or for any subsequent process; and
(c) "Employed "means employed in any process involving contact with liquid from a bath.
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.

3. Prohibition relating to women and young persons: No women, adolescent or child shall be employed or permitted to work at a bath.
4. Floor of workrooms: The floor of every work-room containing a bath shall be impervious to water. The floor shall be maintained in good and level condition and shall be washed down at least once a day.
5. Protective devices:
(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:
(a) waterproof aprons and bibs; and
(b) For persons actually working at a bath, loose fitting rubber gloves and rubber boots or other waterproof footwear, and chemical goggles.
(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. Washing facilities
(1) There shall be provided and maintained in good repairs for the use of all persons employed in electrolytic process and processes incidental to:
(a) a wash place under cover, with either:

(i) a trough with a smooth impervious surface filled with a waste pipe, and of sufficient length to allow at least 60cms for every 5 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 60cms, or
(ii) at least one wash basis for every five such persons employed at any one time, fitted with a waste pipe and having a constant supply of water laid on.
(b) a sufficient supply of clean towels renewed daily, and soap or other suitable cleaning material.
(2) In addition to the facility in sub-paragraph (1) an approved type 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.
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. Chemicals handled in this plant are corrosive and poisonous.
2. Smoking, chewing tobacco, eating food or drinking, in this area is prohibited. No food stuff or drink shall be brought in this area.
3. Some of these chemicals may be absorbed through the skin and may cause poisoning.
4. A good wash shall be taken before meals.
5. Protective devices supplied shall be used while working in this area.
6. Spillage of the chemicals on any part of the body or on the floor shall be immediately washed away with water.
7. All workers shall report for the prescribed medical tests regularly to protect their own health.
8. Medical facilities and records of examinations and tests
(1) The occupier of every factory in which electrolytic processes are carried on 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;
(b) Provide to the said medical practitioner all the necessary facilities for the purpose referred to in clause (a); and
(c) maintain a sufficient supply of suitable barrier cream, ointment and impermeable water proof plaster in a separate box readily accessible to the worker's ad used solely for the purpose of keeping these substances. In case cyanides are used in the both, the box shall also contain an emergency cyanide kit.
(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
(3) The record of the examinations referred to in sub-paragraph (2) shall be maintained in a separate register approved by Chief Inspector of Factories which shall be kept readily available for inspection by the Inspector.
9. Medical examination by the Certifying Surgeon

(1) Every worker employed in the electrolytic processes shall be examined by a Certifying Surgeon before his first employment Such examination shall include X-ray of the chest and:
(a) in case of chromium plating include examination for nasal septum perforation and test for chromium in urine;

(b) in case of nickel platting, test for nickel in urine; and
(c) in case of cadmium plating, test for cadmium in urine and -2 macroglobulin in urine.
(2) No worker shall be employed in any electrolytic process unless certified fit for such employment by the Certifying Surgeon.
(3) Every worker employed in the electrolytic processes shall be re-examined by a Certifying Surgeon at least once in every year, except in case of the workers employed in cadmium, chromium and nickel plating processes for whom this examination shall be carried our 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.
(4) 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 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 28.
(5) The Certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.
(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 for work in the said processes. The person declared unfit in such circumstances shall be provided with alternate placement facility unless he is fully incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.
(7) No person who has been found unfit to work as said in sub-paragraph (6) 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 these processes."

SCHEDULE – III
Manufacture and Repair of Electric Accumulators
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.
2. Definitions: For the purposes of this schedule:

(a) "Lead process" means the melting of lead or any material 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) “Suspension” means suspension from employment in any lead process by written certificates in the Health Register in Form No. 17 signed by the Certifying Surgeon who shall have power of suspension as regards all persons employed in any such process.
3. Prohibition relating to women and young persons: No women or young person shall be employed or permitted to work in any lead process or in any room in which the manipulation of raw oxide of lead or pasting is carried on.
4. Separation of certain processes: 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 processes:
(a) Manipulation of raw oxide of lend;
(b) Pasting;
(c) Drying of pasted plates;
(d) Formation with lead turning “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 14.0 cubic meters of air space for each person employed therein, and in computing this air space no height over 3.6 meters shall be taken into account.
6. Ventilation: Every workroom shall be provided with inlets and outlets of adequate size as to secure and maintain efficient ventilation in all parts of the room.
7. Distance between workers in pasting room: In every pasting-room the distance between the centre of the working position of any paster and that of the paster working nearest to him shall not be less than 1.5 meters.
8. Floor of workrooms
(1) The floor of every room in which 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; and
(c) kept free from materials, plant, or other obstructions not required for, or produced in, the process carried on in the room.

(2) In all such rooms other than grid casting shops the floor shall be:
(a) cleansed 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 cleansed 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; and
(c) Thoroughly washed daily by means of 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 out there at;

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 suction cleaning apparatus at the time when no other work being carried on threat; and all such work-benches in grid casting shops shall
(d) be cleaned daily;

and every work-bench used for pasting shall
(e) be covered throughout with sheet lead and other impervious material;
(f) be provided with raised edges;
(g) be kept constantly moist while pasting being carried on.
10. Exhaust draught: The following provisions shall not be carried on without the use of an efficient exhaust draught:
(a) Melting of lead or material containing lead.
(b) Manipulation of raw oxide of lead unless done in an enclosed apparatus so as to prevent the escape of dust into work-room.
(c) Pasting
(d) Trimming, brushing, filing or any other abrading or cutting or pasted plates giving rise to dust.
(e) Lead burning other than:
(i) “tacking” in the formation room

(ii) Chemical burning for making of lead linings for cell cases necessarily carried on in such a manner that the application of efficient exhaust is impracticable.

Such exhaust draught shall be affected by mechanical means and shall operate on the dust or fume given off as nearly as may be at the point of reason so as to prevent it entering the air of any room in which persons works.
11. Fumes and gasses from melting pots: The products of combustion produced in the heating of any melting pot shall not be allow to escape into a room in which person’s work.
12. Containers 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 accept when dross is being deposited therein.
13. Container for lead waste: A suitable receptacle shall be provided in every work-room in which old plates and waste material which may give rise to shall be deposited.
14. Racks and shelves drying room: The racks and shelves provided in any drying room shall not be more than 2.40 M from the floor and not more than 60 centimetre in width; provided that as regards racks or shelves set or drawn from both sides the total width shall not exceed 1.2 metre. Such racks and shelves shall be cleaned only after being thoroughly damped unless so efficient suction cleaning apparatus is used for this purpose.
15. Medical examination

(a) Every person employed in a lead process shall examined by the Certifying Surgeon within the seven days preceding or following the date of his first employment in such process and thereafter shall examined by the Certifying Surgeon once in every calendar month, or at such other intervals as may be specified in writing by the Chief Inspector, on a day of which due notice shall be given to all concerned

"First employment" means first employment in a lead process in the factory or workshop and also re-employed there in a lead process following any cessation of employment in such process for a period exceeding three calendar months
(b) A Health Register in Form No 17 containing the names of all persons employed in a lead process shall be kept
(c) No person after suspension shall be employed in a lead process without written sanction from the certifying Surgeon entered in or attached to the Health Register.

SCHEDULE – IV
Glass Manufacture

1. Exemption: If the Chief Inspector is satisfied in respect of any factory or any class of process that, owing 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 danger to the persons employed therein, or that the application of this Schedule or any part thereof is for any reason impracticable, he may be 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. Definitions: For the purpose of this Schedule:
(a) "efficient exhaust draught" means localised 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, yields to an aqueous solution of hydrochloric acid a quantity soluble lead compound exceeding, when calculated as lead monoxide, five percent of the dry weight of the portion taken analysis:

The method of treatment shall be as follows:
A weighed quantity of the material which has been dried at 100C 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) "Suspension" means, suspension from employment in any process specified in paragraph 3 by written certificate in Heal Register in Form No.17 signed by the certifying surgeon who shall have power of suspension as regards all persons employed in any such process

3. Exhaust draught: The following processes shall not be carried on except under an efficient exhaust draught or 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 processes in which hydrofluoric acid fumes or ammoniacal vapours are given off.
(d) All processes in the making of furnace moulds or pots (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 person: 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 in which any process is carried on giving off silica dust shall be kept moist and shall comply with the following requirements:

The floor shall be:
(a) of cement or similar material so as to be smooth and impervious to water;
(b) maintained in sound condition; and
(c) cleansed daily after being thoroughly spareyed with water at a time when no other work is being carried on the room.

The work-benches shall:
(a) have a smooth surface and be maintained in sound condition, and
(b) cleansed daily either after being thoroughly damped or by means of a suction 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 in 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 the 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: Every glass blower shall be provided with a separate blow pipe bearing the distinguishing mark of the person to whom it is issued and suitable facilities shall be readily available to every glass blower for sterilizing his blow pipe.
9. Food, drinks, etc., prohibited in workrooms: No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any room or workplace 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 of sufficient length to allow of at least 60 cm. 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 60 cms; or
(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
(b) a sufficient supply of clean towels made of suitable material renewed daily with sufficient supply of soap or other suitable cleansing material and of nail brushes; and
(c) a sufficient number of stand pipes with taps the number and location of which shall be to the satisfaction of the Chief Inspector.
12. Medical examination
(a) Every person employed in any process specified in paragraph 3 shall examined by the Certifying Surgeon within the seven days preceding or following the date of his first employment in such process and thereafter shall examined by the Certifying Surgeon once in every calendar month, or at such other intervals as may be specified in writing by the Chief Inspector, on a day of which due notice shall be given to all concerned
(b) A Health Register in Form No 17 containing the names of all persons employed in any process specified in paragraph 3 shall be kept.
(c) No person after suspension shall be employed in any process specified in paragraph 3 without written sanction from the Certifying Surgeon entered in or attached to the Health Register.

SCHEDULE – V
Grinding or Glazing of Metals and Processes Incidental Thereto
1. Definitions: For the purposes of this Schedule:
(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.

(b) “Abrasive wheel” means a wheel manufactured of bonded emery or similar abrasive.
(c) “Grinding” means the abrasion, by aid of mechanical power, of metal, by means of a grindstone or abrasive wheel.
(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.

(e) “Racing” means the turning up, cutting or dressing of a revolving grindstone before it is brought into use for the first time.
(f) ‘Hacking’ means the chipping of the surface of a grindstone by a hack or similar tool.
(g) ‘Rodding’ means the dressing of the surface of a revolving grindstone by the application of a rod, bar or strip of metal to such surface.

Exceptions:
(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 or glazing of metals.
(2) Nothing in this schedule except paragraph 4 shall apply to any grinding or glazing of metals carried on intermittently and at which no person is employed for more than 12 hours in any week
2. [185][Relaxation: The chief Inspector of Factories 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 owing to the special methods of works or otherwise such relaxation or suspension is practicable without danger to the health or safety of the persons employed.]
3. Equipment for removal of dust: No racing, dry grinding or glazing shall be performed without:
(a) a hood or other appliance so constructed, arranged, placed and maintained as substantially to intercept the dust thrown off; and
(b) abduct 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
(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.
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, abrasive wheel or glazing appliance.
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.
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.
7. Examination of dust equipment

(a) All equipment for the extraction or suppression of dust shall at least once in every six months be examined and tested by competent person, and any defect disclosed by such examination and test shall be rectified as soon as practicable.
(b) [186][A register containing particulars and tests shall be kept in Form No.38]
8. 187[Medical examination
(a) Every person employed in any process specified in paragraph 3 shall examined by the Certifying Surgeon within the fourteen days preceding or following the date of his first employment in such process and thereafter shall examined by the Certifying Surgeon at intervals of not more than three months.
(b) A Health Register in Form No 17 containing the names of all persons employed in any process specified in paragraph 3 shall also be maintained.
(c) No person after suspension shall be employed in any process specified in paragraph 3 without written sanction from the Certifying Surgeon and the same shall be entered in or attached to the Health Register.

SCHEDULE – VI
Manufacture and Treatment of Lead and Certain Compounds of Lead
1. Exemption: Where the Chief Inspector is satisfied that all or any of the provisions of this Schedule is not necessary for the protection of the 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.
2. Definitions: For this purpose of this schedule:

(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, a 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 paints and similar products and other mixtures containing oil 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 100C 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 filtrate shall then precipitate as lead sulphate and weighed as lead sulphate.
(b) “Efficient Exhaust draught”: Means localised 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) 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 dusts 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 delivering of lead or the melting of scrap lead or zinc.
(c) the manufacture of solder or alloys containing more than ten percent of lead.
(d) the manufacture of any oxide, carbonate, sulphate, chromate, acetate, nitrate or silicate of lead.
(e) Handling or mixing of lead tetra-ethyl.
(f) Any other operation involving the use of a lead compound.
(g) The cleaning of workrooms where any of the operations aforesaid are carried on.
4. Prohibition relating to women and young persons: No women 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 an efficient exhaust draught to contrived as to operate on the dust, fume, gas or vapour as closely as possible to the point of origin.
7. Certificate of fitness: A person medically examined under paragraph 8 and found fit for employment shall be granted by a Certifying Surgeon a certificate of fitness in Form No.27 and such certificate shall be in the custody of the manager of the factory. The certificate shall be kept readily available for inspection by any Inspector and the person granted such a certificate shall carry with him, while at work, a token giving reference to such certificate.
8. Medical examination
(1) The person so employed shall be medically examined by the Certifying Surgeon within the 14 days of his first employment in such process and thereafter shall be examined by the Certifying Surgeon at intervals of not more than three months, and a record of such examinations shall be entered by the Certifying Surgeon in the special certificate of fitness granted under paragraph 7.
(2) If at any time the Certifying Surgeon is of opinion that any person is no longer fit for employment on the grounds that continuance therein would involve special danger to health, he shall cancel the special certificate of fitness of that person.
(3) No person whose special certificate of fitness has been cancelled shall be employed unless the Certifying Surgeon, after re-examination, again certifies him to be fit for employment.
9. Food, drinks, etc. prohibited in workroom: No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in 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.
10. Protective clothing: Suitable protective overalls and head coverage shall be provided, maintained and kept clean by the occupier and such overalls and head coverings shall be worn by the persons employed.

11. Cleanliness of workrooms, tools, etc.: The rooms in which the persons are employed and all tools and apparatus used by them shall be kept in a clean state.
12. Washing facilities
(1) The occupier shall provide and maintain for the use of all persons employed suitable washing facilities consisting of:
(a) a trough with a smooth impervious surface fitted with a waste pipe, without plug, and of sufficient length to allow of at least two feet 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 cms; or
(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 cleansing material.
(2) The facilities so provided shall be placed under the charge of a responsible person and shall be kept clean.
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 arrangements shall consist of the use of a room separate from any work-room which shall be furnished with sufficient tables and benches, and unless a canteen serving hot meals is provided, adequate means of warming the 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.
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

[188] [Generating Petrol Gas From Dangerous Petroleum

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 [189][in which the generation of gas from dangerous petroleum] is carried on.
2. Flame traps: The plant for [190][generation of gas from dangerous petroleum] and associated piping and fittings 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 form leaks.
3. Generating building or room: All plants for [191][generation of gas from dangerous petroleum] 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 'generating building'). In the case of such plants 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.

4. Fire extinguishers: An efficient means of extinguishing petrol fires shall be maintained in an easily accessible position near the plant for generation of [192][gas from dangerous petroleum].
5. Plant to be approved by Chief Inspector: [193][Gas from dangerous petroleum] shall not be manufactured except in a plant for [194][Generating gas], the design and construction of which has been approved by the Chief Inspector.
6. Escape of [195][dangerous petroleum]: Effective steps shall be taken to prevent [196][dangerous petroleum] from escaping into any drain or sewer.
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 generation 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.
8. Access to [197][dangerous petroleum] or container: No unauthorized person shall have access to any [198][dangerous petroleum] or to a vessel containing or having actually contained [199] [dangerous petroleum].
9. Electric fittings: All electric fittings shall be of flame-proof construction and all electric conductors shall either be enclosed in metal conduits or be lead-sheathed.
10. Construction of doors: All doors in the generating room or building shall be constructed to open outwards or to slide and no door shall be locked or obstructed or fastened in a such a 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.
11. Repair of containers: No vessel that has contained [200][dangerous petroleum] 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 [dangerous petroleum] or inflammable vapour.

[201][SCHEDULE – VIII

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 or steam

Blasting regulations

1. Definitions: For the purposes of this Schedule:
(a) “Blasting” means cleaning, smoothing, roughening, or removing of any part of the surface of any article by the use of an abrasive of a jet of sand, metal shot, or grit or other material, propelled by a blast of compressed air or steam.
(b) “Blasting Enclosure” means a chamber, barrel, cabinet or any other enclosure designed for the performance of blasting therein.

(c) “Blasting Chamber” means a blasting enclosure in which any person may enter at any time in connection with any work or otherwise.
(d) “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 smoothening of a casting, but does not include the free treatment.

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:

Provided that this clause shall come into force two years after the coming into operation of this Schedule:
Provided further that no woman or young person shall be employed or permitted to work at any operation of sand blasting.
3. Precautions in connection with blasting operations
(1) Blasting shall not be done except in a blasting enclosure and no work other than blasting and any work immediately incidental thereto and clearing and repairing of the enclosure including the plant and appliances situated therein, shall be performed in a blasting enclosure. Every door, aperture and joint of blasting enclosure, shall be kept closed and air tight while blasting is being done therein.
(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 enclosure, and from apparatus connected therewith, into the air of any room.
(3) Provision of separating apparatus: There shall be provided 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 opinion that it is not reasonably practicable to provide such separating apparatus.
(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 manner that it 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.
(5) Operation of ventilating plant: The ventilating plant provided for the purpose of sub-paragraph (4) shall be 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.
4. Inspection and examination
(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.
(2) Particulars of the result of every such inspection, examination or 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. Provision of protective helmets, gauntlets and overalls
(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 this use whilst he is in the chamber and shall not remove it until he is outside the chamber.
(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.
(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.
(4) Suitable gauntlets and overalls 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.
6. Precautions in connection with cleaning and other work

(1) Where any person is engaged upon cleaning of any blasting apparatus or blasting enclosure or of any apparatus or ventilating plant connected therewith or the surroundings thereof or 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) 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.
7. Storage accommodation for protective wear: Adequate and suitable storage accommodation for the helmets, gauntlets and overalls required to be provided by clause 5 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.
8. Maintenance and cleaning of protective wear: All helmets, gauntlets, overalls and other protective devices or clothings provided and worn for the purposes 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 not be used for removing dust from any clothing.
9. Maintenance of vacuum cleaning plant: Vacuum cleaning plant used for the purpose of this Schedule shall be properly maintained.
10. Restrictions in employment of young persons
(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 employed on maintenance or repair work at such apparatus, enclosure or plant.
(2) No person under 18 years of age shall be employed to work regularly within 20 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.
11. Power to exempt or relax:
(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 an 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 relaxed without endangering the health of the persons employed or that application of any 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 such conditions and for such period as may be specified in the said order.
(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 – IX
Liming and Tanning of Raw Hides and Skins and Processes Incidental Thereto
1. Cautionary notices
(1) Cautionary notices as to anthrax in the form specified by the Chief Inspector shall be affixed in prominent positions in the factory where they may be easily and conveniently read by the persons employed.
(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.
(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 so placed as to be easily and conveniently read by the persons employed.

(4) Notices shall be affixed in prominent places in the factory stating the position of the first-aid box or cupboard and the name of the person in charge of such box or cupboard.
(5) If any person employed in the factory is illiterate, effective steps shall be taken to explain carefully to such illiterate person the contents of the notice specified in subparagraphs 1, 2 and 4 and if chrome solutions are used in the factory, the contents of the notice specified in sub-paragraph 3.
2. Protective clothing: The occupier shall provide and maintain in good condition the following articles of protective clothing:

(a) Waterproof footwear leg coverings, aprons and gloves for persons employed in processes involving contact with chrome solutions, including the preparation of such solutions.
(b) gloves and boots for persons employed in lime yard; and
(c) protective footwear, aprons and gloves for persons employed in processes involving the handling of hides and skins, other than in processes specified in clauses (a) and (b):

Provided that:
(i) the gloves, aprons, leg coverings or boots may be of rubber or leather, but the gloves and boots to be provided under sub-clauses (a) and (b) shall be of rubber;
(ii) the gloves may not be provided to persons fleshing by hand or employed in processes in which there is not risk of contract with lime, sodium sulphide or other caustic liquor
3. Washing facilities, mess room and cloakroom: There shall be provided and maintained in a clean state and in good repair for the use of all persons employed:
(a) a trough with a smooth impervious surface fitted with a waste pipe, without plug, and of sufficient length to allow of at least 60 centimetres 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 centimetre; or
(b) at least on 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 clean water; together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleansing material and clean towels;
(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 (2) and adequate means for warming food and for boiling water;

The mess room shall:
(1) by separate from any room or shed in which hides or skins are stored, treated or manipulated,
(2) be separate from the cloakroom; and
(3) be placed under the charge of a responsible person;
(d) 202[The occupier shall provide and maintain, for use of all persons employed suitable accommodation for clothing put off during working hours and another accommodation for protective clothing and also adequate arrangements 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.

4. Food, drinks, etc. prohibited in workrooms: No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any workroom or shed in which hides or skins are stored, treated or manipulated.
5. First-aid arrangements: The occupier shall
(a) arrange for an inspection of the hands of all persons coming into contact with chrome solution be made twice a week by a responsible person,
(b) provided and maintain a sufficient supply of suitable ointment and impermeable water-proof plaster in a box readily accessible to the worker and used solely for the purpose of keeping the ointment and plaster.

SCHEDULE – X
Carrying on of Certain Processes of Lead and Lead Material in Printing Presses and Type Foundries
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 persons employed, he may by certificate in writing exempt any factory from all or any such provisions subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector.
2. Definitions: For the purpose of this Schedule:
(a) "Lead material" means material containing not less than five per cent of lead;
(b) "Lead process" means:
(i) the melting of lead or any lead material for casting;
(ii) the recharging of machines with used lead material; or
(iii) any other work including removal of dross from melting pots, cleaning of plungers; and
(iv) Manipulation, movement or other treatment of lead material.
(c) "efficient exhaust draught" means localised ventilation effected by head 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 smoke generated at the point where such gas, vapour, fume, or dust originate.
3. Exhaust draught
(1) None of the following processes shall be carried on except with an efficient exhaust draught:
(a) melting lead material or slugs;

(b) Heating lead material so that vapour containing lead is given off:

Provided that the aforesaid processes may be carried on without efficient exhaust draught if they are carried on in such a manner as to prevent free escape of gas, vapour, fume or dust into any place in which work is being done or is carried on in electrically-heated and thermostatically controlled melting pots.
(2) 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.
4. Prohibition relating to women and young persons: No woman or young person shall be employed or permitted to work in any lead process.

5. Separation of certain processes: 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 any other processes:
(a) melting of lead or any lead material;
(b) casting of lead ingots; and
(c) Mechanical composing.
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 workroom near the machine except when the dross is being deposited therein.
7. Floor of workroom: The floor of every workroom where 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; and
(c) cleansed throughout daily after being thoroughly damped with water at a time when no other work is being carried on at the place.
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.
9. 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:
(a) a wash place with either:
(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 water from taps or jets above the trough at intervals of not more than 60 centimetres; or
(ii) at least one wash basin for every 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
(b) a sufficient supply of clean towels made of suitable materials renewed daily, with a sufficient supply of soap or other suitable cleansing material.
10. Medical examination
(a) Every person employed in a lead process shall examined by the Certifying Surgeon within the 14 days of his first employment in such process and thereafter shall examined by the Certifying Surgeon at intervals of not more than 3 months, and a record of such examination shall be entered by the Certifying Surgeon in the special certificate of fitness in Form 27.
(b) A Health Register containing the names of all persons employed in a lead process shall be kept in Form No. 17.
(c) No person after suspension shall be employed in a lead process without written sanction from the Certifying Surgeon entered in the Health Register.
11. Food, drinks, etc. prohibited in workrooms: No food, drink, pan and supari or tobacco shall be consumed or brought by any worker into any workroom in which any lead process is carried on.

12. The occupier shall provide to all persons employed in lead process two full sleeve overall every year, arrange for their weekly washing and maintain these in good condition. The person employed in such a process shall wear these overall while engaged in such work.

203[SCHEDULE – XI]

CHEMICAL WORKS

PART I

1. Application: This schedule shall apply to all manufacture and processes incidental thereto carried on in chemical works.

2. Definitions: For the purpose of this Schedule:

(a) "Chemical works" means any factory or such parts of any factory as are listed in Appendix "A" to this Schedule;

(b) "efficient exhaust draught" means localised 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;

(c) "bleaching powder" means the bleaching powder commonly called chloride of lime;

(d) "chlorate" means chlorate or perchlorate;

(e) "caustic" means hydroxide of potassium or sodium;

(f) "chrome process" means the manufacture 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 paragraph 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 fatality 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 is 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 circumstance 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 or pollution to the work and outside environment, affecting the workers or neighbourhood in a serious manner, demanding immediate action;

(k) "dangerous chemical reactions" means high speed reactions, runaway reactions, delayed reactions, etc. and are characterized by evolution of large quantities of heat, intense release of toxic or flammable gases or vapours, 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 or health or body; and
(o) “confined space” means any space by reason of its construction 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. Housekeeping:
(1) Any spillage of materials shall be cleaned up before further processing.
(2) Floors, platforms, stairways, passages and gangways shall be free of any obstructions.
(3) There shall be provided easy means of access to all parts of the parts of the plant to facilitate cleaning.
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 purpose other than in the processes for which they are supplied.
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.
4. Cautionary Notices and Instructions:
(1) Cautionary notices in 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 and 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.
(2) In addition to the above cautionary notice, arrangement 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, an undertaking from the workers shall be obtained within 1 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 stuck or painted on the various types of containers and pipe lines.
5. Evaluation and provision of safeguards before the commencement of process:
(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 studied and provisions shall be made for dealing with any hazards including effects on workers, which may occur during manufacture.
(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-paragraph (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) 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) The requirements under the sub-paragraph (1) to (3) shall not act in lieu of or in derogation to, any other provisions contained in any Act governing the work.
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 or where hazardous chemicals are stored.
7. Examination of instruments and safety devices:
(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.
(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.
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 ISI specifications governing their construction and use for that area.
9. Handling and storage of chemicals:
(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 conform to the respective ISI standards. The instructions given in the label shall be strictly adhered to. Damaged containers shall be handled only under supervision of a knowledgeable and responsible person and spillage shall be rendered innocuous in a safe manner using appropriate means.
(2) The arrangements 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) Without prejudice to the generality of the requirements in sub- paragraph (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 storage and the compatibility requirements of substances with other chemicals stored nearby.
(4)
(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.
(b) Whenever the quantities laid down in the above clause (a) are to be exceeded, the permission of the Chief Inspector shall be obtained.
(c) Notwithstanding anything contained in clauses (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.
(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.
(6) Any storage facility constructed using non-metallic material such as Fibreglass 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, pipelines etc. used in such storage facility shall not have any support on the structure of the storage facility and shall be independently supported.
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 plan 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. Personal protective equipment:
(1) All workers exposed to the hazards in the processes 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) 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) As regards any doubt regarding the appropriateness of any personal protective equipment, the decision of the Chief Inspector will be final.
12. Alarm Systems:
(1) Suitable and effective alarm systems 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.
(2) The Chief Inspector of Factories may direct such system to be installed in case of plants or processes where toxic materials are being used and spillage or leakage of which may cause wide spread poisoning in or around the plant.

13. Control of escape of substances into the work atmosphere:
(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 or 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.
(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.
(3) The substances that would have escaped into the work atmosphere before taking immediate steps as required in sub-paragraph (2), shall be rendered innocuous by diluting with air or water or any other suitable agent or by suitably treating the substances.
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 effective arrangements shall come into operation.

15. Testing, examination and repair of plant and equipment:
(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 person 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 mentioned above in respect of pressure vessels or reaction vessels the following precautions shall be observed, namely:
(a) before the test is carried out, each vessel shall be thoroughly cleaned and examined externally, and as far as practicable, internally also for surface defects, corrosion and foreign matters. During the process of cleaning and removal of sludge, if any, all precautions shall be taken against fire or explosion, if such sludge is of pyropheric nature or contains spontaneously combustible chemicals;
(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
(c) any vessel which fails to pass the test or which for any other reason is found to be unsafe for use shall be destroyed or rendered unusable under intimation to the Chief Inspector.
(2) All parts of plant, equipment, machinery which is the likely event of failure may give rise to an emergent situation shall be examined once in a month by the competent person.
(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.
(4) All repair work including alteration, modification and addition to be carried out 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 or modification is done on pipelines, and joints are required to be welded, butt welding of joints

shall be preferred. Wherever necessary, the responsible person shall regulate the aforesaid work through a “permit to work system".

16. Staging:

(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 substantial

material of adequate strength. Such staging shall conform to the respective Indian Standard specifications.

(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) All the staging constructed for the purpose of this paragraph shall have appropriate access which are safe and shall be fitted with proper hand rails to a height of one metre and toe board.

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 to toxic, flammable and explosive substances evolved in the work environment in the course of manufacture or repair or maintenance, either due to failure of plant and equipment or due to the substances which are under pressure, escaping into the atmosphere.

18. Entry into or work in confined spaces:

(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:

(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;

(b) regulate the entry or work inside the confined spaces through a `permit to work system’ which should include the safeguards so developed as required under sub-clause (a) above;

(c) before testing the confined space for entry into or work, the place shall be rendered safe by washing or cleaning with neutralizing agents; or purging with steam or inert gases and making adequate forced ventilation arrangements or such measure which will render the confined space safe;

(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;

(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 and knowledgeable person.

(2) The manager shall maintain a log of all entry into or work in, confined spaces and such record shall contain the details of persons assigned for the work, the location of the work and

such other details that would have a bearing on the log book so maintained shall be retained as long as the concerned workers are in service and produces to the Inspector when demanded.

19. Maintenance work etc.

(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.

(2) Maintenance work shall be carried out in such a manner that there is no risk to persons in the vicinity or to persons who pass by. If necessary, the place of such work shall be cordoned off or the presence of unconnected persons effectively controlled.

20. Permit to work system: The permit to work system shall inter-alia include the observance of the following precautions while carrying out any specified work to be subjected to the permit to work system

(a) all work subject to the permit to work system shall be carried out under the supervision of a knowledgeable and responsible person;

(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.;

(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;

(d) persons who are assigned to carry out the permit to 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;

(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"; and

(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 condition 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 built 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 arrangements for making available urgent medical facilities.
(3) The occupier shall send 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 recognisable warning arrangements to caution all persons inside the plant as well as the neighbouring 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 meaning. 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.
(7) All the employees of the factory shall be trained about the action to be taken by them including evacuation procedures during emergencies.

(8) All emergency procedures must be rehearsed every three months and deficiencies, if any, in the achievement of the objectives shall suitably be corrected.
(9) The occupier shall arrange to have 10 percent of the workers trained in the use of first aid fire fighting appliances and in the rendering of specific hazards of the particular process.
(10) The occupier shall furnish immediately on request the specific chemical identity of the hazardous substance to the treating physician where the information is needed to administer proper emergency or first-aid treatment to exposed persons.
24. Danger due to effluents:
(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.
(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 Explosion Risks
1. Sources of ignition including lighting installation.

(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 in the process area where there could be fire and explosion hazards.
(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 suitably protected.
(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.
(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 or conveyors shall be conductive type.
(5) All tools and appliances used for work in this area shall be of non-sparking type.
(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. Static Electricity:

(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.
(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 take place.
3. Lightning protection: Lightening protection arrangement shall be fitted where necessary, and shall be maintained.
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 arrangement shall be automatically controlled at a pre-determined temperature below the danger temperature.
5. Leakage of flammable liquids:
(1) Provision shall be made to confine by means of bund walls, dykes, sumps etc. Possible leakages from storage vessels containing flammable liquids.
(2) Waste material in contact with flammable substances shall be disposed of suitably under the supervision of knowledgeable and responsible person.
(3) Adequate and suitable fire-fighting appliances shall be installed in the vicinity of such vessels.
6. Safety valves: Every still and every closed vessel 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 relieve the pressure. These appliances shall be maintained in good condition.

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 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.
8. Firefighting systems:
(1) Every factory employing 500 or more persons and carrying out processes listed in Appendix `A' shall provide:
(a) Trained and responsible firefighting squad so as to effectively handle the fire fighting 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 than 8 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 government 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 gate(s) of the factory be connected to all manufacturing or storing areas through telephone inter lined and placed in a convenient location near such areas.

PART IV
Risks of Toxic Substances
1. Leakage:
(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 buildings shall be so designed as to localize any escape of toxic substances.
(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.
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.
3. Covering of vessels

(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 a worker, shall be so constructed as to avoid physical contact.

(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) 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 centimetres 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 or 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 control 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 the 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 completion 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 considerations of quality, sufficient precautions shall be taken to render them innocuous or otherwise treat them or inactivate 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. Special precautions for Nitro or Amino Processes
(1) Unless the crystallized intro 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 or fume in the working atmosphere.

(2) No part of the plant or equipment or 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.
(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.
(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 the steam or vapour is effectively prevented to be blown back into the working atmosphere.
(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 nitro or amino compounds.
2. Special precautions for chrome processes:
(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.
(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 affected 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 perforation of nasal septum.
3. Special precautions for processes carried out in all glass vessels:
(1) Processes and chemical reactions such as manufacture of vinyl chloride, 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 suitable means such

as dilution with water or suitable solvents so as to avoid the risks of fire or explosion or health hazards.
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 likes 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 crystallized ground chlorate.

PART VI
Medical Requirements

1. Decontamination facilities: In all places where toxic substances are used in processes listed in Appendix "A" the following provisions shall be made to meet an emergency:
(a) fully equipped first aid box;
(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 shown in the Table 1.

No. of persons employed at any time	**No. of drenching showers showers**
Up to 50 persons	2
Between 51 to 100	3
101 to 200	3 + 1 for every 50 persons thereafter
201 to 400	5 + 1 for every 100 persons thereafter
401 and above	7 + 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 times.
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 his notified clinic near to the factory for seeking medical help during emergency. He will also carry out the pre-employment and periodical medical examinations 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 on 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 Sq. 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 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 the purpose stipulated herein and will always be available near the Occupational Health Centre.
(2) The relaxation to procure Ambulance Van from nearby places provided for in sub-paragraph (1) above will not be applicable to factories employing more than 500 workers.
4. Medical examination
(1) Workers employed in processes covered in Appendix `A' shall be medically examined by a Factory Medical Officer in the following manner:
(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 will 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 incapacitated

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 may 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.
(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.
(4) The worker suspended from the process owing to the circumstances covered in sub-paragraph (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. Washing facilities:
(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 every 15 persons including liquid soap in a container with tilting 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.
(2) If washing facilities as required above are provided for women, such facilities shall be separate for them and adequate privacy at all times shall be ensured in such facilities.
2. Mess room facilities:
(1) The occupier of all the factories carrying out processes covered in Appendix "A" and employing 50 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.
(2) Such facilities shall include suitable arrangements for cleaning and washing and shall be maintained in a clean and hygienic condition.
3. Cloakroom facilities:
(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 and the lockers should be such as to enable the keeping of the clothing in a hanging position.
(2) The cloak room facilities provided in pursuance of sub-para (1) shall be located as far as possible near to the facilities provided for washing in pursuance of para (1). If it is not possible to locate the washing facilities the cloakroom facilities shall have adequate and suitable arrangements for cleaning and washing.

4. Special bathing facilities:

(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.
(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 or 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.
(3) Notwithstanding anything contained in sub-para above, the Chief Inspector may require in writing the occupier of any factory carrying out any other process for which his opinion bathing facilities are essential from the health point of view, to provide special bathing facilities.

PART VIII
Duties of Workers
(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.
(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 mal-function or defect immediately to the supervisor or any responsible person of the management.
(3) All workers shall co-operate in all respects with the management while carrying out any work or any emergency duty assigned to them in pursuance of this Schedule and shall always use all the personal protective equipment issued to them in a careful manner.
(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.
(5) All workers employed in the processes covered in Appendix “A” shall not remain in unauthorized place or carry cut unauthorized work or improvise any arrangement or adopt short out method or misuse any of the facilities provided in pursuance of the Schedule, in such a manner as to cause risk to themselves as well as or to others employed.
(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) 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) 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. 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'

***Process Carrying Out By Any Factory Where Exemption May Be Granted From The Compliance With Any Of The Requirements Of This Schedule Partly Or Fully By The State Government Of Chief Inspector**

Any works or that part of 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, beryllium and their organic and inorganic salts, alloys, oxides and hydroxides;

(ii) ammonia, ammonium hydroxide and salts of ammonium;

(iii) the organic or inorganic compounds of sulphurous, sulphuric, nitric, nitrous, hydrochloric, hydrofluoric, hydriodic, hydro sulphuric, hydrobromic, boric;

(iv) cyanogen compounds, cyanide compounds, cyanate compounds;

(v) phosphorous and its compounds other than oregano phosphorus insecticides.

(vi) chlorine

(b) hydrogen sulphide is evolved by the decomposition of metallic sulphides, or hydrogen sulphide is used in the production of such sulphides;

(c) bleaching powder is manufactured or chlorine gas is produced in chlor-alkali plants;

(d)

(i) gas tar or coal tar or bitumen or shale 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 non-metallic derivatives or substituted derivatives, such as chloroform, ethylene glycol, formaldehyde, benzyle

chloride, phenol, methyl ethyl keytone peroxide, cobalt carbonyl, tungsten carbide etc. are manufactured or recovered.

APPENDIX `B'

Concerning special bathing accommodation in pursuance of para 4 of Part VII

1. Nitro or amino processes
2. All chrome processes.
3. Processes of distilling gas or coal tar or processes of chemical manufacture in which tar is used.
4. Processes involving manufacture, manipulation, handling or recovery of Cyanogen compound, cyanide compound, cyanate compounds.
5. Processes involving manufacture of bleaching powder or production of chlorine gas in chlor-alkali plants.
6. Manufacture, manipulation or recovery of nickel and its compounds
7. All processes involving the manufacture, manipulation or recovery of aliphatic or aromatic compounds or their derivatives or substituted derivatives.

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;
Fixed oxygen supply with equipment;
Pillow with case;
Sheets;
Blankets;
Towels;
Emesis bag;
Bed pan;
Urinal;
Glass

Roll of aluminium foils
soft roller bandage 6x5 Yards
Adhesive tape in 3 mts roll
Safety pins
Bandage sheets;
Burn sheet

Poisoning:
Syrup of Ipecea
Activated charcoal;
Pre-packed in does
Snake bite kit;
Drinking water.
Emergency Medicines:
As per requirement (under the advice of Medical Officer only)
Safety equipment:
Flares with life of 30 minutes
Flood lights;
Flash lights;
Fire extinguisher dry powder type;
Insulated gauntlets.
Emergency care equipment
Resuscitation:
Portable suction unit;
Portable oxygen unit;
Bag-valve-mask, hand operated artificial ventilation unit;
Airways;
Mouth gags;
Tracheostomy adapters;
Short spine board;
I.V. Fluids with administration unit;

B.P. manometer;
Cugg;
Stethoscope
Immobilisation
Long & short padded boards;

Wire ladder splints;
Triangular bandage;
Long & short spine boards.
Dressings:
Gauze pads
4” x 4”;
Universal dressing 10” x 36”;

SCHEDULE – XII

Manufacture of Pottery

1. Definitions: For the purposes of this Schedule:

(a) “pottery” includes earthenware, stoneware, porcelain, china tiles, and any other articles made from such clay or from a mixture containing clay and other materials such as quartz, flint, feldspar, and gypsum;

(b) “efficient exhaust draught” means localised ventilation effected by mechanical or other means for removal of dust or fume so as to prevent it from escaping into 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;

(c) “fettling” includes scalloping, towing, sand papering, sand sticking, brushing or any other process of cleaning of pottery ware in which dust is given off;

(d) “leadless glaze “means a glaze which does not contain more than one per cent of its dry weight, of a lead compound calculated as lead monoxide;

(e) “low solubility glaze” means a glaze which does not yield to dilute hydrochloric acid more than five per cent of its dry weight, of a soluble lead compound calculated as lead monoxide when determined in the manner described below:

A weighed quantity of the material which has been dried at 100C and thoroughly mixed shall be continuously shaken for one hour at the common temperature with 1000 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 filtrate shall then be precipitated as lead sulphide and weighed as lead sulphide;

(f) sound or powdered flint or quartz” does not include natural sands; and

(g) “potter’s shop includes all places where pottery is formed by pressing or by any other process and all places where shaping, fettling or other treatment of pottery articles prior to placing for the biscuit fire is carried on.

2. Efficient exhaust draught: The following processes shall not be carried on without the use of an efficient exhaust draught:

(i) All processes involving the manipulation or use of a dry and unfitted lead compound;

(ii) The fettling operations of any kind, whether on green ware 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;
(iii) The shifting of clay dust or any other material for making tiles or other articles or other articles by pressure, except where:
(a) his is done in a machine so enclosed as to effectually prevent the escape of dust; or
(b) the material to be shifted is so damp that no dust can be given off;
(iv) The processing of tiles from clay dust, an exhaust opening being connected with each press, and pressing from clay dust of articles other than tiles, unless the material is so damp that no dust is given off;
(v) The fettling of tiles made from clay dust by pressure, except where the fettling is done wholly on, or with, damp material, and fettling of other articles made from clay dust, unless the material is so damp that no dust is given off;
(vi) The process of loading and unloading of saggars where handling and manipulation of ground and powdered flint, quartz, alumina or other materials are involved;
(vii) The brushing of earthenware 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;
(viii) Fettling of biscuit ware which has been fired in powdered flint or quartz except where this is done in machines so enclosed as to effectually prevent the escape of dust;
(ix) Where cleaning after the application of glaze by dipping or other process;
(x) Crushing and dry grinding of materials for Pottery bodies and saggars, unless carried on in machines so enclosed as to effectively prevent the escape of dust or is so damp that no dust can be given off;

(xi) Sieving or manipulation of powdered flint, quartz, clay grog or mixture of these materials unless it is so damp that no dust can be given off;
(xii) Grinding of tiles on a power driven wheel unless an efficient water spray is used on the wheel;
(xiii) 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;
(xiv) The preparation or weighing out of flow material, lawning of dry colours, colour dusting and colour blowing;
(xv) Moulds making unless the bins or similar receptacles used for holding plaster of Paris are provided with suitable covers; and
(xvi) The manipulation of calcined material unless the material has been made and remains so wet that no dust is given off.
3. Carrying of processes: 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) Crushing and dry grinding or sieving of materials, fettling, pressing of tiles, drying of clay and green ware, loading and unloading of saggars.
(b) All processes involving the use of a dry lead compound.

4. Use of glaze: No glaze which is not a leadless glaze or a low solubility glaze shall be used in a factory in which pottery is manufactured.
5. Restriction on employment of women and young persons: No woman or young person shall be employed or permitted to work in any of the operations specified in clause 2 or at any place where such operations are carried on.
6. Potter's wheel: The potter's wheel (Jolly and Jigger) shall be provided with screens or so constructed as to prevent clay scrapings being thrown off beyond the wheel.
7. Measures to be taken to prevent dust flowing:
(1) All practical measures shall be taken by damping or otherwise to prevent dust arising during cleaning of floors.
(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.
8. Cleaning of floors: The floors of potter's shops, slip houses, dipping houses and ware cleaning rooms shall be hard, smooth and impervious and shall be thoroughly cleaned daily using a moist method by an adult male.
9. Medical examination:

(1) All persons employed in any process included under clause 2 shall be examined by certifying surgeon within 7 days preceding or following the date of his first employment in process; thereafter all persons employed in any process included under clause 2(i) and 2 (xiv) shall be examined by the Certifying Surgeon once in every three calendar months, and those employed in any process included in sub-clauses (ii) to (xii), sub clauses (xv) and (xvi) of clause 2, once in every 12 months by the certifying surgeon, records of such examination shall be entered by the Certifying Surgeon in the Health Register and certificate of fitness granted to him under clause 10.
(2) If any time the Certifying Surgeon is of the opinion that any person employed in any process included in clause 2 is no longer fit to continue in the same job, he may ask the management to provide such a person an alternative job, and if the Certifying Surgeon is of the opinion that the person so employed is no longer fit for employment even in any other process on the ground that his continuance therein would involve damage to health, he shall cancel the certificate of fitness granted to that person.
(3) No person whose certificate of fitness has been cancelled shall be re-employed unless the certifying surgeon, after examining, again certifies him to be fit for employment in the same process of or some alternative process.
10. Certificate of fitness:

A person medically examined under clause 9 and found fir for employment shall be granted by the certifying surgeon a certificate of fitness in Form No.32 and such certificate shall be in the custody of the manager of the factory. The certificate shall be kept readily available for inspection by any Inspector and the person granted such a certificate shall carry with him, while at work a token given reference to such certificate
11. Protective equipment:

(1) The occupier shall provide and maintain suitable overalls and hand coverings for all persons employed in process mentioned in clause 2.
(2) The occupier shall provide and maintain suitable aprons of waterproof or similar material, which can be sponged daily, for the use of the dippers, dippers assistants, throwers, jolly workers, casters, moulds makers and filter press and pug mill workers.
(3) Aprons provided in pursuance of sub-clause (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.
(4) No person shall be allowed to work in emptying sacks of dust materials, weighing out and mixing of dusty materials and charging of ball mills and plungers without wearing a suitable and efficient dust aspirator.

12. Washing facilities: The occupier shall provide and maintain, in a clean state and in good repair for the use of all persons employed in any of the processes specified in clause 2 - a wash place under cover, with either:
(a)
(i) a trough with a smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow of at least two feet for every 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 minutes; or
(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 1.2 metres apart; and
(iii) a sufficient supply of clean towels made of suitable materials changed daily, with a sufficient supply of soap and nail brushes.
13. 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 each person employed in any of the processes mentioned in clause 2.
14. Mess room:
(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 0.95 square meter per head. The washing facilities mentioned above shall be provided near the mess room or canteen the mess room and canteen shall be furnished with:
(i) a sufficient number of tables and chairs or benches with back rest;
(ii) arrangements for washing utensils;
(iii) adequate means for warming food;
(iv) adequate quantity of drinking water.
(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.
15. Food, drinks, etc. prohibited in workrooms: No food, drink, pan and supari or tobacco shall be brought into, or consumed by any worker in any workroom in which any of the processes mentioned in clause 2 are carried on and no person shall remain in any such room during intervals for meals or rest.

16. Cloakrooms etc.: There shall be provided and maintained for the use of all persons employed in any of the processes mentioned in clause 2:
(a) a cloakroom for clothing put off during working hours which shall be separate from any mess room;

(b) separate and suitable arrangements for the storage of protective equipment provided under clause 11.
17. Applications: These provisions contained in this Schedule not apply to a factory in which any of the following articles, but no other pottery, are made:
(a) unglazed or salt glazed bricks and tiles; and
(b) Architectural terra-cotta made from plastic clay and either unglazed or glazed with a leadless glaze only.
18. Exemption: If in respect of any factory the Chief Inspector of Factories 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 a 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 – XIII
Compression of Oxygen and Hydrogen Produced by Electrolysis of Water
(1) The room in which electrolysis plant is installed shall be separate from the plant for storing and compressing the oxygen and hydrogen and also the electric generator room.
(2) [204][The purity of oxygen and hydrogen shall be tested by a competent person at least once in every shift at the following points:
(i) In the electrolysis room;
(ii) at the gas holder inlet; and
(iii) at the suction and of the compressor.

The purity figures shall be entered in a register and signed by the persons carrying out such test:
Provided, however, that if the electrolysis plant is fitted with automatic recorder of purity of oxygen and hydrogen with alarm lights, it shall be sufficient if the purity of gases is tested at the suction and of the compressor only.]
The purify figures shall be entered and signed by the person carrying out such tests in the register;
"Provided that if the compression unit and the gas holder inlets are fitted with automatic oxygen-in-hydrogen or hydrogen-in-oxygen purity indicating instruments which trips the supply to the driving motors in the event of the purity dropping below 98 percent testing of gas at hourly intervals at these two points shall not be necessary
(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.

(4) [205][In addition to the limit switch in the gas holder, a sensitive negative pressure switch shall be provided in or adjacent to the suction main for hydrogen close to the gas holder and

between the gas holder and the hydrogen compressor to switch off the compressor motors in the event of the gas holder being emptied to the extents as to cause vacuum.]
(5) Each gas holder shall be fitted with a low level alarm and a trip switch to stop the compression in the event of the bell of the gas holder reaching within 30 cm, from its lowest working level
(6) The water, caustic and soda used for making lye shall be of the standard suitable for electrolysis.
(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.
(8) Oxygen and hydrogen gas pipes shall be painted with distinguishing colours. Whenever an hydrogen pipe is opened for repairs or any other work, on reconnection, the pipe shall be purged of all air before hydrogen is allowed to pass through that pipe.
(9) All electrical wiring and apparatus in the electrolyser room shall be of flameproof construction or enclosed in flameproof fittings and no naked light or flame shall be allowed to be taken either in the electrolyser room or where compression and filling of the gases is carried on and such warning notices shall be exhibited in prominent places.
(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.
(11) No work or operations, 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/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 clause 7.
(12) Every part of the electrolysis plant and the gas holders and compressor shall have a regular schedule of overhaul and checking and every defect noticed shall be rectified forthwith.

206[SCHEDULE – XV
Manipulation Of Stone Or Any Other Material Containing Free Silica
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. Definitions: For the purpose of this Schedule
(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 material;
(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.

3. Precautions in manipulation: No manipulation shall be carried out in a factory or part of a factory unless one or more of the following measures, namely:
(a) damping the stone or other material being processed,
(b) providing water spray,
(c) enclosing the process,
(d) isolating the process, and
(e) providing localised 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 Table 2 appended to Rule 120:

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 referred to.
4. Maintenance of floors
(1) All floors or places where fine dust is likely to settle on and whereon 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.
(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 cleansed 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.
5. Prohibition relating young 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 out.
6. 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; 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 separate register approved by the Chief Inspector of Factories, which shall be kept readily available for inspection by the Inspector.
7. Medical examination by Certifying Surgeon
(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 medical examination shall include pulmonary functions 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.
(2) Every worker employed in the said processes shall be re-examined by a Certifying Surgeon at least once in every twelve months. Such re-examination shall, wherever the Certifying Surgeon

considers appropriate, include all the tests as specified in subparagraph (1) except chest X-ray which will be once in 3 years.
(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.
(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 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 these 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 fully is incapacitated in the opinion of the Certifying Surgeon, in which case the person affected shall be suitably rehabilitated.
8. 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.

207[SCHEDULE – XVI

Handling And Processing Of Asbestos, Manufacture Of Any Article Of Asbestos And Any Other Process Of Manufacture Or Otherwise In Which Asbestos Is Used In Any Form

1. Application: This schedule shall apply to all factories or parts of factories in which any of the following processes is carried on:
(a) breaking, crushing, disintegrating, opening, grinding, mixing or sieving of asbestos and any other processes involving handling and manipulation of asbestos incidental thereto;
(b) all processes in the manufacture of asbestos textiles including preparatory and finishing processes;
(c) making of insulation slabs or sections, composed wholly or partly of asbestos, and processes incidental thereto;
(d) making or repairing of insulating mattresses, composed wholly or partly of asbestos, and processes incidental thereto;
(e) manufacture of asbestos cardboard and paper;
(f) manufacture of asbestos cement goods;
(g) application of asbestos by spray method;
(h) sawing, grinding, turning, abrading and polishing in dry state of articles composed wholly or partly of asbestos;

(i) cleaning of any room, vessel, chamber, fixture or appliance for the collection of asbestos dust; and
(j) Any other processes in which asbestos dust is given off into the work environment.
2. Definition: For the purpose of this Schedule:
(a) “asbestos” means any fibrous silicate mineral and any admixture containing actiolite, amosite, anthophyllite, dhrysotile, crocidolite, tremolite or any mixture thereof, whether crude, crushed or opened;
(b) “asbestos textiles” means yarn or cloth composed of asbestos or asbestos mixed with any other material;
(c) “Approved” means approved for the time being in writing by the Chief Inspector;

(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;
(e) “Efficient exhaust draught” means a localised 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 applies 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;
(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 a 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 or asbestos by hand;
(e) workplaces at which the filling or emptying of sacks, skips or other portable containers, weighing or other process incidental thereto 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.
(4) The asbestos bearing dust removed from any workroom by the exhaust system shall be collected in suitable receptacles or filter bags which shall be isolated from all work areas.
5. Testing and examination of ventilating systems:
(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 examinations or test shall be rectified forthwith.
6. Segregation in case of certain process: Mixing or blending of asbestos by the hand, 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.
7. Storage and distribution of loose asbestos
(1) All loose asbestos shall, while not in use be kept in suitable closed receptacles which prevent the escape of asbestos dust therefrom.
(2) Such asbestos shall not be distributed in the factory except in such receptacles or in totally enclosed system of conveyance.

8. Asbestos sacks:
(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.
(2) A sack which has contained asbestos shall not be cleaned by hand beating but by a machine, complying with paragraph 3.
9. Maintenance of floors and workplaces:
(1) In every room in which any of the requirements of this schedule apply:

(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
(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 construct the proper cleaning of the floor.
(2) The cleaning as mentioned in sub-rule (1) shall so for as is practicable, as 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.
(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 be provided with respiratory protective equipment and protective clothing.
(4) The vacuum cleaning equipment used in accordance with provisions of subparagraph (2), shall be properly maintained and after each cleaning operation, its surfaces kept in a clean state and free from asbestos waste and dust.

(5) Asbestos waste shall not be permitted to remain on the floors or other surfaces at the work place at 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.
10. Breathing apparatus and protective clothing:
(1) An approved breathing apparatus and protective clothing shall be provided and maintained in good conditions for use of every person employed:
(a) in chambers containing loose asbestos;
(b) in cleaning, dust settling or filtering chambers of apparatus;
(c) in cleaning the cylinders, including the defer cylinders, or other parts of a carding machine by means of hand-strikes;
(d) in filling, beating, or levelling in the manufacture or repair of insulating mattresses; and
(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.
(2) Suitable accommodation in conveniently accessible position shall be provided for the use of persons 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.

(3) All breathing apparatus and protective clothing Washing not in use shall be stored in the accommodation provided in accordance with sub-rule (2) above.
(4) All protective clothing in use shall be de-dusted 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 protective the wearer.
(5) All breathing apparatus shall be cleaned and disinfected at suitable intervals and thoroughly inspected once every month by a responsible person.
(6) A record of the cleaning and maintenance and of the condition of the breathing apparatus shall be maintained in a register provided for that purpose which shall be readily available for inspection by an Inspector.
(7) No person shall be employed to perform any work specified in sub-paragraph (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.
(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.
11. Separate accommodation for personal clothing: A separate accommodation shall be provided in a conveniently accessible position for all persons employed in operation to which this schedule applies for storing of personal clothing. This should be separated from the accommodation provided under sub-paragraph (2) of paragraph to prevent contamination of personal clothing.
12. Washing and bathing facilities:
(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 for every 15 persons employed.
(2) The washing places shall have standpipes place at intervals of not less than one metre.
(3) Not less than one half of the total number of washing places shall be provided with bathrooms.
(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.
13. Mess room:

(1) There shall be provided and maintained for the use of all worker 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:
(a) sufficient tables and benches with back rest, and
(b) adequate means for warming food.
(2) The mess room shall be placed under the charge of a responsible person and shall be kept clean.
14. Prohibition of employment of young persons: No young person shall be employed in any of the process covered by this schedule.
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.
16. Cautionary notices:
(1) Cautionary notices shall be displayed at the approaches and along the perimeter of every asbestos processing area to warn all persons regarding:
(a) hazards to health from asbestos dust,
(b) need to use appropriate protective equipment,
(c) Prohibition of entry to unauthorized persons, or authorized persons but without protective equipment.
(2) Such notices shall be in the language understood by the majority of the workers.
17. Air monitoring: To ensure the effectiveness of the control measures, monitoring of asbestos fibre 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.
18. Medical facilities and records of medical examinations and tests:
(1) The occupier of every factory or part of the factory to which the schedule applied, shall:
(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; 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 appropriated 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.
19. Medical examination by Certifying Surgeon:

(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 test, tests for detecting asbestos fibres 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.
(2) Every worker employed in the process referred to sub-paragraph (1) shall be re-examined by a Certifying Surgeon at least once in every twelve calendar months. Such examination shall, wherever the Certifying Surgeon considers appropriate, include all the tests specified in sub-paragraph (1) except chest X-ray which will be carried out once in 3 years.
(3) The Certifying Surgeon after examining a worker shall issue a Certificate of Fitness in Form 29. 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.
(4) The certificate of Fitness and the health register shall be kept readily available for inspection by the Inspector.

SCHEDULE – XVI
Handling or Manipulation of Corrosive Substances
1. Definitions: For the purposes of this Schedule
(a) “Corrosive operation” means an operation of manufacturing, storing, handling processing, packing, or using any corrosive substance in a factory; and
(b) “Corrosive substance” includes sulphuric acid, nitric acid, hydrochloric acid, hydrofluoric acid, carbolic acid, phosphoric acid, liquid chlorine, liquid bromine, ammonia, sodium hydroxide and potassium hydroxide and a mixture thereof, and any other substance which the State Government by notification in the Official Gazette specify to be corrosive substance.
2. Flooring: The floor of every workroom of a factory in which corrosive operation is carried on shall be made of impervious, corrosion and fire resistance material and shall be so constructed as to prevent collection of any corrosive substance. The surface of such flooring shall be smooth and cleaned as often as necessary and maintained in a sound condition.
3. Protective equipment:
(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 clean and hygienic condition by

suitably treating 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.
(b) The Protective equipment and preparations provided shall be used by the persons employed in any corrosive operation.
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 of 210 centimetres (7 feet) from a pipe of 1.25 centimetres (1/2 inch) 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 210 centimetres, 120 centimetres and 60 centimetre, respectively, or such dimensions as are approved by the Chief Inspector shall provide as the source of clean water.
5. Cautionary notice: A cautionary notice in the following form and printed in the language which majority of the workers employed understand, shall be displayed prominently close to the place where a corrosive operation is carried out and where any of the operation mentioned in clause 2 above is carried out and where it can be easily and conveniently read by the workers. If any worker 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 burns and vapours thereof may be extremely hazardous. In case of contact, immediately flood the part affected with plenty of water for at least 15 minutes.
Get medical attention quickly.
6. Transport:
(a) Corrosive substances shall not be filled, moved or carried except in [208][contain or through pipes and when they are to be transported in containers], they shall be placed in crates of sound construction and of sufficient strength.
(b) A container with a capacity of 11.5 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.
7. Devices for handling corrosive:
(a) [209][Suitable Tilting, lifting of pumping arrangement] shall be used for emptying jars, carboys and other containers of corrosives.
(b) Corrosive substance shall not be handled by bare hands but by means of a suitable scoop or other device.
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 stills or other large chambers used for holding any corrosive substance, suitable implements made of wood or other material shall be used to prevent production of arseniuretted hydrogen (Arsine).
(b) Whenever it is necessary for the purpose of cleaning or other maintenance work for any worker to enter chamber, tank, vat, pit or other confined space where a corrosive substance had been stored, all possible precautions required under section 36 of the Act shall be taken to ensure the worker's safety.
(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 powders 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) Pumping or filling overhead tanks, receptacles, vats or other containers for storing corrosive substances shall be so arranged that there is no possibility of any corrosive substance overflowing and causing injury to any person.
(c) Every container having a capacity of twenty litres or more and every pipeline, valve, and fitting used for storing or carrying corrosive substances shall be thoroughly examined every year for finding out any defects, and defects so found out shall be removed forthwith. A register shall be maintained of every such examination made and shall be produced before the Inspector whenever required.

11. Fire extinguishers and firefighting equipment: An adequate number of suitable types of fire extinguishers or other stored, shall be provided. Such extinguishers or other equipment shall be regularly tested and refilled. Clear instructions as to how the extinguishers or other equipment should be used, printed in the language which majority of the workers employed understand, shall be affixed near each extinguisher or other equipment.
12. Exemption**:** If in respect of any factory on application made by the manager, the Chief Inspector is satisfied that owing to the exceptional circumstances, or the infrequency of the process or 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.

210[SCHEDULE XVII]

Manufacture or Manipulation of carcinogenic dye Termediates

1. Application: This 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 processes indicated in this paragraph shall be referred to hereinafter as "the said processes" and such a reference shall mean any or all the processes described in this paragraph

2. Definition: For the purpose of this Schedule the following definitions shall apply, unless the context otherwise requires:
(a) “controlled substances” means chemical substances mentioned in paragraph 4 of this Schedule.
(b) “first Employment” means first employment in the said processes and also re-employment in such processes following any cessation of employment for a continuous period exceeding three calendar months.
(c) “efficient exhaust draught” means localised 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 originates.
(d) “prohibited Substances” means chemical substances mentioned in paragraph 3 of the Schedule.
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:

(a) beta-naphthylamine and its salts;
(b) Benzidine and its salts;
(c) 4-amino diphenyl and its salts;
(d) 4-nitrodiphenyl 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:
(a) Alpha-naphthylamine or alpha-naphthylamine containing not more than one per cent of beta-naphthylamine either as a by- product of chemical reaction or otherwise, and its salts;
(b) Ortho-tolodine and its salts;
(c) Dianisidine and its salts;
(d) Dichlorobenzidine and its salts;
(e) Auramine; and
(f) Magneta.
5. Prohibition of employment: No person shall be employed in the said processes 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:
(a) 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 substances 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.
(b) 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.

(c) The controlled substances shall be received in the factory in tightly closed containers and shall be kept so except when these 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:

(A) 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 overalls with full sleeves and head coverings. The shirt or overall shall cover the neck completely.
(b) rubber-gum-boots.
(B) The following items of personal protective equipment shall be provided [211][to everyone separately] 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:
(i) Rubber Hand-gloves,
(ii) Rubber aprons, and
(iii) Airline respirators or other suitable respiratory protective equipment.
(C) It shall be the responsibility of the manager to maintain all items of personal protective equipment in a clean and hygienic condition and in good repair.
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 processes are carried on.
9. Floors of work room: The floor of every work-room in which the said processes are carried on, shall be;
(a) smooth and impervious to water provided that asphalt or tar shall not be used in the composition 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.
10. Disposal of empty containers: Empty containers used for holding controlled substances shall be thoroughly cleaned of their contents and treated with an inactivating agent before being discarded.
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.
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 precaution to be taken. Workers shall also be instructed on the measures to be taken to deal with an emergency.
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. Arrangements shall be made by the manager to instruct periodically all such workers regarding the precautions contained in the cautionary placards.

14. Medical examination.:

(a) Every worker employed in the said processes shall be examined by a Certifying Surgeon within 14 days of his first employment. Such examination shall include tests, which the Certifying Surgeon may consider appropriate and shall include exfoliative cytology of the urine. No workers shall be allowed to work after 14 days of his first employment in the factory unless certified fit for such employment by the Certifying Surgeon

(b) 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 include [212][tests] which the Certifying Surgeon may consider appropriate but shall include exfoliative cytology of the urine.

(c) A person medically examined under sub-paragraph (a) shall be granted by the Certifying Surgeon, a certificate of fitness in Form No.39. [213][Record of each re-examination] carried out under sub-paragraph (6) shall be entered in the certificate. The certificate shall be kept in the custody of the manager of the factory.

(d) The records of each examination carried out as referred to in subparagraphs (a) and (b) including the nature and result of the tests, shall be entered by the Certifying Surgeon in a health register in Form No. 40.

(e) The certificates of fitness and the health register shall be kept readily available for inspection by any Inspector.

(f) If at any time the Certifying Surgeon is of the opinion that a person is no Longer fit for employment in the said processes or in any other work on the ground that his continuance therein would involve damage to his health, he shall make a record of his findings in the said certificate and the health register. The entry of his findings in these documents should also include the period for which he considers that the said person is unfit [214][for working in the said processes] or in any work as the case may be.

(g) No person who has been found unfit to work as said in sub- paragraph (f) shall be re-employed or permitted to work unless the Certifying Surgeon, after further examination again certifies him to be fit for employment.

15. Medical facilities:

(a) The occupier of every factory in which the said processes are carried on shall engage a qualified medical practitioner for medical surveillance of the workers employed in such processes. His appointment shall be subject to approval of the Chief Inspector.

(b) The occupier shall provide to him all the necessary facilities for the purpose referred to in sub-paragraph (a).

(c) A record of medical examinations and appropriate tests carried out by the qualified medical practitioner shall be maintained in a form approved by the Chief Inspector.

16. Obligations 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 [215][cytology of the urine] by the Certifying Surgeon or the qualified medical practitioner as provided for under these rules.

17. Washing and bathing facilities:
(a) 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:
(i) a wash place under cover having constant supply of water and provided with clean towels, soap, and nail brushes and with at least one stand pipe for every five such workers;
(ii) 50 per cent of the stand pipes provided under clause (i) 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;
(iii) the washing and bathing facilities shall be in close proximity of the area housing the said processes;
(iv) clean towels shall be provided individually to each worker, and
(v) in addition to the taps mentioned under clause (i) one stand pipe, in which warm water is made available, shall be provided on each floor.
(b) Arrangements shall be made to wash factory uniforms and other clothes every day.
18. Food, drinks etc. prohibited in the work-room: No worker shall consume food, drinks, 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 any such room during the intervals for meals or rest.
19. Cloak room: There shall be provided and maintained in a clean state and in good repair for the use of the workers employed in the said processes: (a) a cloakroom with lockers having two compartments one for street clothes and the other for the storage of protective equipment provided under paragraph (7). The accommodation so provided shall be under the care of a responsible person and shall be kept clean.
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.

21. Time allowed for washing: Before the end of each shift 30 minutes shall be allowed for bathing for each worker who is employed in the said processes. Further, at least 10 minutes shall be allowed for washing before each meal, in addition to the regular time allowed for meals.
22. Restriction on age of persons employed: No worker under the age of 40 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.
23. Exemption: Prohibited substances:
(a) The Chief Inspector may by a certificate in writing which he may be at his discretion revoke at any time, subject to such conditions, if any, as may 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 not 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.
(b) The Chief Inspector may allow the manufacture, handling 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 not 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 hydrochloride, 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.
24. General exemptions: 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 as 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
PLAY CARD/NOTICE
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. Use the various items of protective wear to safeguard your own health.

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. Wash off any chemical falling on your body with soap and water. If splashed with a solution of the chemical, remove the contaminated clothing immediately. These chemicals are known to produce cyanosis. Contact the medical officer or appointed doctor immediately and get his advice.

5. Handle the dye intermediates only with long handled scoops, never with bare hands.
6. Alcoholic drinks should be avoided as they enhance the risk of poisoning by the chemicals.
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.
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–XVIII
[216][Process of extracting oils and fats from vegetables and animal sources in solvent extraction plants
1. Definitions:
(a) [”Solvent Extraction Plant” means a plant in which the process of extracting oils and fats from vegetable and animal sources by use of solvents is carried on.][217]
(b) “Solvent” means an inflammable liquid such as pentane, hexane and heptane used for the recovery of vegetable oils.
(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 flammable gas or vapour which may enter or which may originate inside the

enclosure without communicating internal inflammation (or explosion) to the external flammable gas or vapour.
(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 a 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[218][qualifications if in its opinion] [219][these] are equivalent to the qualification aforesaid.
2. Location and layout:
(a) No solvent extraction plant shall be permitted to be constructed or extended within a distance of 30 meters from the nearest residential locality.
(b) 1.5-meter 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 match-box 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 a distance less than 30 meters from the solvent extraction plant, these 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.
(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 bonded together and connected to earth so as to avoid accidental rise in the electrical potential of such parts above the earth potential.
4. Restriction on smoking: Smoking shall be strictly prohibited within 15 meters' distance from solvent extraction plant. For this purpose, "No Smoking" signs shall be permanently displayed [220][in Hindi and English] in the area.
5. Precautions against friction:
(a) All tools and equipment including ladders, chains and other lifting tackle required to be used in solvent extraction plant shall be of non-sparking type.
(b) No machinery or equipment in solvent extraction plant shall be belt driven.
(c) No person shall be allowed to enter and work in the solvent extraction plant if wearing clothes made of nylon or such other fibre that can generate static electrical charge or wearing footwear which is likely to cause sparks by friction.
6. Fire-fighting apparatus:

(a) Adequate number of portable fire extinguishers suitable for use against

inflammable liquid fires shall be provided in the solvent extraction plant.
(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 through the building housing such plant.
7. Precautions against power failure: Provision shall be made for the automatic cutting off of steam 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.
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.
9. Venting:
(a) Tanks containing solvents shall be protected with emergency venting to relieve excessive internal pressure in the event of fire.
(b) All emergency relief vents shall terminate at least 6 meters above the ground and so located that vapours will not re-enter the building in which solvent extraction plant is located.
10. Waste water: Process waste water shall be passed through a flash evaporator to remove any solvent before it is discharged into sump [221][which should be located within the fenced area, but not closer than 8 meter to the fence.]
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.

12. Housekeeping:
(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.
(b) Waste materials such as oily rags, other wastes and absorbents used to wipe off solvent and paints and oils shall be deposited in approved containers and removed from the premises at least once a day.
(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.
13. Examination and repairs:
(a) The solvent extraction plant shall be examined by the competent persons 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.

(b) No repairs shall be carried out to the machinery or plant except under the direct supervision of the competent person.
(c) Facility shall be provided for purging the plant with inert gas before opening for cleaning or repairs and before introducing solvent after repairs.
14. Operating personnel: The operation of plant and machinery in the solvent extraction plant shall be in the charge of such duly qualified and trained person as are certified by the

competent persons to be fit for the purpose and no other person shall be allowed to operate the plant and machinery.
15. Employment of women and young persons: No women or young persons shall be employed in the solvent extraction plant.
16. Vapour detention: A suitable type of [222][flame proof and portable combustible gas indicator] shall be provided and maintained in good working order and a schedule of routine sampling of atmosphere at various location as approved by the Chief Inspector shall be drawn out and entered in a register maintained for the purpose

[223][SCHEDULE XIX]

Manufacture or Manipulation of manganese and its Compounds

1. Definition: For the purpose of this Schedule, the following definitions shall apply:
(a) "Manganese Process" means processing, manufacture or manipulation of manganese or any compound of manganese or any ore or any mixture containing manganese.
(b) "first employment" means first employment in any manganese process and includes also re-employment in any manganese process following any cessation in employment for a continuous period exceeding 3 calendar months.
(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 or mixture containing manganese.
(d) "Efficient exhaust ventilation" means localised 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.
2. Application: This Schedule shall apply to every factory in which or in any part of which any manganese process is carried on.
3. Exemptions: 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 condition and for such period as he may specify in the said order
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 persons employed on other work or processes may not be effected by the same.
5. Ventilation of process: No process in which any dust, vapour or mist containing manganese is generated, shall be carried out except under an efficient exhaust ventilation which shall be applied as near to the point of generation as practicable.
6. Medical Examination:

(1) Every person employed in a manganese process shall be medically examined by Certifying Surgeon within 14 days of his first employment and thereafter at intervals of not more than three months.
(2) If a person medically examined is found fit for employment on a manganese process the Certifying Surgeon shall grant a Certificate of Fitness in Form No. 27 which shall be kept in the custody of the manager of the factory. The certificate shall be readily produced by the manager whenever required by an Inspector, and the person granted such a certificate shall be provided with a token made of metal with the number of the certificate inscribed thereon and the said person shall always 224[carry the said token] on his person while at work.
(3) If a person is found unfit for work in any manganese process, the Certifying Surgeon shall grant a certificate to that effect and such person shall not be allowed to work in any manganese process.
(4) If the Certifying Surgeon finds that any worker who had been granted a certificate of fitness at a previous medical examination was no longer fit to be employed on any manganese process, he may revoke the previous certificate and no person whose certificate of fitness has been revoked shall be allowed to work on any manganese process.

The Certifying Surgeon may require such person to be produced before him for fresh medical examination after such period as he may specify in writing on the revoked certificate and in the Health Register.
(5) If the Certifying Surgeon is of the opinion that a person had become permanently unfit for employment on any manganese process he shall make an entry to that effect in the certificate and in the Health Register and no such person shall be allowed to work in any manganese process.
(6) If the Certifying Surgeon is of the opinion that any special expert examination or test is necessary for a proper diagnosis in a doubtful case, he may direct the manager and or the occupier to get the worker examined by such expert, or to get such tests carried out as may be specified by him and the manager or the

occupier as the case may be shall comply with the direction given within a specified time and produce the report of examination or test as the case may be, before the Certifying Surgeon.
(7) If the Certifying Surgeon is of the opinion that any person is not fit for employment in any manganese process but is fit to be employed on any other work, he may advise the manager or the occupier to employ the said person on such other job as may be a safe for him. The Certifying Surgeon may also advise the worker to undergo such treatment as he may consider necessary.
(8) If any person has any doubt regarding the diagnosis or decision of the Certifying Surgeon, he may make an appeal to the Chief Inspector of Factories and the Chief Inspector may refer the case to the Medical Inspector of Factories or to a Medical Committee constituted by him for this purpose of which the Medical Inspector of Factories shall be a member. The decision of the Medical Inspector or the Medical Committee, as the case may be, shall be final in the matter.
7. Personal protective equipment:
(1) The occupier of the factory shall provide and maintain in good and clean condition suitable overalls 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.
(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.
(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.
8. Prohibition relating to women and young persons: No woman or young person shall be employed or permitted to work in any manganese process.
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.
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.
11. Washing facilities: There shall be provided and maintained in clean state and in good condition, for the use of persons employed on manganese process a wash place under cover, with either:

(a) a trough with a smooth impervious surface fitted with a waste pipe without plug. The trough shall be of sufficient length to allow at least 60 cms for every such person employed at any one time, and having a constant supply of water from taps or jets above the trough at intervals at not more than 60 cms; or 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; and
(b) Sufficient supply of soap or other suitable cleaning material and nail brushes and clean towels.
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.
13. Cautionary placard and instruction: Cautionary notices in the following form and [225][printed in Hindi and 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. Dust fumes and mists of Manganese and compounds are toxic when inhaled or when ingested.

2. Do not consume food or drink near the work place.
3. Take a good wash before taking meals.
4. Keep the working area clean.
5. Use the protective clothing and equipment's provided.
6. When required to work in situations where dusts, fumes or mists are likely to be inhaled, use respiratory protective equipment provided for the purpose.
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.

226[SCHEDULE XX]

Manufacture and Manipulation of dangerous Pesticides

1. Definitions: For the purpose of this Schedule, the following definitions shall apply:
(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.
(ii) "Manipulation" includes mixing, blending, formulating, filling, emptying, packing or otherwise handling.
(iii) "Efficient exhaust draught" means localised mechanical ventilation for removal of smoke, gas, vapour, dust, fume or other 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.
(iv) "First employment" shall mean first employment in any manufacturing process to which this Schedule applies and shall also include re-employment in said manufacturing process following any cessation of employment for a continuous period exceeding three calendar months.
(v) "Suspension" means suspension from employment in any process where in a dangerous pesticide is manipulated by written certificate in the Health Register in Form 17-A signed by the Certifying Surgeon who shall be competent to suspend all persons employed in such process.
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 pesticides, hereinafter referred to as the said manufacturing process, is carried on.
3. Instruction to 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.
4. Cautionary notice and placards: Cautionary notices and placards in the form specified in Appendix I of this Schedule and 227[printed in Hindi and in the language] of the majority of the workers shall be displayed in all work places in which the 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.
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 pesticides are stored.

6. 228[Food and drinks, smoking prohibited]
(i) No food, drink, tobacco, pan and supari shall be brought in or consumed by any worker into any work room in which the said manufacturing process is carried out.
(ii) Smoking shall be prohibited in any work room in which the said manufacturing process is carried out.
7. Medical examination:
(i) Every worker employed in the said manufacturing process shall be examined by the Certifying Surgeon within seven days of the first employment and no worker shall be allowed to work unless certified fit for such employment by the Certifying Surgeon.
(ii) Every worker employed in the said manufacturing process shall be re-examined by a Certifying Surgeon at least once in 6 calendar months.
(iii) Due notice shall be given to the Certifying Surgeon and the concerned workers regarding the arrangements for examination of workers employed in the said manufacturing process after obtaining the consent regarding the arrangements from the Certifying Surgeon.
(iv) Health Register in Form 17-A containing name of all workers employed in the said manufacturing process shall be maintained.
(v) No worker after suspension shall be employed without written sanction from the Certifying Surgeon entered in or attached to the health register.
8. Medical facilities:
(i) The occupier shall engage a qualified medical practitioner approved by the Chief Inspector who shall examine and when necessary treat on the premises of the factory, all workers who are employed in the said manufacturing process for effects of excessive absorption of the dangerous pesticides at least once a week.
(ii) The occupier shall make necessary arrangements to ensure quick availability of qualified medical practitioners in emergency.
(iii) The occupier shall provide medicines and antidotes and other equipment's required for treatment of excessive absorption of dangerous pesticides
(iv) Records of such examinations and treatments and tests shall be maintained in a form approved by the Chief Inspector and shall be made available to Inspector.
(v) The Chief Inspector may order suitable clinical test or tests to be carried out at specified intervals in respect of workers in any factory where such manufacturing process is carried on. Charges for such test or tests shall be borne by the employer.
(vi) Every worker in any factory where the said manufacturing process is carried on, shall undergo the prescribed examination, tests and treatment.

9. Protective clothing and protective equipment:

(1) Protective clothing consisting of long pants and shirts or overall with long sleeves and head coverings 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 phosphorus and shall be washed frequently if handling other pesticides.
(5) Protective clothing and equipment shall be maintained in good repair.
10. Floor 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 manipulations splashes or spills on the work bench floor or on the protective clothing's 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 a 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 readily accessible place for use while attending to a spillage.
(4) Easy means of 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.
14. Ventilation:
(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.

(2) Unless the process is completely enclosed the following operations during manipulation of a dangerous pesticides shall not be undertaken without an efficient exhaust draught:
(a) emptying a container holding a dangerous pesticide;
(b) blending a dangerous pesticide;
(c) preparing a liquid or powder formulation containing a dangerous pesticide;
(d) charging 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 in 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 pesticides.
(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 places for every 5 persons employed.
(2) The washing places shall have stand pipes placed [229][at a distance] 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, a 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 responsible person and shall be clean.
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 exempt such factory from all or any of the provisions, on such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector after recording his reasons thereof.
20. Manipulation not to be undertaken: Manufacture or manipulation of a pesticide shall not be undertaken in any factory unless a certificate regarding its dangerous nature or otherwise is obtained from the Chief Inspector

APPENDIX I
CAUTIONARY NOTICE (INSECTICIDES AND PESTICIDES)
[See Clause 4]
1. Chemicals handled in this plant are poisonous substances.
2. Smoking, eating food or drinking, chewing tobacco in this area is prohibited. No foodstuff or drink shall be brought in this area.
3. Some of these chemicals may be absorbed through skin and may cause poisoning.
4. A good wash shall be taken before meals.
5. A good bath shall be taken at the end of the shift.

6. Protective clothing and equipment supplied shall be used while working in this area.
7. Containers of pesticides shall not be used for keeping foodstuff.
8. Spillage of the chemicals on any part of the body or on the floor or work bench shall be immediately washed with water.
9. Clothing contaminated due to splashing shall be removed immediately.
10. Scrupulous cleanliness shall be maintained in this area.
11. Do not handle pesticides with bare hands, use scoops provided with handle.
12. In the case of sickness like nausea, vomiting, feeling giddiness the manager should be informed who will make necessary arrangements for treatment.
13. All workers shall report for the prescribed medical tests regularly to protect their own health.

SCHEDULE XXI
Carbon Disulphide Plants
1. Application: This Schedule shall apply to all electric furnaces in which carbon disulphide is generated and all other plants where carbon disulphide after generation, is condensed, refined and stored. These rules are in addition to and not in derogation of any of the provisions or the Act and Rules made thereunder.
2. Construction, Installation and operation:
(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 of open type to ensure optimum ventilation and the plant lay-out shall be such that only a minimum number of workers are exposed to the risk of any fire or explosion at any one time
(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 so designed that carbon disulphide liquids and gas are in closed system during their normal working.
(c) The electric furnace supports shall be firmly grouted about a foot in concrete or by other effective means.
(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.

(e) The instructions regarding observance of correct furnace temperature, Sulphur dose, admissible current/power consumption and periodical checking of charcoal level shall be strictly complied with.
3. Electrodes:
(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.
(b) The arrangements 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 the power supply for the furnace operation and to stop the further supply of water. The alarm system and actuating device shall be checked every day.
4. Charcoal level indicator and vibrator: Means shall be provided on each electric furnace for indicating the correct level of charcoal in the furnace and for vibrating the charcoal. This means shall be employed as often as necessary to maintain correct charge and level of the charcoal.
5. Charcoal separator: A cyclone type of charcoal separator shall be fitted on the off take pipe between the electric furnace and Sulphur separator to prevent entry of pieces of charcoal into the condensers and piping.
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. Pyrometer and manometers:
(a) Each electric furnace shall be fitted with adequate number of pyrometers to make a correct assessment of the temperature at various points in the furnace. The dials for reading the temperatures shall be located in the control room.
(b) Manometers shall be provided for indicating pressure:
(i) in the off take 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 any 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 or repairs; and
(iii) periodically every time the furnace is opened for cleaning or de-ashing or for replacing electrodes.
(b) Then an electric furnace is shut down for cleaning or de-ashing:
(i) the brick lining shall be checked for continuity and any part found defective removed;
(ii) after removal of any part of the lining, referred to be in (i) 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.
(iii) Water temperatures and flow of water through the siphon in the Electrodes.
(iv) Primary and secondary voltages and current and energy consumed.
11. Electrical apparatus, wiring and fittings: All buildings in which carbon disulphide is refined or stored shall be provided with electrical apparatus, wiring and fitting which shall afford adequate protection from the fire and explosion.
12. Prohibition relating to smoking: No person shall smoke or carry matches, fire or naked light or other means of producing a naked light or spark in buildings in which carbon disulphide is refined or stored and a notice in [230][Hindi in Davanagri script] shall be pasted 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.
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 [231][staircases or ramps of adequate width] shall be provided in every building housing the furnaces at the reasonable intervals at opposite ends. These shall always be kept clear of all obstructions and so designed as to afford easy passage.
14. Warning in case of fire: There shall be adequate arrangements for giving warning in case of fire or explosion which shall operate on electricity and in case of failure of electricity by some mechanical means.

15. Fire-fighting equipment:
(a) Adequate number of suitable fire extinguishers or other fire-fighting equipment shall be kept in constant readiness for dealing with risks involved and depending upon the amount and nature of materials stored.
(b) Clear instructions as to how the extinguishers or other equipment should be used printed in [232][Hindi in Devanagari script] shall be affixed to each extinguisher or other equipment and the personnel trained in their use.
16. Bulk Sulphur:

(a) Open or semi-enclosed spaces for storage of bulk Sulphur shall be cited with due regard to the dangers which may arise from sparks given off by nearby locomotives 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.
(b) All enclosures for bulk Sulphur shall be of non-combustible construction, adequately ventilated and so designed as to provide a minimum of lodges on which dust may lodge.
(c) The bulk sulphur in the enclosure shall be handled in such a manner as to minimize the formation of dust clouds and no flames, smoking and matches or other sources of ignition shall be employed during handling and non-sparking tools shall be used whenever sulphur is shovelled 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 in 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 good repair, for the use of all persons employed, wash place under cover with at least one tap or standpipe, having a constant supply of clean water, for every five such persons, the taps or stand-pipes, being spaced not less than 120 cms apart with the sufficient supply of soap and clean towels provided that towels shall be supplied individually to each worker [233][***]. 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 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) handling charcoal or sulphur.
(b) suitable respiratory protective equipment shall be provided and stored in the appropriate place for use 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-room: 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 [234][working 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, person directly connected with the plant operation and those accompanied by authorized persons shall be admitted into the plant.

235[SCHEDULE XXII]

Protection against Hazards of Poisoning Arising from Benzene

1. Application: 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. Definitions: For the purpose of this Schedule, the following definitions shall apply:

(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 vapours to the working atmosphere.

(d) "Efficient exhaust draught" means localised ventilation affected by mechanical means for the removal of gases, vapours 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, vapours, fumes or dusts originate.

3. Prohibition and substitution:

(a) 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 a manner which is considered equally safe as if it is carried out in an enclosed system.

(b) Where suitable substitutes are available, they shall be used instead of benzene or substances containing benzenes. This provision, however, shall not apply to the processes specified in Appendix 'A'.

(c) 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 employers and workers concerned.

(d) 236[Use of benzene and substances containing benzene is prohibited in the following process:

(1) Manufacturing of varnishes, paints and thinners, and

(2) Cleaning and degreasing operations.]

4. Protection against inhalations:

(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 workroom 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 vapours, to prevent their escape into the air of the workroom so that the concentration of benzene in the air does not exceed 25 parts per million by volume or 80 mg/m_3.

(c) Air analysis for the measurement of concentration of benzene vapours in air shall be carried out every 8 hours or 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 vapours in air, as measured by air analysis, exceeds 25 parts per million by volume or 80 mg/m_3, the Manager shall forthwith report the 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 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 effected by benzene or its vapours.
(b) The protective wears 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 workroom 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 waning about inflammability of the chemical.
8. Improper use of benzene:
(a) The use of benzene or substances containing benzene by workers for cleaning their hands or their work clothing shall be prohibited.
(b) Workers shall be instructed on the possible dangers arising from such misuse.
9. Prohibition of consuming food, etc. in work-room: 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.
10. Instruction as regards risks: Every worker on his first employment shall be fully instructed on the properties of benzene or substances containing benzene which he has to handle and of the dangers involved. Workers shall also be instructed on the measures to be taken to deal with an emergency.
11. Cautionary notices: Cautionary notices in the form specified in Appendix B and presented in [237][Hindi in Devanagari script] shall be displayed in prominent places in the work-rooms where benzene or substances containing benzene are manufactured handled or used.
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:
(a) washing facilities under cover of the standard of at least one tap for every 10 persons having constant supply of water with soap and clean towel provided individually to each worker [238][***].

(b) a cloak-room with lockers, for each worker, having two compartments, one for street clothing and one for work-clothing;
(c) a mess-room furnished with tables and benches with means of warming [239][food However], where a canteen or other proper arrangements exist for the workers to take their meals the requirements of mess-room shall be dispensed with.

13. Medical examination:
(a) Every worker who is to be employed in processes involving use of benzene or substances containing benzene, shall undergo:
(i) a thorough pre-employment medical examination including blood test for fitness for employment by a Certifying Surgeon.
(ii) Periodical medical examination including blood test and other biological tests at intervals of every 6 months by the factory medical officer with the assistance of a laboratory.
(b) Certificate of pre-employment medical examination and periodical medical examination including tests shall be entered in a Health Register in Form No. 17-A, which shall be produced on demand by an Inspector.
(c) If the factory medical officer on examination at any time is of the opinion that any worker had developed signs or symptoms of benzene exposure, he shall make a record of his findings in the said register and inform the manager in writing. On receipt of the information from the factory medical officer, the manager of the factory shall send the worker so found exposed, to the Certifying Surgeon who shall after satisfying himself with the findings of the factory medical officer and conducting necessary examination, issue orders of temporary shifting of the worker or suspension of the worker in the process.
(d) The medical examination shall be arranged by the occupier or manager of the factory and the worker so examined shall not bear any expenses for it.

APPENDIX—A
[Clause 3(b)]
Processes To Which The Provision Shall not apply Regarding use Of suitable Substitutes If available, To Be Used Instead Of benzene Or Substances Containing Benzenes.
1. Production of benzene.
2. Process where benzene is used for chemical synthesis.
3. Motor spirits (used as fuel).

APPENDIX—B
[Clause (11)]
Cautionary notices To Be Displayed In Prominent Places In The Work-Rooms Where Benzene Or Substances Containing benzene are Manufactured Handled Or Used (Also In Hindi In Devanagri Script)
(a) The hazards:
(i) Benzene and substances containing benzene are harmful,
(ii) Prolonged or repeated breathing of benzene vapours may result in acute or chronic poisoning,

(iii) Benzene can also be absorbed through skin which may cause skin and other disease.
(b) The Preventive Measures to be taken:
(i) Avoid breathing of benzene vapours.
(ii) Avoid prolonged or repeated contact of benzene with the skin.
(iii) Remove benzene soaked or wet clothing promptly.
(iv) If any time you were exposed to high concentration of benzene vapours and exhibit the sign and symptoms such as dizziness, difficulty in breathing, excessive excitation and losing of consciousness, immediately inform your factory manager.
(v) Keep all the containers of benzene closed.
(vi) Handle, use and process benzene and substances containing benzene carefully in order to prevent their spillage on floor.
(vii) Maintain good house-keeping
(c) The protective equipment to be used:
(i) Use respiratory protective equipment in places where benzene vapours are present in high concentration.
(ii) In emergency, use self-generating oxygen mask or oxygen or air cylinder mask.
(iii) [240][Wear hand gloves, aprons, goggles and gum boots to avoid contact of benzene with skin and body parts.]
(d) The first-aid measures to be taken in case of acute benzene poisoning:
(i) Remove the clothing immediately if it is wetted with benzene.
(ii) If liquid benzene enters eyes flush thoroughly for at least 15 minutes with clean running water and immediately secure medical attention.
(iii) In case of unusual exposure to benzene vapour, call a physician immediately. Until he arrives do the following:
(a) Move him to fresh air in open;
(b) Lay down without a pillow and keep him quiet and warm if the 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.

[241][SCHEDULE-XXIII]

Operations Involving High Noise Levels

1. Application: This Schedule shall apply to all operation in any manufacturing process having high noise level.
2. Definitions: For the purpose of this schedule
(a) “Noise” means any unwanted sound:
(b) “High noise level” means any noise Level which 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 “Bel” 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} newtons per square metre or 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 hertz;
(e) “dBA” refers to sound level in decibels as measured on a sound level meter operating on the A-weighting network with low 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 a instrument reflects the actual response of the human ear to the sound measured.
3. Protection against noise.
(1) In every factory, suitable engineering control of 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 Exposure 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	90
6	92
4	95
3	97
2	100
1 ¼	102
1	105
¾	107
½	110
¼	115

Notes:
1. No exposure in excess of 115 dBA is to be permitted.

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 extrapolation on a proportionate basis.

TABLE-2
Permissible Exposure Levels Of impulsive Or Impact Noise

Peak Sound pressure level in db	Permitted number of impulses or impacts per day
140	100
135	315
110	1000
125	3160
120	10000

Notes:
1. No exposure in excess of 140db peak sound pressure Level is permitted.
2.

(i) 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.
(ii) For the purposes of this schedule, if the variations in the noise level 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 1 would apply. In other cases, the noise is to be considered as in pulsive noise and the criteria given in Table 2 would apply.
(iii) 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

$C_1+C_2……C_n$
$T_1+T_2…….T_n$ exceeds unity
Where the C_3 C_2 etc. indicate the total time of actual exposure at a specified noise level and T_1 T_2 etc. denote the time of exposure permissible at that level. Noise exposure of less than 90 dBA be ignored in the above calculation.
(iv) Where it is not possible to reduce the noise exposure to the levels specified in sub-rule (1) by reasonable practicable engineering control or administrative measures the noise exposure shall be reduced to the greatest extent feasible by the such control measures, and each worker so exposed should be provided with suitable ear protectors so as to reduce the exposure to noise to the levels specified in sub-rule (1).

(v) Where the ear protectors provided in accordance with sub-paragraph (2) and worn by a worker cannot still attenuate the noise reaching near his ear, as determined by subtracting the attenuation value in 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 exposures specified in sub-paragraph (1).
(vi)
(a) in all cases where the prevailing sound levels exceed the permissible levels specified in sub-paragraph (1) there shall be administered an 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.
(b) Every worker employed in areas where the noise exceeds the maximum permissible exposure levels specified in sub-rule (1) shall be subjected to an auditory examination by a certifying surgeon within 14 days of his first employment and thereafter, shall be re-examined at least once 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, 2000, 4000 and 8,000 cycle per second.

242[SCHEDULE XXIV]

Manufacture of Rayon by Viscose Process

1. Definition: For the purpose of this Schedule:
(a) “approved” means approved for the time being in writing by the Chief Inspector;
(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 breaths unpolluted air; or any other approved apparatus;
(c) “churn” means the vessels in which alkali cellulose pulp is treated with carbon disulphide;
(d) “dumping” means transfer of cellulose xenthate from a dry churn to a dissolver;
(e) “efficient exhaust draught” means localised 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 drought 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 belt made of leather or other suitable length of rope attached to it, each of which is sufficiently strong to sustain the weight of a man;
(h) “protective equipment” means apron, goggles, face shields, foot wear, gloves and overalls made of suitable materials;
2. Ventilation:

(1) In all work-rooms 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 disulphide and

hydrogen sulphide in the air of every work environment within the permissible limits.
(2) Notwithstanding the requirement in sub-paragraph (1) an efficient exhaust draught shall be provided and maintained to control the concentration of carbon-disulphide and hydrogen sulphide in the air at the following locations:
(a) a dumping hoppers of dry churns;
(b) spinning machines;
(c) trio rollers and cutters used in staple fibre 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 in staple fibre spinning are concerned they shall be, for the purpose of ensuring the effectiveness of the exhaust draft to be provided as required in sub-paragraph (1), enclosed as fully as practicable and provided with suitable shutters in sections to enable the required operations to be carried out without giving rise to undue quantities of carbon disulphide and hydrogen sulphide escaping into the work environment.
(4) No Dry Churn shall be opened after completion of reaction without initially exhausting the residual vapours of carbon disulphide by operation of a suitable and efficient arrangement for exhausting the vapours which shall be continued to be operated as long as the churn is kept open.
(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 whatever, all persons shall be required to leave the work areas where the equipment of processes specified in the above said sub-paragraphs are in use, as soon as possible, and in any case not later than 15 minutes after such an occurrence.
(6)
(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 tests shall be rectified forthwith.
(ii) A register containing particulars of such examinations and tests, and the state of the systems and the repairs or alterations (if any) found to be necessary shall be kept and shall be available for inspection by an Inspector.

3. Waste from spinning machines: Waste yarn from the spinning machines shall be deposited in suitable containers provided with close fitting covers. Such waste shall be disposed of as quickly as possible after decontamination.
4. Lining of dry churns: The inside surface of all dry churns shall be coated with a non-sticky paints so that cellulose xanthate will not stick to the surface of the churn. Such coating shall be maintained in good condition.

5. Air monitoring:
(1) To ensure the effectiveness of the control measures, monitoring of carbon-disulphide 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 purpose.
(2) For the purpose of the requirement in sub-paragraph. (1) instantaneous gas detector tubes shall not be used. Samples shall be collected over a duration of not less than 10 minutes and analysed by an approved method. The locations where such monitoring is to be done shall be as directed by the Inspector.
(3) If the concentration of either carbon disulphide 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. A report of such occurrences shall be sent to the Chief Inspector forthwith.
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 on.
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.
8. Protective equipment:
(1) The occupier shall provide and maintain in good condition protective equipment's as specified in the Table for use of persons employed in the processes referred to therein.

TABLE
243[protective equipments for use of persons employed
In the processes]

PROCESS	PROTECTIVE EQUIPMENT
1. Dumping	Overalls, face-shields, gloves and footwear all made of suitable material
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 Chief Inspector by an order in writing

(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.

9. Breathing apparatus:

(1) There shall be provided in every factory where fume process is carried on, sufficient supply of:
(a) breathing apparatus,
(b) oxygen and a suitable appliance for its administration, and
(c) life belts.
(2)
(i) The breathing apparatus and other appliances referred to in subparagraph (1) shall be maintained in good conditions and kept in appropriate locations so as to be readily available.
(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.
(iii) A record of the maintenance or the condition of the breathing apparatus and other appliances referred to sub-clause (1) shall be entered in a register provided for that purpose which shall be readily available for inspection by an Inspector.
(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 two such trained persons would be available during all the working hours in each room in which fume process is carried on
(4) Breathing apparatus shall be kept properly labelled in clean dry, lightproof cabinets and if liable to be effected by fumes, shall be protected by placing them in suitable containers.
(5) No person shall be employed to perform any work specified in sub-paragraph (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.
(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 has been fully instructed in the proper use of that equipment.
10. Electric fittings: All electric fittings in any room where carbon-disulphide 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 conductors shall either be enclosed in metal conduits or be lead-sheathed.
11. 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 a room in which fume process is carried on. A notice in the language understood by the majority of the workers shall be pasted 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 purpose of the process itself under the direction of a responsible person.
12. Washing and bathing facilities:
(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 for every 25 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 bathrooms.
(4) Sufficient supply of clean towels made of suitable material shall be provided:

Provided that such towels shall be supplied individually to each worker if so ordered by the Inspector.
(5) Sufficient supply of soap and nail brushes shall be provided.
13. Rest room:
(1) A rest-room shall be provided for the workers engaged in doing operations of filament yarn spinning process.
(2) Such rest-room shall be provided with fresh-air supply and adequate seating arrangement.
14. Cautionary notice and instruction:

(1) The following cautionary notice shall be prominently displayed in each fume process room.

"CAUTIONARY NOTICE"
1. Carbon disulphide (CS_2) and Hydrogen Sulphide (H_2S) which may be present in this room are hazardous to health.
2. Follow safety instructions.
3. Use protective equipment and breathing apparatus as and when required.
4. Smoking is strictly prohibited in this area.
(1) This notice shall be in a language understand 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.
(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. Those 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 (iodine oxide 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 fit 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 12 calendar months. Such examination shall, whenever 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-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 tests, shall, also 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 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 fume process.

(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 fume process unless the Certifying Surgeon, after further examination again certifies him fit for employment in such process.

17. Exemption: If in respect of any factory, the Chief Inspector is satisfied that owing to the exceptional circumstances or infrequency of the process 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 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.

244[SCHEDULE XXV]

Highly flammable Liquids and Flammable Compressed Gases

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. Definition: For the purpose of this schedule:

(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) gives off flammable vapours at a temperature less than 32°C;
(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, 1884.
3. Storage:
(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.
(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 always kept closed and all reasonable practicable steps shall be taken to contain or immediately drain off to a suitable container any spill or leak that may occur.
(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 marked "Danger—Highly Flammable Liquid" or "Danger—Flammable Compressed Gas".
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.
5. Preventing formation of flammable mixture with air: Wherever there is a possibility of leakage or spills 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.
6. Prevention of ignition:
(1) In every room work-place or other location where highly flammable liquid or flammable combustible gas is stored, conveyed, handled or used 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:
(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;

(b) effective measures shall be adopted for prevention of accumulation of static charges to a dangerous extent;
(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;
(d) smoking, lighting or carrying of matches, lighters or smoking materials shall be prohibited;
(e) transmission belts with iron fasteners shall not be used;

(f) and all other precautions, as are reasonably practicable, shall be taken to prevent initiation of ignition from all other possible sources such as open flame, frictional sparks, overheated surfaces of machinery or plant, chemical or physical-chemical reaction and radiant heat.
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 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.
8. Firefighting: In every factory where highly flammable liquid or flammable compressed gas manufactured, stored, handled or 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 firefighting, shall be to the standards and levels prescribed by the Indian Standards applicable, and in any case not inferior to the stipulations under the relevant Model Rule 69.
9. 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 he may at his discretion revoke at any time, exempt such conditions, if any, as he may specify therein.

245[SCHEDULE-XXVI]

Operation In Foundries

1. Application: Provision of this Schedule shall apply to all parts of factories where any of the following operations or processes are carried on:
(a) the production of iron castings or, as the case may be, steel castings by casting in moulds made of sand, loam, moulding composition or other mixture of materials, or by shell moulding, or by centrifugal casting and any process incidental to such production;

(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, die-casting (including pressure die-casting), centrifugal casting or continuous casting and any process incidental to such production; and
(c) the melting and casting of non-ferrous metal for the production of ingots, billets, slabs or other similar products, and the stripping thereof; but shall not apply with respect to:
(a) any process with respect to the smelting and manufacture of lead and the electric accumulators;
(b) any process for the purposes of a printing works; or
(c) any smelting process in which metal is obtained by a reducing operation or any process incidental to such operation; or
(d) the production of steel in the form of ingots; or
(e) any process in the course of the manufacture of solder or any process incidental to such manufacture; or

(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.

2. Definition: For the purpose of this schedule:

(a) “approved respirator” means a respirator of a type approved by the Chief Inspector;

(b) “Cupola or furnace” ‘includes a receiver associated therewith;

(c) “dressing or fettling operations” includes stripping 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 (a) the removal of metal from a casting when performed incidentally in connection with machining or assembling of castings after they have been dressed or fettled, or (b) any operation which is knock-out operation within the meaning of this schedule;

(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 mixture of materials, or by shell 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, carrying-out and the removal of runners and risers;

(f) “pouring aisle” means an aisle leading from a main gangway or directly from a cupola or furnace to where metal is poured into moulds.

3. Prohibition of use of certain materials as parting materials:

(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 the 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 fire clay

(d) Silimanite

(e) Clacined or fused alumina

(f) Olivile

(g) Natural sand

(2) Dust or other matter deposited from a fettling 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 purposes of promoting safety and cleanliness in work-rooms the following requirements shall be observed:
(a) moulding boxes, loam plates, ladles, patterns, pattern plates, frames, boards, box weights, and other heavy 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 work place shall be of sand except where this is necessary by reason of the work done.
(3) All parts of the surface of the floor of any such indoor work place 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 work place in which the processes are carried on and of everything affixed to those walls shall be effectively cleaned by a suitable method to a height of not less than 7.2 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 or 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 work place in which the processes are carried on, other than parts which are of sand; and the parts of 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 enable 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 engaged in the operation.
8. Gangways and pouring aisles:

(1) In every work-room to which this paragraph applies constructed or 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 gangway shall be provided and properly maintained which:

(a) shall have an even 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;
(b) shall be kept, so far as reasonable practicable, free from obstruction;
(c) if not used for carrying molten metal, shall be at least 920 mm in width;
(d) if used for carrying molten metal shall be:
(i) where truck ladles are used exclusively, at least 600 mm wider than the overall width of the Ladle;
(ii) where hand shanks are carried by not more than two men, at least 920 millimeters in width;
(iii) where hand shanks are carried by more than two men, at least 1.2 meters in width; and
(iv) where used for simultaneous travel in both directions by men carrying hand shanks, at least 1.8 meters in width.
(2) In work-room 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 and properly maintained which:
(a) shall have an even 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;
(b) shall be kept so far as reasonably practicable free from obstruction;
(c) if molten metal is carried in hand ladles by not 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;
(d) if molten metal is carried in hand ladles or bulk ladles by more than two men per ladle, shall be at least 760 millimeters wide; and
(e) if molten metal is carried in crane, trolley or truck ladles, shall be of a width, adequate for the same performance of the work.
(3) Requirements of sub-paragraphs (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 work-room or, as the case may be, that part of a work-room has to be of sand.
(4) In this paragraph “work-room 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.
9. Work near cupolas and furnaces: No person shall carry out any work within a distance of 4 meters from a vertical line passing through the delivery end of any spout of a cupola 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 form molten metal which is being obtained from the cupola or furnace or is in a ladle in position at the end of the spout.

10. Dust and fumes:

(1) Open coal, coke or wood fires shall not be used for heating or drying ladles inside a work-room unless adequate measures are taken to prevent, so far as practicable, fumes or other impurities from entering into or remaining in the atmosphere of the work- room.

(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.

(3) Moulds 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 work-room during any period when a person is employed therein.

(4) All knock-out operations shall be carried out

(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 and a high standard of general ventilation are provided; or

(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.

(5) All dressing or fettling operations shall be carried out:

(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 means of suppressing dust, operating as near as possible to the point of origin of the dust.

11. Maintenance and examination of exhaust plant:

(1) All ventilating plants used for the purpose of extracting, suppressing or controlling dust or fumes shall be properly maintained.

(2) All ventilating plants 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 the 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 persons carrying out the examination and test to the occupier or manager of the factory.

12. Protective equipment's:

(1) The occupier shall provide and maintain suitable protective equipment's specified for the protection of workers:

(a) suitable gloves or other protection for the hands for workers engaged in handling any hot material likely to cause damage to the hands by burn, scald or scar, or in handling the pig iron, rough castings or other articles likely to cause damage to hands by cut 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 purposes of clause l (b) which 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 or attend to a cupola or furnace in such circumstances that material therefrom may 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 assisting with, the pouring of molten metal; or
(c) carry by hand or move by manual power any ladle or mould containing molten metal; or
(d) are engaged in knocking-out operations involving material at such a temperature that its contact with the body would cause a burn;

shall be provided with suitable footwear and gaiters which worn by them prevent, so far as reasonably practicable, risk of burns of 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 his protection in pursuance of sub-paragraphs (1) and (4) and shall without delay report to the occupier, manager or other appropriate person any defect in, or loss of, the same.
13. Washing and bathing facilities:
(1) There shall be provided and maintained in clean state and good repair for the use of all workers employed in the foundry:
(a) a wash place under cover with either:
(i) a trough with impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least 60 centimetres for every 10 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 60 centimetres; or
(ii) at least one tap or stand pipe 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
(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;
(c) a sufficient supply of clean towels made of suitable material changed daily, with sufficient supply of nail brushes and soap.
(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.

14. Disposal of dross and skimming's: Dross and skimming's removed from molten metal or taken from a furnace shall be placed forthwith in suitable receptacles.
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.
16. Material and equipment left out of doors: All materials 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 which shall be properly

maintained. Such roadways or pathways shall have a firm and even surface and shall so far as reasonably practicable be kept free from obstruction.
17. 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; 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.
18. Medical examination by Certifying Surgeon:
(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 functions tests and chest X-ray. No workers 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 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) The Certifying Surgeon after examining a worker, shall issue a Certificate of Fitness in Form 5. 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 subparagraphs (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 17.
(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 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 by suitably rehabilitated.
(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.
19. 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 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 XXVII
Fire Works Manufactories And Match Factories
1. Application: The 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 the Factories Act 1948 and these rules or of any other Act or rules that are applicable to fireworks manufactories and match factories.
2. Definitions:
(a) “fireworks manufactory” means any factory or such parts of any factory wherein the following chemicals or combination of chemicals and material are being used for the manufacture of crackers, sparklers, caps, fuses, blasting powder and rue works:

Saltpeter
Pyrotechnic aluminium powder
Barium Nitrate
Charcoal
Potassium Chloride
Red Phosphorus
Gum
Dextrin
Strontium Nitrate
Magnesium Powder
Copper Coated Wires

Steel fillings or iron fillings

Galvanized Iron wires
Gun Powder (Black Powder)

(b) “match works” means any establishment which manufactures safety matches or colour matches by the use of chemicals mentioned in clause(a);
(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 breathes ordinary air or any other suitable apparatus approved in writing by the Chief Inspector in this behalf.
3. Buildings:
(a) The building of any fireworks manufactory or match factory shall conform to the standards prescribed under the Explosives Act, 1884 (Central Act 4 of 1884), and the height of such buildings shall at no time be less than three meters.
(b) No building inside a fireworks manufactory shall have a first floor at any time.
(c) In match works, provided with a first floor, there shall be two 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 stair cases shall be of masonry construction of non- Inflammable materials.
(d) All doors shall open outwards and all the doorways shall be kept free from obstructions.
(e) All doors of workrooms shall not be less than 1.2 meters in width or less than 2 meters in height
(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 millimeter. 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 millimeters; and
(g) Mixing sheds shall be 30.5 meters away from all other sheds and be separated by baffle walls opposite each exit of the mixing shed.
4. House-Keeping:
(a) Every part of ways, works, machinery and plant shall be maintained in a clean and tidy conditions.
(b) Any spillage of materials shall be cleaned without delay.
(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 fibre 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-wear to combat static electricity shall be supplied.
(e) All protective equipment's shall be maintained in an efficient, clean and hygienic conditions.
7. 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 resinous 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 department by means of fire proof walls and doors providing adequate means of escape in case of fire;
(v) Splints, veneers and other materials in excess of the quantity required for the day manufacture, shall be kept in separate room 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 splints and veneers in case stored in peeling and box making departments.
(vi) store rooms for matches shall be entirely separated by fireproof walls from the buildings used for manufacture;

(vii) the racks in the dipped splints room shall have sides top and the rear part provided with non-flammable materials:
(viii) the process of packing shall be done in an area away from the place of manufacturer to the satisfaction of the Inspector; and
(ix) no child shall be employed or permitted to work directly connected with the manufacturing process up to final production of match sticks.
8. Precaution to be taken in connection with manufacture of fuses in crackers, etc.
(a) Bundles of fuses shall be handled by carrying and not dragging them on the floor.
(b) Drying of fuses after wrapping shall be carried out on platforms away from workrooms.
(c) Cutting shall be done by experienced workers employed only for this purpose and under proper supervision.
(d) Cutting shall be done on a large masonry platform covered with a tarpaulin and kept free/from grit and pebbles.

(e) Cutting shall be done on a raised platform so that workers can work while standing, cutting must be done by placing the fuse on wooden sleepers kept over blocks of wood. Bricks shall not be used beneath the wooden reapers.
(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.
9. Employment of women and children: Women workers and young persons shall not be employed on operation where chemicals are mixed and where fuses are cut, children shall not be employed or permitted to work in the manufacturing process of any work operation or process connected therewith or incidental thereto in fireworks manufactory.
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-mat 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 tube of crackers, only aluminium or plastic rings shall be used and not galvanized iron rings.
(g) Buckets, container, hoops, locks, nails, screws, bolts, nuts, knives, scissors, etc. made 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 process 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.
(ii) Dried paper cap sheets shall be carried in wooden trays with four compartments (partitions), each compartment (partition) carrying a single sheet.
(i) Each manufacturing shed of a firework shall have at least two doors facing each other. The door provided to the work sheds of adjacent row shall not face each other.
(j) Not more than four persons shall be employed or allowed at any one time in anyone 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 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 of clothes made of artificial fibre like terrene, terelene, etc. is prohibited. Clothing 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 keys etc.
12. First-aid boxes:
(a) The materials required under sub rule (5) of this Schedule shall 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 to be used if 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 Sant John's Ambulance Associated 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 by 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 we may deem expedient to ensure safety and health of the worker.

The Chief Inspector may at any time in his discretion revoke such order without assigning any reason".

103. [246]**[Notification of Accidents and Dangerous Occurrences under Section 88 and 88-A**
(1) When any accident which results in the death of any person or which results in such bodily injury to any person as is likely to cause his death or any dangerous occurrence specified in the schedule, takes place in the factory, the manager of the factory shall forthwith send a notice thereof by telephone, [247][special messenger, e-mail or fax] to the Inspector and the Chief Inspector
(2) When any accident or any dangerous occurrence specified in the schedule, which results in the death of [248][any person or which result] in such bodily injury to any person as is likely to cause his death, takes place in a factory, notice as mentioned in sub- rule (1) shall be sent also to:
(a) The District Magistrate or Sub-Divisional Officer.
(b) The officer in-charge of the nearest police station; and
(c) The relatives of the injured or deceased person.
(3) Any notice given as required under sub-rules (1) and (2) 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 in Form 18 in the case of an accident or dangerous occurrence causing death or bodily injury to any person and in Form 18-A in the case of dangerous occurrence which has not resulted in any bodily injury to any person.
(4) 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 accident or the dangerous occurrence, as the case may be, the manager of the factory shall send a report thereof to the

Inspector and Chief Inspector in Form 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 to 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, [249][special messenger, e-mail or fax] to the authorities and persons mentioned in sub-rules (1) and (2) and shall also confirm the same in writing within 12 hours of the death:

Provided further that, if the period of disability of 48 hours or more does not occur immediately following the accident, or the dangerous occurrence, but occurs later, or occurs in more than one spell, the report referred to in sub rules (1) and (2) shall be sent to the Inspector and Chief Inspector in the prescribed Form 18 within 24 hours immediately following the hour when the actual total period of disability [250][from working, resulting from the accident or the dangerous occurrence, become 48 hours.

SCHEDULE

Dangerous Occurrence

The following classes 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 crane, derrick, winch, 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 a 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.

104. Notice of Poisoning or Disease under section 89

A notice in Form No. 19 should be sent forthwith both to the Chief Inspector and to the Certifying Surgeon by the manager of a factory in which there occurs a case of lead, phosphorus, mercury, manganese arsenic, carbon bi-sulphide or benzene poisoning or poisoning by nitrous fumes, or by halogens or halogen derivatives of the hydrocarbons of the aliphatic series; or of chrome ulceration, anthrax, silicosis, toxic anaemia, toxic jaundice, primary opitheliomatous cancer of the skin, or pathological manifestations due to radium or other radio active substances or X-Rays.

CHAPTER X

SUPPLEMENTAL

105. Procedure in Appeals

(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 [251][State Government] and shall be in the form of a memorandum setting forth concisely the grounds of objection to the order and bearing court fees stamp in accordance with Article II of Schedule II to the Court Fees Act, 1870, and shall be accompanied by a copy of the order appealed against.
(2) Appointment of assessors: On receipt of the memorandum or appeal, the appellate authority, may, if it thinks fit or if the appellant has requested that the appeal should be heard with the aid of assessors, call upon the body specified in sub rule (4) being the representative of the 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 him in the hearing of the appeal.
(3) [252][The appellant shall state in the memorandum presented under sub-rule (1), whether he is a member of any Registered Industrial Association. The appellant shall mention the name and address of such Industrial Association.]
(a) Punjab, Haryana, Delhi Chamber of Commerce and Industry, 9-A, Connaught Place, New Delhi;
(b) Faridabad Industries Association, Faridabad;
(c) Haryana Chamber of Commerce and Industry, Yamunanagar;
(d) Manufacturers Association, Faridabad;
(e) Manufacturers Association, Industrial Area, Sonepat.][253]
(4) The body empowered to appoint the assessor shall:
(a) if the appellant is a member of one of such bodies, be that body;
(b) if he is a member of two such bodies, be the body which the appellate desires should appoint such assessor; and
(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 assessors, the body which the appellate authority considers as the best fitted to represent the industry concerned.
(5) Remuneration of assessors: An assessor appointed in accordance with the 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 fifity 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 in whole or in part by the appellant.

106. Display of Notices
The abstract of the Act and the Rules required to be displayed in every factory shall be in Form No. 20.
107. Returns

The manager of every factory shall furnish to the Chief Inspector or other officer appointed by State Government in this behalf the following returns, provided that in the case of periodical factories, he shall submit such returns within 15 days of the close of factory, if so required by the Chief Inspector:
(1) Annual return. On or before the 15 January, of each year, an annual return in duplicate in Form No. 21.
(2) [***].
(3) Half-yearly return: The manager of every factory shall furnish to the Chief Inspector on or before the 15th July, [***] of each year, a half-yearly return in duplicate in Form No. 22.
(4) Annual return of accidents: The manager of every factory shall furnish to the Chief Inspector on or before 15th January, of every year an annual return of accidents in Form No. 31.

108. Service of Notices
The dispatch by post under registered cover 254[or e-mail] of any notice or order shall be deemed sufficient service on the occupier, owner or manager of a factory of such notice or order.
109. Information Required by the Inspector
The occupier or manager of a factory shall furnish any information that an Inspector may require for the purpose of satisfying himself whether any provision of the Act and rules made thereunder have 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 7 days of receipt thereof.
109-A 255[Work Environment
Without prejudice to the requirement in any other provisions in the Act or the Rule the requirement specified in this Schedule shall apply to all factories.

SCHEDULE
Requirements To Apply To All Factories
1. Definitions: For the purpose of this Schedule:
(a) “mg/m_3” means milligrams of a substance per cubic metre of air.
(b) “mppcm” means million particles of a substance per cubic metre of air.
(c) “ppm” means parts of vapour or gas per million parts of air by volume at 25°C and 760 mm of mercury pressure.
(d) “Time weighted average concentration” means the average concentration of a substance in the air at any work location in a factory computed from evaluation of adequate number of air samples taken at that 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: $C_1T_1+C_2T_2+\ldots\ldots C_nT_n/T_n+T_2+\ldots. T_n$
Where C_1 represents the concentration of the substances for duration T_1 (in hours) C_2 represents the concentration of the substance for duration T_2 (in hours); and Cn represents the concentration of the substance for duration T_n (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 concentration of substances at work locations:

(1) The time weighted average concentration of any substance listed in Table 1 or 2 of the 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 substance mentioned in Tables 1 in respect of which a limit in terms of short-term maximum concentration is indicated. The concentration of such substance may exceed the permissible limit of the time weighted average concentration for the substance for short periods 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 4 per shift;

(b) the time intervals 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 of 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 cases where the word “skin” has been indicated against certain substance mentioned in Tables 1 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 for conditions where; he exposure is only through respiratory tract.

(4)

(a) In case, the air at any work location contains a mixture of such substances mentioned in Tables 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 these time weighted concentration divided by the respective permissible time weighted average concentration specified in the above mentioned table, and the fractions obtained are added together, the total shall not exceed unity. i.e. $C_1+C_2+ .... C_n$ should not exceed unity $L_1 + L_2 + L_n$

Where C_1 C_2 …… Cn are the time weighted concentration of toxic substance 1, 2 ….. and n respectively determined after measurement at work location;

and L_1, L_2……..Ln are the permissible time weighted average concentration of 1 2…… n the toxic substance 1, 2…… and n respectively.

(b) In cases the air at any work location contains a mixture of substances, mentioned in Tables 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(i) and 2(ii).

3. Sampling and evaluation procedures:

(1) Notwithstanding provisions in any other paragraphs, the sampling evaluation procedures to be adopted for checking compliance with the provisions in the schedule shall be as per standard procedure 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 of the number of particles per cubic meter in item 1(A)(l)(i) in Table 2, samples are to be collected by standard or midget impinger and the counts made by light- field technique.
(b) The percentage of quartz in the 3 formulae given in item 1(A)(i) of Table 2 is to be determined from airborne samples.
(c) For determination of number of fibres as specified in item 2(A) of Table 2, the memberance filter method at 430 x phase contrast should be used.
(d) Both for determination of concentration and percentage of quartz for use of the formula given in item (A)(i)(2) of Table 2, the fraction passing through a size-select or with the following characteristic should only be considered:

Aerodynamic diameter (Unit density sphere)	**Percentage allowed by size selector**
2.0	90
2.5	75
3.5	50
5.0	25
10.0	10

4. Power to required assessment of concentration of substances
(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 3 carried out.
(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.
5. 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 In lector) 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.

Permissible levels of certain chemical substances in work environment

TABLE 1

Substance	**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 (ii) In terms of dust count	1060 ----------mppcm % Quartz+ 10
2. In terms of respirable dust	10 ----------mg/m3 % respirable Quartz+ 2
3. In terms of total dust	30 ----------mg/m3 %Quartz+ 3
(i) Cristobalite (ii) Fridymite (iii) Silica fused (iv) Tripoli (v) Amorphous	Half the limits given against quartz. Half the limits given against quartz. Same limit as for quartz. 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 (b) Mica (c) Mineral Gool fibre (d) Perlite	0.5 fibre cubic centimetre 2 fibres/centimetre 0.2 fibre/cubic centrimetre 705 mppcm 100 mg/m3 1060 mppcm

(e) Portland cement (f) Soap stone (g) Table (conabosti form) (h) Talc (fibrous) (i) Tremolite	1060 mppcm 705 mppcm 705 mppcm ame limit as for asbestosSame limit as for asbestos
3. Coal dust	
(1) for airborne dust having less than 5% silicon dioxide by weight	2 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**
ppm	**mg/m3**

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	..	2
e (TNT)	..	0.5

110. 256[Muster Roll

(1) 257[The manager of every factory except 258[the factories deemed as such] under Section 85 of the Act shall, maintain a muster-roll of all the workers employed in the factory in Form No. 25 showing (a) the name of each worker, (b) the nature of his work, and (c) the daily attendance of the worker which, in case of factories employing more than 200 workmen, shall be marked within two hours and in other cases within one hour of the start of the duty:

Provided that**,** if the daily attendance is noted in the Register of Adult Workers in Form No. 12 or the particulars required under this Rule are noted in any other register, a

separate muster-roll required under this Rule need not be maintained. [259][The attendance record may also be maintained in digital form.]
(2) [260][The manager of the factory shall be responsible to keep the muster-roll available for inspection by an Inspector during the periods of work in the factory.

111. Register of Accidents and Dangerous Occurrences
The manager of every factory shall maintain register of all accidents and dangerous occurrence which occur in the factory in Form No. 26 showing the:
(a) name of injured person (if any)
(b) date of accident or dangerous occurrence;
(c) date of report in Form No. 18 to Inspector;
(d) nature of accident or dangerous occurrence;
(e) date of return of injured person to work; and
(f) number of days of absence from work of injured.

112. 261[Maintenance of Inspection Book
The manager of every factory shall maintain an inspection book in Form No. 35 and shall produce it when so required by the Inspector or Certifying Surgeon.]
113. 262[Intimation of the Intended Closure of Factory
The occupier or manager of every factory shall send a report to the Chief Inspector with a copy to the Inspector of any intended closure of the factory or any section or department thereof at least one month before such closure stating:
(i) the reason for closure;
(ii) the number of workers on rolls on the date of submission of report;
(iii) the number of workers likely to be affected by the closure; and
(iv) the probable period of closure.

1 Vide Punjab Government Notification No. 3686-LP-52/2600, dated 29th May, 1952.
2 Substituted, vide Haryana Government Notification No. 14/40/87-6 Lab dated 26th June, 1995
3 Substituted by Punjab Government Notification No. 2372-VII-DS-Lab.-60/18362, dated 16th June, 1960
4 Substituted vide Haryana Government Notification No. 14/40/87-6 Lab. dated 26 June, 1995
5 Substituted vide Haryana Government Notification No. 14/40/87-6 Lab. dated 26 June,1995
6 Earlier Rule 2A was inserted by Punjab Government Notification No. 5365-VII-DS-Lab-60/ 32924 dated 1st November, 1960. And Inserted, vide Haryana Government Notification No. G.S.R. 51 C.A. 63/48/S. 112 & 115/93, dated 27th August, 1993. Earlier Rule 2 A has been renumbered as Rule 3 and Rule 3 has been renumbered as Rule 3-A. New Rule 2-A has been inserted.
7 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
8Inserted, vide Haryana Government Notification No. G.S.R. 51 C.A. 63/48/S. 112 & 115/93, dated 27th August, 1993. Earlier Rule 2 A has been renumbered as Rule 3 and Rule 3 has been renumbered as Rule 3-A. New Rule 2-A has been inserted.
9 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
10Inserted, vide Haryana Government Notification No. G.S.R. 51 C.A. 63/48/S. 112 & 115/93, dated 27th August, 1993. Earlier Rule 2-A has been renumbered as Rule 3 and Rule 3 has been renumbered as Rule 3-A. New Rule 2-A has been inserted.
11 Substituted, vide Punjab Government Notification No. 5365-VII-DS-Lab.60/32924, dated,1st November 1960.
12 Inserted by Haryana Notification No.9/79/82-6 Lab dated 24th August, 1984 See Gaz. Extra. Dt.27.8.84 P. 1435-1435
13 Substituted, vide Haryana Government Notification No. G.S.R. 51 C.A. 63/48/S. 112 & 115/ 93, dated 27th August, 1993.
14 Inserted vide No.11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
15 Substituted vide No.11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
16 Substituted vide No.11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
17 substituted, vide Haryana Government Notification No. 14/34/93-6 Lab. dated 26th May, 1995.
18 omitted by Punjab Government Notification No. 7579-S-8589-C-Lab.-57/60140, dated, 10th/11th July, 1957.
19 Substituted vide No.11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
20 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
21 substituted, vide Haryana Government Notification No. 14/34/93-6 Lab. dated 26th May, 1995.
22 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
23 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
24 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
25 Substituted by Haryana Government Notification No. 14/71/92-6 Lab. dated 18th January, 1995

26 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
27 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
28 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
29 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
30 Proviso to Rule 9 added by the Punjab Government Notification No. 5365-VII-DS-Lab.-60/32924, dated 1st November, 1960.
31 Rule 10 substituted by Punjab Government Notification No. 10-S-Lab.-II-59/3996, dated 29th January, 1959.
32 Added vide Haryana Government Notification No. 14/34/93-6 Lab. dated 26th May, 1995
33 Substituted, vide Haryana Government Notification No. 14/34/93-6 Lab. dated 26th May 1995.
34 Substituted, vide Haryana Government Notification No. GSR 38/CA 63/48 S 112/ Amd. (I)/78 dated 23rd March, 1978.
35 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
36 Added vide Haryana Govt. Notif No. GSR 38/CA 63/ 48 S. 112/ Amd. (1)78, dated 23rd March 1978.
37 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
38 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
39 Substituted, vide Haryana Government Notification No. 14/34/93-6 Lab. dated 26th May1995
40 Added vide Haryana Notification No. 14/34/93-6 Lab. dated 26th May, 1995.
41 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
42 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017.
43 Substituted, vide Haryana Government Notification No. 14/40/81-Lab. dated the 26th January 1995.
44 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
45 Inserted vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112/Amd. (2), dated 13th October, 1982
46 Substituted, vide Haryana Government Notification No. 14/40/87-Lab. dated the 26th June. 1995.
47 Inserted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/ 82, dated 13th October, 1982.
48 1Substituted, vide Punjab Government Notification No. 7579-S-8589-C-Lab. 57/60140, dated l0th/llth July, 1957.
49 Substituted, vide Haryana Government Notification No. 14/34/93-6 Lab. dated 26th May, 1995.
50 Inserted by Punjab Government Notification No. 3162-VII-DS- Lab. 61/29207, dated 31stAugust, 1961.
51 Substituted by Ibid
52 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
53 Re-numbered by ibid
54 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
55 Inserted, vide Haryana Government Notification No. G.S.R.-51 C.A. 63/48/S. 112 & 115/93, dated 27th August. 1993
56 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
57 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
58 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
59 Subs. vide Haryana Government Notification No. 14/40/87-6 Lab. dated 26th June,1995
60 Added, vide Haryana Government Notification No. G.S.R. 32/C.A. 63/48/S. 112/Amd. (2)/77, dated llth February, 1977
61 Heading not given in rule but added for clarity purposes.
62 The world "Artificial" omitted by Punjab Govt. Notification No. 3583-v-Lab.-II-59 11625, dated 23rd September, 1959.
63 Substituted, vide Haryana Govt. Notification No. G.S.R. 117/C.A. 63/48/S 112/Amd. (2)/82, dated 13th October, 1982.
64 Substituted, vide Haryana Govt. Notification No. G.S.R. 117/C.A. 63/48/S 112/Amd. (2)/82, dated 13th October, 1982.
65 Substituted, vide Haryana Govt. Notification No. G.S.R. 117/C.A. 63/48/S 112/Amd. (2)/82, dated 13th October, 1982.
66 Deleted vide Hr. Govt. Noti. No. G.S.R. 161/C.A. 63/48/S. 112/Amd. (4)/76, dt. 2nd July, 1976
67 Subs. vide Hr. Govt. Noti. No. G.S.R. 161/C.A. 63/48/S. 112/Amd.(4)76, dated 2nd July, 1976
68 Substituted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/82, dated 13th October, 1982.
69 Substituted by Haryana Government Notification No. G.S.R. 38/C.A. 63/48/S 112/Amd , (1)/ 78, dated 23.3.1978.
70 Substituted, vide Haryana Government Notification No. 7/3/86-6 Lab. dated 19th September,1988.
71 Words "I to IV" omitted by Punjab Government Gazzette L.S.P III dated 30.8.1996.
72 Inserted vide Haryana government notification No GSR 117/CA 63/48/S 112 and (2)/82, dated 13th october 1982
73 Added, vide Haryana Government Notification No. G.S.R. 87/C.A. 63/48/S. 112/Amd. 6, dated 9th April, 1976.
74 3Substituted, vide Haryana Government Notification No. G.S.R. 87/C.A. 63/48/S. 112/Amd. (2) dated 9th April, 1976.
75 3Substituted, vide Haryana Government Notification No. G.S.R. 87/C.A. 63/48/S. 112/Amd. (2) dated 9th April, 1976.
76 1Substitute, vide Haryana Government Notification no. G.S.R. 117/C.A.63/48/S. 112/Amd. (2)/82, dated 13th October, 1982
77 Rule 60-A inserted, vide Punjab government Notification no. 10 VII-DS-Lab.-60/216, dated 4th January, 1960
78 Inserted by Punjab Government Notification No. 467/VII-DS-Lab. 62/6283, dated 6th March, 1962
79 2Substituted, vide Haryana Government Notification No.G.S.R. 117/C.A. 63/48/S 112/Amd (2)/82/dated 13th October, 1982.
80 3Inserted vide Haryana Government Notification No. G.S.R. 38/C.A. 63/48/S 112/Amd , (1)/ 78, dated 23rd March, 1978.
81 Substituted by Haryana Govt. Notification No. GSR/CA-63/48-S112/Amd (1)78 dated 23rd March, 1978.
82 Substituted, vide Haryana Government Notification No. 14/43/2001-4Lab. dated 29th July, 2004.
83 Substituted, vide Haryana Government Notification No.12/(33)-80-i-Lab., dated 3rd January. 1980.
84 Subs. vide Hr. Govt. Noti. No. G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/82, dated 13th October, 1982
85 Substituted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/82, dated 13th October, 1982. * Heading not part of the rules added for clarity purposes
86RULE 66 substituted, vide Haryana Government Notification No. 7/3/86-6 Lab. dated 19th September, 1988.
87 Note: Although Rule 66 containing the provision of Safety Officer in sub-rule (4) was substituted yet considering the amendment vide Haryana Government Notification No. 14/ 40/87-6 Lab. dated 16th January, 1995,
88 Inserted vide Haryana Govt. Notification No .14/40/87-6 Lab., dated 26th June , 1995.
89 Omitted, vide Haryana Government Notification No. 14/40/87-6 Lab. dated 26th June, 1995
90 Omitted, vide Haryana Government Notification No. 14/40/87-6 Lab. dated 26th June, 1995.
91 Ins. vide Hr. Govt. Noti. No. G.S.R. 31/C.A. 63/48/S 112/75 dated 26th March, 1975.
92 Ins. vide Haryana Government Notification No. 14/40/87-6 Lab. dated the 26th June, 1995
93 Ins. vide Hr. Govt. Noti. No. G.S.R. 31/C.A. 63/48/S 112/75 dated 26th March, 1975.
94 Ins. vide Hr. Govt. Noti. No. G.S.R. 31/C.A. 63/48/S 112/75 dated 26th March, 1975.

95 Ins. vide Hr. Govt. Noti. No. G.S.R. 31/C.A. 63/48/S 112/75 dated 26th March, 1975.
96 Subs., vide Hr. Govt. Noti. No. 14/40/87-6 Lab dated the 26th June, 1995.
97 Subs. vide Hr. Govt. Noti. No. G.S.R. 51/C.A. 63/48/S. 112/115/93, dated 27th August, 1993
98 Inserted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48 S. 112/Amd. (2), dated 13th October, 1982.
99 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
100 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
101 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
102 Added vide Punjab Government Notification No. G.S.R. 168/C.A. 63/48/S. 112/Amd. (3) 14, dated, 8th July, 1964.
103 Rule 67-B, ins. by Ht. Govt. Noti. No. G.S.R. S.I. C.A./63/48/S.112&165, dated 27thAugust, 1993
104 Not given in the rules but added for clarity purposes
105 Substituted, vide Haryana Government Notification No. 14/40/87-6 Lab. dated 26th June, 1995
106 Rule 68-A inserted by Punjab Government Notification No. 9675-VII-Lab. 1-59/1260, dated 5th October, 1959.
107 Substituted, vide Haryana Government Notification No. G.S.R. 31/C.A. 63/48/S. 11/75, dated 26th March, 1975.
108 Added, vide Haryana Government Notification No. 14/40/87-6 Lab, dated 26th June, 1995
109 Added, vide Haryana Government Notification No. 14/40/876 Lab, dated 26th June, 1995
110 Added, vide Haryana Government Notification No. 14/40/87-6 Lab, dated 26th June, 1995
111 Inserted and substituted respectively, vide Haryana Government Notification No. G.S.R. 31/C.A. 63/48/S. 112/75, dated 26th March, 1975.
112 Inserted, vide Haryana Government Notification No. G.S.R. 38/C.A. 63/48/S. 112/Amd. (I)/78, dated 23rd March, 1978.
113 Added, vide Haryana Government Notification No. 14/40/87-6 Lab. dated 16th January,1995.
114 Added, vide Haryana Government Notification No. 14/40/87-6 Lab. dated 16th January 1995.
115 Rule 70 substituted by Haryana Governmetn Notification No. GSR31-CA63/48/S.112/75 dt 26-3-1975.
116 Added, vide Haryana Government Notification No. 12(33)-80-I-Lab, dated 3rd January, 1980.
117 Rules 70-A to Rule 70-T inserted (added), vide Haryana Government Notification No. G.S.R. 51 C.A. 63/48/S. 112 115/93, dated 27th August 1993.
118 Rules 70-A to Rule 70-T inserted (added), vide Haryana Government Notification No. G.S.R. 51 C.A. 63/48/S. 112-115/93, dated 27th August 1993.
119 Rules 70-A to Rule 70-T inserted (added), vide Haryana Government Notification No. G.S.R. 51 C.A. 63/48/S. 112-115/93, dated 27th August 1993.
120 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
121 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
122 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
123 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
124 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
125 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
126 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
127 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
128 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
129 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
130 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
131 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
132 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
133 Added Haryana Government Notification no. G.S.R. 51 C.A 63/48/S. 112-115/93, dated 27th August 1993.
134 Substituted for “duplicate “ vide Punjab Government Gazette L.S.P III dated 19.3.1991.
135 Inserted, vide Haryana Government Notification No. G.A.R. 38/C.A. 63/48/S. 112/Amd. (I)/ 78, dated 23rd March 1978
136 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
137 Inserted, vide Haryana Government Notification No G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/ 82, dated 13th October, 1982.
138 Re-numbered by Haryana Government Notification No G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/ 82, dated 13th October, 1982.
139 Added, vide Punjab Government Notification No. 9825-VII-Lab. 1-59/13005, dated 12th October, 1959.
140 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
141 Substituted, vide Punjab Government Notification No.7218-S-LP-54/60750, dated 4th November, 1954.
142 Added, vide Pb. Govt. Notification No. 9825-VII-Lab.-I-59/13005, dated 12th October, 1959.
143 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
144 Added, vide Haryana Government Notification No. 14/40/89-6 Lab dated 26th June 1995.
145 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
146 Substituted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/82, dated 13th October, 1982.
147 Subs. vide Hr. Govt. Noti. No. 14/40/89-6 Lab, dated 26th June 1995.
148 Subs. vide Hr. Govt. Noti. No. 14/40/89-6 Lab, dated 26th June 1995.
149 Inse. vide Hr. Govt. Noti. No. G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/82, dt. 1st Oct., 1982.
150 Subs. vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June, 1995
151 Subsituted by Hr. Govt. Noti. No. 14/14/99-6 Lab., dated 26th may ,1999.
152 Rules 85 renumbered as sub-rule (1) and sub-rule (2) added thereto by Punjab Government Notification No. 3551-V-Lab. 11-59/5701, dated 17th July, 1959.
153 Subs.vide Haryana Government Notification No. 14/40/89-6 Lab., dated 26th June, 1995.
154 Subs.vide Punjab Government Notification No. 3581-V-Lab., dated 17th July ,1959.
155 Ins., vide by Punjab Government Notification No. 809/620-C-Lab. 58/38787, dated 13th May, 1958
156 Substituted, vide by Haryana Government Notification No. G.S.R. 39/C.A. 63/48/ S. 112/Amd. (I)/78, dated 23rd March, 1978
157 Substituted, vide by Haryana Government Notification No. 1(119)-80-6 Lab. Dated 22nd November, 1982.
158 Substituted, vide by Haryana Government Notification No.5355-I-Lab.-71/32368 dated 24th September, 1971.
159 Substituted, vide by Haryana Government Notification No. 1(119)-80-6 Lab ., dated 22nd November, 1982.
160 Rules 88 to 91 impliedly repealed vide Punjab Government Notification no. 2063-VII-DSLab-. 61/1345, dated 20th July, 1961

161 Rules 88 to 91 impliedly repealed vide Punjab Government Notification no. 2063-VII-DSLab-. 61/1345, dated 20th July, 1961
162 Rules 88 to 91 impliedly repealed vide Punjab Government Notification no. 2063-VII-DSLab-. 61/1345, dated 20th July, 1961
163 Rules 88 to 91 impliedly repealed vide Punjab Government Notification no. 2063-VII-DSLab-. 61/1345, dated 20th July, 1961
164 Substituted. Vide Punjab Notf No. G.S.R 168/CA 53/48/S. 112/Amd. (3)/64, dated 8th July, 1964.
165 Added, vide Haryana Government Notification No. 5355-I-Lab. 71/32368, dated 24th September, 1971
166 Substituted, vide Haryana Government Notification No. l(119)-80-6-Lab., dated 22nd November, 1982.
167 Substituted, vide Punjab Government Notification No. G.S.R.168/C.A.-63-48/S. 112 Amd. (3)/64, dated 8th July, 1964 and Notification No. G.S.R.163/C.A. 63/48/S. 112/Amd. (7)/66 dated 6th July, 1966
168 Added, vide Haryana Government Notification No. 5355-I-Lab. 71/32368, dated 24th September, 1971
169 Substituted, vide Haryana Government Notification No.l (119)-80-6-Lab.,dated 22nd November, 1982
170 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
171 Subs., vide Punjab Government Notification No. 809/620-E/Lab., 58/38787, dated 19th May, 1958
172 Omitted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 17th January, 1995.
173 Omitted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 17th January, 1995.
174 Subs for the word “holidays”.
175 Substituted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112 Amd. (2)/82, dated 13th October, 1982.1/Amd (2)/82, dated 13th October 1982
176 Substituted by Punjab Government Notification No. 1809-VII-DS-Lab -60-22020, dated 23rd July, 1960.
177 substituted by Haryana Government Notification No. GSR31-CA63/48/S.112/75 dt 16th march 1975.
178 Item (10) added by Punjab Government Notification No. 1064-VII-DS-Lab-61/12863, dated 16th May,1961
179 Item (11) and (12) added by Punjab Government Notification No. 3035-VII-DS-Lab-1-16229, dated 12th june,1961
180 Item (13) and (14) added by Haryana Government Notification No.G.S.R-91-CA-6348/S/112/Amd. (1)/68,dated 24th October, 1965.
181 Item (15),(16) ,(17) and (18) added by Haryana Government Notification No.G.S.R-31-CA-63/48/S.112/75,dated 26th March, 1975.
182 Item Nos. (19),(20),(21) and (22) inserted vide Haryana Government Notification No.12(33)-80-I-Lab.,dated 3rd Jan, 1980.
183 Added vide Haryana Government Notification No. G.S.R 168/C.A 63/48/S.112/Amd.(3) 64.dated 8th July, 1964.
184 Sub-para(4) to Rule 102, added , vide Haryana Government Notification No. G.S.R. S/OA/63.48/S.112& 115/93, dated 27th August ,1993.
185 Substituted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112 Amd. (2)/82, dated 13th October, 1982.
186 Substituted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112 Amd. (2)/82, dated 13th October, 1982.
187 Added, by Haryana Government Notification No. 1063-5-Lab. 73/8000, 8th March, 1973.
188 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
189 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
190 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
191 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
192 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
193 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
194 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
195 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
196 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
197 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
198 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
199 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
200 Substituted by Punjab govt notification No 2809-VII-DS-60/22020, dated the 23rd July, 1960
201 Substituted by Haryana Govt.Notification No.GSR 31/CA 63/48/S.11 2/7, dated 26th March, 1975
202 Substituted by Punjab govt notification GSR 74/CA-63/48/S.112/Amd.(11)/71, dated the 18.11.1971
203 Schedule XI substituted, vide Government Notification No. GSR-51-CA 63-48/S-122115/93 dated 27th August, 1993.
204 Substituted by Punjab Govt. Notification No.GSR.85/CA-63/48/S. 112 and (16)/77, dated 25-+-1977= Haryana Government Notification No.12(33)-30-1, Lab, dated 3rd January,, 1980
205 Para 4 substituted by Punjab govt noti no GSR 8/CA-63/48/S.112/and (16)/77, dated 25-8-1977=substituted vide Haryana govt notification No 12(33)-30-I, Lab, dated 3rd January 1980
206 Schedule XV, substituted vide Haryana government notification No.GSR 51 CA/63/48/S/112 & 115/93, dated 27th August 1993
207 Schedue XVI substituted, vide Haryana Government Notification No GSR 51 CA 63/48/5, 112 & 115/93, dated 27th august 1993.
208 Substituted vide Punjab Govt, gazette Legislative Supplement Part III dated 19.3.1991
209 Substituted vide Punjab Govt, gazette Legislative Supplement Part III dated 19.3.1991
210 Sub. vide Hr. Govt. Noti. No. G.S.R. 117/C.A. 63/48/S. 12/ md. (2)/82, dt. 13th October, 1982
211 Added vide Haryana Govt. notification No. 14/40/87-6 Lab dated 26th June, 1995.
212 Substituted vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June 1995
213 Substituted vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June 1995
214 Substituted vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June 1995
215 Substitute, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June 1995
216 Substituted, vide Haryana Government Notification No. G.S.R. 117/C.A. 64/48/S. 112/ Amd. (2)/82, dated 13th October, 1982
217 Sub para (a) substituted, vide Haryana Government Notification No. GSR 117/CA 64/48/S. 112/Amd. (2)/82, dated 13th October, 1982.
218 Substituted, vide Hr. Govt Noti. No. 14/40/87-6 Lab., dated 16th January 1995.
219 Substituted, vide Hr. Govt Noti. No. 14/40/87-6 Lab., dated 16th January 1995.
220 Substituted, vide Hr. Govt Noti. No. 14/40/87-6 Lab., dated 16th January 1995.
221 Inserted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/ 82, dated 13th October, 1982.
222 Inserted, vide Haryana Government Notification No. G.S.R. 117/C.A. 63/48/S. 112/Amd. (2)/ 82, dated 13th October, 1982.
223 Inserted, vide Haryana Government Notification No. 12/(33)/80-l Lab., dated 3rd January, 1980.
224 Sub, vide Haryana Government Notification No. 14/40/87—6 Lab, dated 26th June 1995
225 Sub, vide Haryana Government Notification No. 14/40/87—6 Lab, dated 26th June 1995
226 Inserted, vide Hr. Govt. Noti. No. 12/(33)-80-I-Lab., dt. 3rd January, 1980.

227 Substituted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June, 1995.
228 Substituted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June, 1995
229 Substituted vide Haryana Govt. notification no. 14/40/87-6 lab dated 26th June, 1995.
230 Substituted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June, 1995
231 Substituted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June, 1995
232 Substituted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June, 1995
233 Omitted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June, 1995
234 Inserted, vide Haryana Government Notification No. 12(33)-80-I-Lab dated the 3rd January, 1980.
235 Inserted, vide Haryana Government Notification No. 12(33)-80-I-Lab dated the 3rd January, 1980.
236 Added vide Haryana Govt Notification No.9/91/82/6 Lab dated 26.12.1984
237 Substituted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June, 1995
238 Omitted, vide Haryana Government Notification No. 4/40/87 Lab., dated 26th June, 1995
239 Substituted, vide Haryana Government Notification No. 4/40/87 Lab., dated 26th June, 1995.
240 Substituted, omitted, vide Haryana Government Notification No. 4/40/87 Lab., dated 26th June, 1995
241 Substituted, omitted, vide Haryana Government Notification No. 4/40/87 Lab., dated 26th June, 1995
242 Schedules XXIII, XXIV, XXV, & XXVI added, vide Haryana Government Notification No. G.S.R. 5/C.A. 63/48/S. 112 & 115/93, dated, 27th August 1993.
243 Not given in the rules but added for clarity purposes.
244 Added vide Hr.Govt Noti. No. G.S.R. 5/C.A. 63/48/S. 112 & 115/93, dated, 27th August 1993.
245 Added vide Hr.Govt Noti. No. G.S.R. 5/C.A. 63/48/S. 112 & 115/93, dated, 27th August 1993
246 Inserted, vide Haryana Government Notification No.12(33)-80-I-Lab., dated the 3rd January, 1980.
247 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
248 Substituted by Haryana Government Notification No. 84/40/87-6 Lab., dated 26th June, 1995.
249 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
250 Substituted, vide Haryana Government Notification No. 14/40/87-6 Lab., dated 26th June, 1995.
251 Read “State Government for Haryana” vide Haryana Government Notification No. GSR 117/CA 63/48/S. 112/Amd. (2)/82, dated 13th October, 1982.
252 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
253 Substituted, vide Haryana Government Notification No. GSR 117/CA 63/48/S. 112/Amd. (2)/82, dated 13th October, 1982.
254 Inserted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
255 Rule 109-A added, vide Haryana Government Notification on G.S.R. 51-CA 63/48/S-112 &’15, dated 27th August, 1995.
256 Substituted, vide Punjab Government Notification No. G.S.R. 105-CA 63/48/S 112/Amd. (I)/62, dated 24th May, 1962.
257 Subs. by Haryana Government Notification No. 5355-1 Lab. 71/32368, dated 24th September, 1971.
258 Added, vide Punjab Government Notification No. G.S.R. 195/C.A.-6348/S. 112/Amd. (3)/62, dated 8th July, 1964
259 Substituted vide No. 11/16/2016-4 by the Punjab Factory (Haryana Amendment) Rules, 2016, dated 17th February, 2017
260 Subs, vide Haryana Government Notification No. 1 (119)-80-6 Lab., dated 22nd November, 1982
261 Substituted, vide Punjab Government Notification No. G.S.R. 105-CA 63/48/S 112/Amd. (I)/62, dated 24th May, 1962.
262 Rule 113 added by Punjab govt not 2025-VII-DS-Lab-60/14388, dated 7th may 1960