GOVERNMENT OF MEGHALAYA

MEGHALAYA FACTORIES RULES

FOR THE YEAR 1980

THE MEGHALAYA FACTORIES RULES, 1980

CHAPTER I

PRELIMINARY

1. **Short title, extent and commencement**—(1) These rules may be called the Meghalaya Factories Rules, 1980.
   (2) They shall extend to the whole of Meghalaya.
   (3) They shall come into force at once.

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 stream 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 opening at times when the temperature of the room is 26.5 degrees Centigrade 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 Centigrade scale.
   (f) "*District Magistrate*" includes such other official as may be appointed by the State Government in that behalf.
   (g) "*Fume*" includes gas or vapour.
   (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 construction and maintenance.
   (j) "*Maintained*" means maintained in an efficient state, in efficient working order and in good repair.
   (k) "*Manager*" means the person responsible to the occupier for the working of the factory for the purposes of the Act.
   (l) All words and expressions used in these rules but not defined shall have the same meanings as and when used in the Act.

3. **Submission of plan**—The State Government or the Chief Inspector of Factories may require for the purpose 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 extend since then. Such plans shall be drawn to the scale showing—
   (a) The site of the factory an immediate surroundings including adjacent buildings and other structures, roads, drains, etc.;
   (b) The plan, elevation and necessary cross section 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.

4. **Approval of plans**—(1) No site shall be used for the location of a factory or no building in a factory be constructed, reconstructed, extended or taken into use as a factory or part of a factory, or any other extension of plant of machinery carried out in a factory unless previous permission in writing is obtained from the State Government or the Chief Inspector.

(2) Application for such permission shall be made in Form No, 1 which shall be accompanied by the following documents:

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

(b) Plans in duplicate drawn to scale showing—

i) The site of the factory and immediate surroundings including adjacent buildings and other structures, roads, drains, etc.; and

ii) The plan, elevation and necessary cross-section to 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; and

(c) Such other particulars as the Chief Inspector may require.

(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 may signing and returning to the applicant one copy of each plan; or he may call of such other particulars as he may require to enable such approval to be given.

5. **Application for registration and grant of licence**--The occupier of every factory, shall submit to the Chief Inspector an application in Form No. 2 for the registration of the factory of these Rules.

6. Grant of licence—(1) A licence to work a factory shall be granted by the Chief Inspector in Form No. 3 prescribed for the purpose and on payment of the fees specified in the Schedule hereto.

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

SCHEDULED A

Scale of fees payable for Licence and annual renewal of Licence for Factories defined in Section 2 (m) of the Factories Act, 1948 other than Electricity Generating (or Transforming) stations

	Maximum number of persons to be employed during the year							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Quantity of K.W. in stalled (Max. K.W.)	20	50	100	250	500	750	1000	Above 1000
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
NIL	25	60	125	200	300	450	600	850
10 K.W.	100	175	275	425	625	825	1,150	1,825
50 K.W.	175	275	425	625	825	1,150	1,825	2,700
100 K.W.	275	425	625	825	1,150	1,825	2,700	3,350
250 K.W.	425	625	825	1,150	1,825	2,700	3,350	4,025
500 K.W.	625	825	1,125	1,825	2,700	3,350	4,025	4,700
1,000 K.W.	825	1,150	1,825	2,700	3,350	4,025	4,700	5,375
Above 1,000 K.W.	2,025	2,700	3,350	4,025	4,700	5,375	6,050	6,700

SCHEDULED B

Scale of fees payable for Licence and annual renewal of Licence for Electricity Generating (or Transforming) Stations

Total installed capacity of the generating (or transforming) plant (in K.W)	Number of workers to be employed	Fees payable.
		Rs.
50 K.W. or less	10 or above	30
Over 50 K.W. not over 100 K.W.	Do	75
Over 100 K.W. not over 150 K.W.	Do	115
Over 150 K.W. not over 300 K.W.	Do	150
Over 300 K.W. not over 750 K.W.	Do	225
Over 750 K.W. not over 1,000 K.W.	Do	340
Over 1,000 K.W. not over 5,000 K.W.	Do	675
Over 5,000 K.W. not over 10,000 K.W.	Do	1.125
Over 10,000 K.W. not over 50,000 K.W.	Do	1,875
Over 50,000 K.W.	Do	2,250

7. **Amendment of licence**—(1) A licence granted under Rule 6 may be amended by the Chief Inspector.

(2) A licence 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.

(3) The fee for the amendment of a licence shall be ten 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.

Provided that the occupier of premises in use as a factory on the date of the commencement of these rules shall submit such application within 30 days from the date of the commencement of these rules.

8. **Renewal of licence**—(1) A licence may be renewed by the Chief Inspector.
(2) Every application for the renewal of a licence shall be in Form No. 2 in duplicate, and shall be made not less than two months before the date on which the licence expires, and, if the application is so made, the premises shall be held to be duly licenced until such date as the Chief Inspector renews the licence.
(3) The same fee shall be charged for the renewal of a licence as for the grant thereof:
Provided that if the application for renewal is not received within the time specified in sub-rule (2), the licence shall be renewed only on payment of a fee 25 percent in excess of the fee ordinarily payable for the licence.

9. **Transfers of licence**—(1) The holder of a licence may, at any time before the expiry of the licence, apply for permission to transfer licence to another person.
(2) Such application shall be made to the Chief Inspector who shall, if he approves of the transfer, enter upon the licence under his signature, an endorsement to the effect that the licence has been transferred to the person named.
(3) A fee of ten rupees shall be charged on each such application.

10. **Procedure on death or disability of licensee**—If a licensee dies or becomes insolvent, the person carrying on the business of such licensee shall not be liable to any penalty under the Act for exercising the powers granted to the licensee by the licence during such time as may reasonably be required to allow him to make an application for the amendment of the licence under Rule 7 in his own name for the unexpected portion of the original licence.

11. **Loss of Licence**—Where a licence granted under these Rules is lost or accidentally destroyed, a duplicate may be granted on payment of a fee of rupees ten.

12. **Payment of fees**—(1) 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 08—Labour and Employment—E—Fees realised under the Factories Act, 1948:

Provided that the appropriate fee may alternatively be paid by a crossed cheque or a bank draft on any nationalized bank or by a postal order drawn in favour of the Chief Inspector.

(2) If an application for the grant, renewal or amendment of a licence is rejected, the fee paid shall be refunded to the applicant.

13. **Prohibition of use of a premises as factory without a valid licence**—An occupier 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 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 the licence.

COMMENTS

Rules 3 to 13 have been prescribed Section 6 (c) of the Act.

14. **Notice of occupation**—The notice of occupation shall be in Form No. 2

COMMENTS

Form No. 2 has been prescribed Section 7 (1) of the Act.

15. **Notice of change of manager**—The notice of change of manager shall be in Form No. 4

COMMENTS

Form No. 4 has been prescribed under sub-section (4) of Section 7 of the Act.

CHAPTER II
INSPECTING STAFF

16. **Qualification of an Inspector**—No person shall be appointed as an Inspector for the purpose of the Act unless he possesses of the Act unless he possesses the qualifications as hereunder—

(a) He must not be less than 23 years or more than 35 years of age;

(b) He must have—

i) Had a good general education up to the pre-degree standard of a recognised university;

ii) Secured a degree or diploma equivalent to a degree of a recognised university, in any branch of Engineering, Technology or Medicine and preferably with practical experience of at least two years in a workshop or a manufacturing concern of good standing and in the case of Medical Inspector an experience of at least two years in a public hospital or factory, medical department or alternatively a diploma in industrial medicine; and

(c) Where for a particular, post, special knowledge to deal with special problems is required, the Government may, in addition to the basic qualifications, prescribe appropriate qualifications for such a post.

COMMENTS

This rule has been prescribed Section 8 (1) of the Act.

17. **Powers of Inspector**—An Inspector shall, for the purpose of the execution of the Act, have power to do all or any of the following things, that is to any—

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

(b) In the case of an Inspector who is duly qualified medical practitioner, to carry out such medical examinations as may be necessary for the purposes of his duties under the Act; and

(c) To prosecute, conduct or defend before a court any complaint or other proceeding arising under the Act or in discharge of his duties as an Inspector.

COMMENTS

This rule has been prescribed Section 9 of the Factories Act.

18. **Duties of Certifying Surgeons**—(1) For the 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 arrangements to the manager of factories situated within the local limits assigned to him.

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

(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 if illness have occurred which it is reasonable to believe one 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 the adoption 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 person 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 process covered by the rules relating to dangerous operations, the Certifying Surgeon shall visit the factories within the local limits assigned to him at such intervals as are prescribed by the rules relating to such dangerous operations.

(5) At such visits the Certifying Surgeon shall examine the persons employed in such processes and shall record the results of his examination in a Register known as the Heath Register (Form No. 6) which shall be kept by the factory manager and produced to the Certifying Surgeon at each visit.

(6) If the Certifying Surgeon finds as a result of his examination that any person employed in such process is no longer fit for medical reasons to work in that process, he shall suspend such person from working in that process for such time as he may think fit and no person after suspension shall be employed in that process without the written sanction of the Certifying Surgeon in the Health Register.

(7) The manager of a factory shall afford to the Certifying Surgeon facilities to inspect any process in which any person is employed or is likely to be employed.

(8) The manager of a factory shall provide for the purpose of any medical examination which the Certifying Surgeon wishes to conduct at the factory (for his exclusive use on the occasion of an examination) a room which shall be properly cleaned and adequately ventilated and lighted and furnished with a screen, a table (with writing materials) and chairs.

COMMENTS

For this rule see sub-section (4) of Section 10 of the Factories Act.

CHAPTER III

HEALTH

19. **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

COMMENTS

For this rule see Section 17(1) of the Act.

20. Cleanliness of walls and ceilings—(1) Clause (d) of sub-section (1) of Section 11 of the Act shall not apply to the class or description of factories or parts of factories specified in the Schedule hereto:

Provided that they are kept in a clean state by washing, sweeping, brushing, dusting, vacuum-cleaning or other effective means;

Provided further that the said Clause (d) shall continue to apply—

(a) As respects factories or parts of factories specified in Part A of the said Schedule, to work-rooms in which the amount of cubic space allowed for every person employed in the room is less 14.2 cubic meters;

(b) As respects factories or parts of factories specified in Part B of the said Schedule, to work rooms in which the amount of cubic space allowed for every person employed in the room is less than 70.8 cubic meters;

(c) To engine-houses, fitting shops, lunch-rooms, canteens, shelters, crèches, cloak-rooms, rest-rooms and wash places; and

(d) To such parts of walls, sides and tops of passage and staircases as are less than 6 meters above the floor or stair.

(2) If it appears to the Chief Inspector that any part of a factory, to which by virtue of sub-rule (1) any of provisions of the said Cl. (d) do not apply, or apply as varied by sub-rule (1), is not being kept in a clean state, he may, by written notice, require the occupier to white-wash or colour-wash, wash, paint or varnish the same, and in the event of the occupier failing to comply with such requisition within two months from the date of the notice, sub-rule (1) shall cease to apply to such part of a factory, unless, the Chief Inspector otherwise determines.

SCHEDULE

PART A

1. Blast furnaces
2. Brick and tile works in which unglazed brick or tiles are made.
3. Cement works.
4. Chemical works.
5. Copper mills.
6. Gas works.

7. Iron and Steel mills.
8. Stone, slate and marble works.
9. The following parts of factories:
   (a) Rooms used only for the storage of articles.
   (b) Rooms in which the walls or ceilings consist of galvanised iron, glazed bricks, glass, slate, asbestos, bamboo, thatch.
   (c) Parts in which dense team is continuously evolved in the process.
   (d) Parts in which pitch, tar or like material is manufactured or is used to a substantial extent, except in brush works.
   (e) Parts of a glass factory known as the glass house.
   (f) Rooms in which graphite is manufactured or is used to a substantial extent in any process.
   (g) Parts in which coal, coke, oxide of iron, ore, lime or stone is crushed or grounds.
   (h) Parts of walls, partitions, ceilings or tops of rooms which are at least 6 meters above the floor.
   (i) Ceilings or tops of rooms in print works bleach works or dye works, with the exception of finishing rooms or warehouses.
   (j) Inside Walls in tanneries below a height of 1.5 meters from the ground floor level where a wet process is carried on.

PART B

1. Coach and motor body works.
2. Electric generating or transforming stations.
3. Engineering works.
4. Factories in which sugar is refined or manufactured.
5. Foundries other than foundries in which brass casting is carried on.
6. Gun factories.
7. Ship-building works.
8. Those parts of factories where unpainted or unvarnished wood is manufactured.

For this rule see Section 11, sub section (2) of the Factories Act.

21. **Disposal of trade-wastes and effluents**—(1) In the case of a factory where the drainage system is proposed to be connected to the public sewerage system, prior approval of the arrangement made shall be contained from the local authority.

(2) In the case of a factory situated in a place where no public sewerage system exists, prior approval of the arrangement 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.

COMMENTS

This rule has been formed under sub-section (2) of Section 12 of the Act.

22. **Ventilation and temperature**—(1) Limits of temperature and air movement—In any factory the maximum wet-bulb temperature of air in a workroom at a height of 1.5 meters above the floor level shall not exceed 30 degrees centigrade and adequate air movement of at least 30 meters per minute shall be provided; and in relation to dry-bulb temperature the wet bulb temperature in the workroom at the said height shall not exceed that shown in the Schedule annexed hereto, 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;

SCHEDULE

Dry-bulb temperature	Wet-bulb temperature
30^0C to 34^0C	29^0 C
35^0C to 39^0C	28.5^0 C
40^0C to 44^0C	28^0 C
45^0C to 47^0C	27.5^0 C

Provided that if the temperature measured with a thermometer inserted in a hollow glove of 15 centimetres diameter coated 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 degrees centigrade, 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 this requirement shall not apply in respect of factories covered by Section 15 of the Act and in respect of factories where the nature of work carried on involves production of excessively high temperature referred to in Clause (ii) of sub-section (1) to which workers are exposed for short periods of time into 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 requirements, in so far as restricting the thermal conditions within the limits laid down in the Schedule are concerned to the extend that he may consider necessary subject to such conditions as he may specify.

(2) *Provision of thermometers*—(a) If it appears to the Inspector that in any factory, the temperature of air in a work-room is sufficiently high and is likely to exceed the limits prescribed in sub-rule (1), may serve on the 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 readings in each such workroom 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.

(b) If the Inspector has reason to believe that a substantial amount of heat is added inside the environment of a workroom by radiation from walls, roof or other solid surroundings, he may serve on the managers of the factory an order requiring him to provide one or more globe thermometers referred to in the first proviso in sub-rule (1) and further requiring him to place the globe thermometers at place specified by him and keep a record of the temperatures in a suitable register.

(3) Ventilation—(a) In every factory the amount of ventilating openings in a workroom below the caves shall, except where mechanical means of ventilation as required by Clause (b) below 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 requirements regarding the amount of ventilating openings if he is satisfied that having regard to the location of the factory, orientation of the workroom, prevailing winds, roof height and the nature of manufacturing process carried on, sufficient supply of fresh air into the workroom is afforded during most part of the working time:

Provided further that this requirement shall not apply in respect of work-room of factories—

i) Covered by Section 16 ; or

ii) In which temperature and humidity are controlled by refrigeration.

(b) Where in any factory owing to special circumstances such as situation with respect to adjacent buildings and height of the buildings with respect of floor space, the requirement of ventilation opening under Clause (a) of this sub-rule cannot be complied with or in the opinion of the Inspector the temperature of air in a workroom is sufficiently high and is likely to exceed the limits prescribed in sub-rule (1), he may serve on the manager of the factory an order requiring him to provide additional ventilation either by means of roof ventilations or by mechanical means.

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

(d) In regions wherein summer (15th March-15th July) dry-bulb temperature of outside air in the shade during most part of the day exceed 35 degrees centigrade and simultaneous wet bulb temperatures are 25 degrees centigrade or below and in the opinion of the Inspector the manufacturing process carried on in the workroom of a factory permits thermal environments with relative humidity of 50 per cent 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 evaporative air coolers (desert coolers) or where supply of outside air is provided by mechanical means through ducts in a plenum system, by means of central air washing plants.

COMMENTS

This rule has been prescribed under Section 13 of the Act.

23. **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 29.5 degrees centigrade; and

(b) At any time when the wet-bulb reading of the hygrometer is higher bulb reading of the hygrometer at that time, or as regards a dry bulb reading intermediate between any low dry bulb readings indicated consecutively in the Schedule when 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
1	2	3	4	5	6
15.5	14.5	25.0	24.0	34.5	30.0
16.0	15.0	25.5	24.5	35.0	30.5
16.5	15.5	26.0	25.0	35.5	31.0
17.0	16.0	26.5	25.5	36.0	31.0
17.5	16.5	27.0	26.0	36.5	31.5
18.0	17.0	27.5	26.0	37.0	31.5
18.5	17.5	28.0	26.5	37.5	31.5
19.0	18.0	28.5	27.0	38.0	32.0
19.5	18.5	29.0	27.0	38.5	32.0
20.0	19.0	29.5	28.0	39.0	32.0
20.5	19.5	30.0	28.0	39.5	32.5
21.0	20.0	30.5	28.5	40.0	32.5
21.5	20.5	31.0	28.5	40.5	33.0
22.0	21.0	31.5	29.0	41.0	33.0
22.5	21.5	32.0	29.0	41.5	33.0
23.0	22.0	32.5	29.5	42.0	33.0
23.5	22.5	33.0	29.5	42.5	33.0
24.0	23.0	33.5	29.5	43.0	33.5
24.5	23.5	34.0	30.0	43.5	33.5

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 2 degrees.

24. **Provision of hygrometer**—In all departments of cotton spinning and weaving mills wherein artificial humidification is adopted, hygrometers shall be provided and maintained in such positions as are approved by the Inspector. The number of hygrometers shall be regulated according to the following scale:

(a) *Weaving department*—One hygrometer for departments with less than 500 looms, and one additional hygrometer for each room of less than 85,00 cubic meters capacity and one extra hygrometer for each 5,670 cubic meters or part thereof, in excess of this;

(b) *Other departments*—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 shade readings.

25. **Exemption from maintenance of hygrometers**—When the Inspector is satisfied that the limits of humidity allowed by the Schedule to Rule 23 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.

26. **Copy of Schedule to Rule 23 to be affixed near every hygrometer**—A legible copy of the Schedule to Rule 23 shall be affixed near each hygrometer.

27. **Temperature to be recorded at each hygrometer**—At each hygrometer maintained in accordance with Rule 24, correct wet and dry bulb temperatures shall be recorded thrice daily during each working day by competent persons nominated by the Manager and approved by the Inspector.

The temperature shall be taken between 7 a.m. and 9 a.m., 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 Prescribed Form No.8, 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.

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

(2) The wet bulb 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 oil or grease.

(3) No part of the wet bulb shall be within 76 millimetres from the dry bulb or less than 25 millimetres from 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 sir 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 60 centimetres.

(6) Each thermometer shall be graduated so that accurate readings may be taken between 10 and so degrees centigrade.

(7) Every degree from 10 degrees up to 50 degrees shall be clearly marked by horizontal lines on the stem, each fifth degree shall be marked by longer marks than the intermediate degrees and the temperature marked opposite each fifth degree, i.e., 10, 15,20,25,30,35,40,45 and 50.

(8) The marking as above shall be accurate, that is to say, at no temperature between 10 and 20 degrees shall be indicated readings, be in error by more than one-ninth 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, Delhi or some competent authority appointed by the Chief Inspector and such certificate shall be attached to the Humidity Register.

29. **Thermometers to be maintained in efficient order**—Each thermometer shall be maintained at all time during the period of employment in efficient working order, so as to give accurate indications and in particular—

(a) The wick and the muslin covering of the wet bulb shall be renewed once a week;

(b) The reservoir shall be filled with water which shall completely renew once a day. The Chief Inspector may direct the use of distilled water or pure rain water in any particular null or mills in certain localities; and

(c) No water shall be applied directly to the wick or covering during the period of employment.

30. **Inaccurate thermometer not to be used without fresh certificate**—If an Inspector gives notice in writing that a thermometer is not accurate, it shall not, after one month from the date of such notice, be 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.

31. **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 12 millimetres in thickness and distant at least 25 millimetres from the bulb of each thermometer.

(2) No hygrometer shall be fixed at a height of more than 170 centimetres from the floor to the top of thermometer stem or in the direct draughts from a fan, window, or ventilating opening.

32. **No reading to be taken within 15 minutes of removal of water**—No reading shall be taken for record on any hygrometer within 15 minutes of the removal of water in the reservoir.

33. **Hot 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 provision shall apply :

(a) The diameter of such pipes shall not exceed 50 millimetres and in the case of pipes installed after 1st day of January, 1979 the diameter shall not exceed 25 millimetres.

(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 12.50 millimetres in thickness;

(d) No uncovered jet from such pipe shall project more than 11.5 centimetres beyond the outer surface of any cover;

(e) The steam pressure shall be as low as practicable and shall not exceed 5 kilogram per square centimetres; and

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

COMMENTS

Rules 23 to 33 have been framed under Section 15 of the Factories Act.

34. **Lighting Application and commencement**—Subject as in these Rules provided, Rules 34 to 38 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 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.

35. **Lighting of interior parts**—(1) The general illumination over those interior parts of a factory or where persons are regularly employed shall not be less than 65 lux measured in the horizontal plane at a level of 90 centimetres.

Provided that in any such parts in which the mounting height of the light source for general illumination necessarily exceeds 7.6 meters measured from the floor or where the structure off the room or the position or construction of the fixed machinery or plant prevents the uniform attainment of this standard, the general illumination at the said level shall be not be less than 22 lux and where work is actually being done the illumination shall be not less than 65 lux.

(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 suitable for the nature of the work.

(3) The standard specified in this rules 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.

36. **Prevention of glare**—(1) Where any source of artificial light in the factory is less than 4.9 meters above floor level, no part of the light source or of the light fitting having a brightness greater than 1.55 candles per square centimetres (4.87 lamborts) shall be visible to persons whilst normally employed within 30 meters of the source, except where the angle of elevation from the eye to the source or part of the fitting, as the case may be, exceeds 20 degrees.

(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 operative working near each other, shall be provided with a suitable shade of opaque material to prevent glare or with other effective means 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 part no such person is exposed to glare there from.

37. **Powers of Chief Inspector to exempt**—Where the Chief Inspector is satisfied in respect of any particular factory or part thereof or in respect of any description of work-room or process that any requirement of Rules 34 to 36 is inappropriate or is not reasonably practicable, he may, by order in writing, exempt the factory or part thereof, or description of work-room or process from such requirement to such extent and subject to such conditions as he may specify.

38. **Exemption from Rule 35**—(1) Nothing in Rule 35 shall apply to the parts of factories specified in Part 1 of the Schedule annexed hereto.

(2) Nothing in sub-rule (1) of Rule 35 shall apply to the factories or parts of factories respectively specified in Part II of the said Schedule.

SCHEDULE

PART I

Parts of factories in which light sensitive photographic materials are made or used in an exposed condition.

PART II

1. Cement works.
2. Works for the crushing and grinding of line-stone.
3. Gas works.
4. Coke oven works.
5. Electrical stations.
6. Flour Mills
7. Malting and breweries.
8. Parts of factories in which the following processes are carried on:
   (a) Concrete or artificial stone making.
   (b) Conversion or iron into steel.
   (c) Smelting of iron ore.
   (d) Iron or steel rolling.
   (e) Hot rolling or forging, tampering or annealing of metals.
   (f) Glass blowing and other working in molten glass.
   (g) Tar distilling.
   (h) Petroleum refining and blending.

COMMENTS

Rules 34 to 38 have been prescribed under Section 17 (4) of the factories Act.

39. **Quantity of drinking water**—The quantity of drinking water to be provided for the workers in every factory shall be at least 5 litres per worker employed in the factory and such drinking water shall be readily available at all times during working hours.

40. **Source of supply**—The water provided for drinking shall be supplied—
(a) From a public water supply system; or
(b) From any other source approved in writing by the Health Officer.

41. **Means of supply**—If drinking water is not supplied directly from taps either connected with public water supply system or any other water supply system of the factory approved by the Health Officer, it shall be kept in suitable vessels, respectable or thinks fitted with taps and having dust proof covers and placed on raised stands or platforms in shade and having suitable arrangement of drainage to carry away the spilt water. Such vessels, receptacles or tanks shall be kept clean and the water renewed at least once every day. All practicable measures shall be taken to ensure that the water is free from contamination.

42. **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 sterilized 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 water therein is filtered and treated to the satisfaction of the Health Officer before it is supplied for consumption.

43. **Report from Health Officer**—The Inspector may, by order in writing, direct the manager to obtain, at such time or at such intervals 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.

44. **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 the 15th April to the 15th September in every year, be cooled by ice or other effective method;

Provided that if ice is placed in the drinking water, 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, lunch-room and rest-room and also at conveniently 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 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 a factory where the number of persons employed exceeds 500 it shall be sufficient if there is one such "centre" as aforesaid for every 150 persons up to the first 500 and one for every 500 persons thereafter;

(e) Every "water centre" shall be maintained in a clean and orderly condition; and

(f) Every water centre shall be in charge of a suitable person who shall distribute the water, and such person should be provided with clean clothes while on duty:

Provided that this requirement shall not apply to any factory in which suitable mechanically operated drinking water refrigerating units are installed to the satisfaction of the Chief Inspector.

COMMENTS

Rules 39 to 44 have been framed under sub-section (4) of Section 18 of the factories Act.

45. **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 every 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 10 thereafter.

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.

46. **Latrines to conform to Public requirement**—Latrine, other than those connected with an efficient water-borne sewage system; shall comply with the requirements of the Public Health Authorities.

47. **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.

48. **Sign-boards to be displayed**—Where workers of both sexes are employed, there shall be displayed outside each latrine block a notice “For men Only” or “For women Only” as the case may be, in the language understood by majority of the workers. The notice shall also bear the figure of a man or woman, as the case may be.

49. **Urinal accommodation**—Urinal accommodation shall be provided for the use of male workers and there shall be at least one urinal of not less than 60 centimetres 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.

In calculating the urinal accommodation required under this rule any old number of workers less than 50 or 100, as the case may be, shall be reckoned as 50 or 100.

50. **Urinals to conform to public health requirements**—Urinals, other than those connected with an efficient water-borne sewage system and urinals in a factory wherein more than two hundred and fifty workers are ordinarily employed shall comply with the requirements of the Public Health Authorities.

51. **Certain latrines and urinals to be connected to sewage system**—When any general system of underground sewage with an assured water supply for any particular locality is provided in a municipality, all latrines and urinals of a factory situated in such locality shall, if the factory is situated within 30 meters of an existing sewer, be connected with that sewerage system.

52. **White-washing, colour-washing of latrines and urinals**—The walls, ceilings and portions of every latrine and urinal shall be white-washed or colour washed and the white-washing or colour-washing shall be repeated at least once in every period of four months. The dates on which the white-washing or colour-washing is carried out shall be entered in the prescribed Register (Form No. 7):

    Provided 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 detergent and disinfectants at least once in every period of four months.

53. **Construction and maintenance of drains**—All drains carrying waste or sullage shall be constructed in masonry or other impermeable material and shall be regularly flushed and the effluent disposed of by connecting such drains with a suitable drainage line:

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

54. **Water taps in latrines**—(1) Where piped water supply is available a sufficient number of water taps, conveniently assessable 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.

COMMENTS

See Section 19 (13) of the factories Act.

55. **Number and location of spittoons**—The number and location of spittoons to be provided shall be to the satisfaction of the Inspector.

56. **Type of spittoons**—The spittoons shall be of any 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 layer of bleaching powder;

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

57. **Cleaning of spittoons**—The spittoons mentioned in Clause (a) of Rule 56 shall be emptied, cleaned and disinfected at least once every day and the spittoons mentioned in Clause (b) of Rule 56 shall be cleaned by scrapping out the top layer of sand as often as necessary or at least once every day.

COMMENTS

Rules 55 to 57 have been framed under Section 20 (2) of the factories Act.

CHAPTER IV
SAFETY

58. Further safety precautions—Without prejudice to the provisions of sub-section (1) of Section 21 in regard to the fencing of machines, the further precautions specified in the Schedules annexed hereto shall apply to the machines noted in each Schedule.

COMMENTS

This rule has been prescribed under Section 21 of the Factories Act.

SCHEDULE I

Cotton textiles

1. *Cotton Openers, Scutchers, Combined Openers and Scutchers, Scutchers-Lap Machines, Hard Waste Breakers, etc*—(1) All Cotton Openers, Scutchers, Combined Openers and Scutchers, Scutchers-Lap Machines, Hard Waste Breakers are similar machines shall be driven by separate motors or from counter-shafts provided with fast and loose pulleys and efficient belt shifting devices.

   (2) In all Openers, Combined Openers and Scutchers, Scutchers-Lap Machines, Hard Waste Breakers and similar machines, the beater covers and doors, which give access to any dangerous part of the machine shall be fitted with effective interlocking arrangements which shall prevent—

   (a) The covers and doors being opened while the machine is in motion; and
   (b) The machine being re-started until the covers and doors are closed;

   Provided that in respect of doors or openings other than dirt doors or desk doors, such openings shall be so fenced as to prevent access to any dangerous parts of the machine if effective interlocking arrangement is not provided.

   (3) In all Openers, Combined Openers and Scutchers, Scutchers-Lap Machines, Hard Waste Breakers and similar machines, the openings giving access to the dust chamber shall be provided with permanently fixed fencing, which shall, while admitting light, yet prevent contact between any problem of a worker's body and the beater grid bars.

2. *Combined Openers and Scutcher, Scutcher-lap, Silver, Machines, Derby Doublers and Ribbon Machines*—(1) The lap forming rollers shall be fitted with a guard or cover which shall prevent access to the intake of the lap roller and fluted roller as long as the weighed rack is down.

   (2) The guard or cover shall be so locked that it cannot be raised until the machine is stopped and the machine cannot be started until the guard or cover is closed.

3. *Carding Machines*—All cylinder doors shall be secured by an automatic locking device which shall prevent the door being opened until the cylinder has ceased to revolve and shall render it impossible to re-start the machine until the door has been closed:

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

Provided further that stripping or grinding operations shall be carried out only by specially trained adult workers wearing light fitting clothing whose names have been recorded in the register prescribed in sub-section (1) of Section 22.

4. *Speed Frames*—Headstocks shall be fitted with automatic locking arrangement which shall prevent the doors giving access to jack box wheels being opened whole the machinery is in motion and shall render it impossible to re-start the machine until the doors have been closed.

5. *Self-acting Mules*—The drive shall be from counter-shaft which shall be provided with fast and loose pulleys and efficient belt shifting devices.

6. *Calendaring Machines, etc*—In respect of calendaring machines, mangles and similar machines, all such machines shall be provided with an efficient "nip" guard along the whole length on the intake side of each pair of bowls and similar parts, which shall be so fitted and maintained whilst the rollers or bowls are in motion, as to prevent access to the point of contact of the roller or bowls.

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 unclimable 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

Wood-working Machinery

1. *Definitions*—For the purposes of this Schedule—
   (a) "*Wood-working machine*" means a circular saw, band saw, planning machine, chain mortising machine or vertical spindle moulding machine operating on wood or cork;
   (b) "*Circular saw*" means a circular saw working in a bench (including a rack bench) but does not include a pendulum or similar saw which is moved towards the wood for the purpose of cutting operation;
   (c) "*Band saw*" means a band saw, the cutting portion of which runs in a vertical direction but does not include a log saw or band re-sawing machine; and
   (d) "*Planning machine*" means a machine for overhand planning or for thicknessing or for both operations.

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

3. *Space around machine*—The space surrounding every wood-working machine in motion shall be kept free from obstruction.

4. *Floor*—The floor surrounding every wood-working machine shall be maintained in good and level condition, and 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 wood-working machine unless he has been sufficiently trained to work that class of 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 wood-working machine shall be fully and carefully instructed as to the dangers of the machine and the precaution 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 riving 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 not exceeding the radius of the largest saw used on the 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 millimetres; and

iii) For a saw of a diameter of less than 60 centimetres the knife shall extend upwards from the bench table to within 25 millimetres of the top of the saw, and for a saw of a diameter of 60 millimetres or over shall extend upwards from the bench table to a height of at least 23 centimetres;

(b) The top of the saw shall be covered by a strong and easily adjustable guard, with a flange at the side of the saw farthest from the fence. The guard shall be kept so adjusted that the said flange shall extend below the roots of the teeth of the saw. The guard shall extend from the top of the riving knife to a point as low as practicable at the cutting edge of the saw; and

(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 plate shall not be more than 15 centimetres apart, and shall extend from the axis of the saw outwards to a distance of not less than 5 centimetres beyond the teeth of the saw. Metal plates, if not headed, shall be of a thickness of at least 1.25 millimetres or if beaded be of a thickness of at least .67 millimetres.

7. *Push Stick*—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 Saw*—Every band saw shall be guarded as follows:
   a) Both sides of the bottom pulley shall be completely incased by the 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; and
   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 overhead planning shall be provided with a "Bridge' guard capable of covering the full length and breadth of the cutting slot in the bench, and so constructed as to be easily adjusted both in a vertical and horizontal direction.
   (3) The feed roller of every planning machine used for thicknessing, except the combined machine for overhead 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 a vertical spindle moulding machine shall, if practicable, be held in a jig or holder of such construction as to reduce as far as possible the risk of accident to the worker.

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 is in motion, and

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

13. *Exemption*—Paragraph 6, 8, 9 and 10 shall not apply to any wood-working 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 the Schedule.

SCHEDULE IV
Rubber Mills

1. *Installation of machines*—Mills for breaking down, cracking, granting mixing, refining and warming rubber or rubber compounds shall be so installed that the top of the front roll is not less than 105 centimetres above the floor of working level;

Provided that in existing installations where the top of the front roll is below this height a strong rigid distance bar guard 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; or
   (b) Horizontal safety-trip 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 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 175 centimetres above the floor of working level.

   (3) Safety-trip rods or tight-wire cables on rubber mills shall be examined and tested daily in 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 centrifugal machines 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 of the lid shall be such that not access is possible to the drum and 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 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 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 manufacturer's 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 paragraph 3, paragraphs 4 and 5 shall not apply in case of top lung machines or similar machines used in the sugar manufacturing industry.

59. **Register of workers employed for work on or near machinery in motion**—In every factory a register shall be maintained in Form No. 9 in which the name and other particulars of every such workers as may be employed for such examination or operation a referred to in the provision to sub-section (1) of Section 21 shall be entered.

COMMENTS

This rule has been prescribed under Section 22 (1) of the Factories Act.

60. **Employment of young person on dangerous machines**—The machines specified in Sections 28, 29 and 30 and the machines mentioned below shall be deemed to be of such dangerous character that young person shall not work at them unless the provisions of sub-section (1) of Section 23 are complied with:
    (a) Power passes other than hydraulic presses;
    (b) Melting machines used in the metal trades;
    (c) Circular saws;
    (d) Platen printing machines;
    (e) Guillotine machines.

COMMENTS

This rule has been framed under Section 23 (2) of the Factories Act.

61. Hoists and lifts—(1) A register shall be maintained to record particulars of examinations of hoists and lifts and shall give particulars as shown in Form No. 10:

(2) In pursuance of the provisions of sub-section (4) of Section 28, in respect of any class or description of hoist or lift specified in the first column of the following Schedule, the requirements of Section 28 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

Class or description of hoist or lift	Requirements which shall not apply :
Hoists or lifts mainly used for raising materials or charging last furnaces of lime kilns	Sub-section (1) (b) in so far as it requires a gate at the bottom landing; sub-section (1) (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 hoistway or liftway 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) (c).

COMMENTS

This rule has been framed under Section 23 (2) of the Factories Act.

62. **Lifting machines, chains, ropes and lifting tackles**—(1) No lifting machine and no chain, rope or lifting tackle except a 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 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) Every jib-crane so constructed that the safe working load may be varied by the raising or lowering of the jib, shall have attached thereto either an automatic indicator or 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.

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

Provided that this sub-rule shall not apply in respect of such lifting tackle if the safe workings load thereof, or in the case of multiple slings, the safe working load at different angles of the legs is plainly marked upon it.

(4) The register to be maintained under Clause (a) (iii) of sub-section (1) of Section 29 of the Act shall contain the following particulars and shall be kept readily available for inspection:\

(a) Name of occupier of factory;
(b) Address of the factory;
(c) Distinguishing number or mark, if any, and description sufficient to identify the lifting machine, chain, rope or the lifting tackle.
(d) Date when the lifting machine, chain, rope or lifting tackle was first taken into use in the factory:
(e) Date and number of the certificate relating to any test and examination made under sub-rules (1) and (9) together with the name and address of the person who issued the certificate;
(f) Date of each periodical thorough examination made under Clause (a) (iii) of sub-section (1) of Section 29 of the Act and sub-rule (8) and by whom it was carried out;
(g) Date of annealing or other heat treatment of the chain and other lifting tackle made under sub-rule (7) and by whom it was carried out;
(h) Particular 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.

(5) All rails on which a 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.

(6) To provide access to rail tracks of overhead travelling cranes suitable passage-ways of a least 50 centimetres width the boards and double hand rails 90 centimetres high shall be provide alongside, and clear of, the rail tracks of overhead travelling cranes, such that no moving part of the crane can strike persons on the ways, and the passage-ways shall be at, lower than the crane track itself. Safe access ladders shall be provided at suitable intervals to afford access to these passage-ways, and from passage-ways to the rail tracks:

Provided that the Chief Inspector may, for reasons to be specified in writing, exempt any factory in respect of any overhead travelling crane from the operation f any provision of this sub-rule subject to such conditions as he may specify.

(7) All chains and lifting tackle, except a rope sling shall, unless they have been subjected to such other heat treatment as may be approved by the Chief Inspector of Factories, be effectively annealed under the supervision of a competent person at the following intervals:

(a) All chains, slings, rings, hooks, shackles and swivels used in connection with molten metal or molten slag or when they are made of 12.5 millimetres bar or smaller, once at least in every six months;
(b) All other chains, rings, hooks, shackles and swivels in general use once at least in every twelve months:

Provided that chains and lifting tackle not in frequent use shall, subject to the Chief Inspector's approval, be annealed only when necessary. Particulars of such annealing shall be entered in a register prescribed under sub-rule (4).

(8) Nothing in the foregoing sub-rule (7) shall apply to the following classes of chains and lifting tackles:

(a) Chains made of malleable cast iron;
(b) Plate link chains;
(c) Chains, rings, hooks, shackles and swivels made of steel or of any non-ferrous metal;
(d) Pitched chains, working on sprockets or pocketed wheels;
(e) Hooks an swivels having screw threaded parts or ball bearing or other case hardened parts;
(f) Rings, hooks, shackles and swivels permanently attached to pitched chains, pulleys blocks or weighing machines;
(g) Sockets, shackles secured to wire ropes by white-metal capping;
(h) Bordeaux connections;

Provided that such chains and lifting tackles shall be thoroughly examined by a competent person once at least in every twelve months and particulars entered in the register kept in accordance with sub-rule (4).

(9) All lifting machines, ropes, chains and lifting tackles, except at fibre rope slings, which have been lengthened, altered or repaired by welding or otherwise shall, before being again taken into use, be adequately re-tested 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 (4).

(10) 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.

(11) Where the Chief Inspector of Factories is satisfied that in a factory due to shut down or for any other reasons it is not practicable to maintain a minimum distance of 6 meters 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 extent as he may consider necessary and also prescribe further precaution indicating appointment of suitable number of supervisors to ensure the safety of the persons while they employed or working on or near the track.

COMMENTS

This rule has been framed as provided in Section 29 of the Factories Act.

63. **Pressure vessels or plant**—(1) Interpretation—In this rule—

(a) "*Design pressure*" means the maximum pressure that a pressure vessel or plant is designed to withstand safety when operating normally;

(b) "*maximum permissible working pressure*" means the maximum pressure at which a pressure vessel or plant is permitted to be operated or used under this rule and is determined by the technical requirements of the process;

(c) "*Plant*" means a system of piping that is connected to a pressure vessel and is used to contain a gas vapour of liquid under pressure greater than the atmospheric pressure and includes the pressure vessels;

(d) "*Pressure vessel*" means a 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 includes any pipeline fitting or other equipment attached thereto or used in connection therewith; and

(e) "*Competent person*" means a person who is, in the opinion of the Chief Inspector, capable by virtue of his qualification, training and experience of conducting a thorough examination and pressure tests required on a pressure vessel or plant, and of making a full report on its conditions.

(2) *Exceptions*—Nothing in this rule shall apply to—

(a) Vessels having internal diameter not exceeding 150 millimetres and a capacity not exceeding 142 litres;

(b) Vessels made of ferrous materials having an internal operating pressure not exceeding 1 Kilogram per square centimetre;

(c) Steam boiler, steam and feed pipes and their fitting coming under the purview of Indian Boilers Act, 1923;

(d) Metal bottles or cylinders used for storage or transport of compresses gases or liquefied or dissolved gases under pressure covered by the Gas Cylinder Rules, 1949 framed under the Indian Explosives Act, 1884;

(e) Vessels in which internal pressure is due solely to the static head of liquid;

(f) Vessels with a nominal water capacity not exceeding 500 litres connected in a water pumping system containing air that is compressed to serve as a cushion;

(g) Vessels for nuclear energy application;

(h) Refrigeration plant having a capacity of 3 tons or less of refrigeration in 24 hours; and

(i) Working cylinders of steam engines or prime movers, feed pumps and steam traps, turbine casting, compressor cylinders, steam separators or dryers, steam strainer, steam de-super heaters, oil separators, air receivers for fire sprinkler installation; air receivers of monotype machines; provided the maximum working pressure of the air receiver does to exceed 1.33 Kilograms per square centimetres and the capacity 85 litre, air receivers of electrical circuit breakers; air receivers of electrical relays; air vessels on pumps, pipe coils, accessories of instruments and appliances such as cylinders and piston assemblies used for operating relays and interlocking type of guards, vessels with liquids subjected to static head only; and hydraulically operating cylinders other than any cylinder communicating with an air loaded accumulator.

(3) *Design and construction*—Every pressure vessel or plant used in a factory—

(a) Shall be properly designed on sound engineering practice;

(b) Shall be of god construction, sound materials, adequate strength and free from any patent defects; and

(c) Shall be properly maintained in a safe condition:

Provided that the pressure vessel or plant in respect of the design and construction of which there is an Indian standard or 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) *Safety devices*—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 5 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 at test pressure gauge for checking the accuracy of the pressure gauge referred to in Clause (b) of this sub-rule;

(d) A suitable stop valves or valve by which the pressure vessel may be isolated from the other pressure vessels or plant or source of supply of pressure. Such a stop valve or valves shall be located as close to the pressure vessels as possible and shall be easily accessible; and

(e) A suitable drain cock or valve at the lowest part of the pressure vessel for the discharge of the liquid or other substances that may collect in the pressure vessel:

Provided that it shall be sufficient for the purpose of this sub-rule if the safety valve or pressure relieving device, the pressure gauge and the stop valve are mounted on a pipeline immediately adjacent to the pressure vessel and where there is a range of two or more similar pressure vessels served by the same pressure 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) *Pressure reducing device*—(a) Every pressure vessel which is designed for a working pressure less than the pressure at the source of supply, or less than the pressure which can be obtained in the pipe connecting the pressure 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.

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

(6) *Pressure vessel or plant being taken into use*—(a) 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 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, however, that the pressure vessel or plant which is so designed and constructed that it cannot be safely filled with 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.

Design pressure shall be not less than the maximum permissible working pressure and shall take into account the possible fluctuation of pressure during actual operation.

(b) No pressure vessel or plant shall be used in a factory unless there has been obtained from the maker of the pressure vessel 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 firings (if any) have been subjected, and every pressure vessel or plant so used on a factory shall be marked so as to enable it to be identified as to be the pressure vessel or plant to which the certificate relates and the certificate shall be kept available for perusal by the Inspector.

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

(7) *In-service test and examination*—(a) Every pressure vessel or plant in service shall be thoroughly examined by a competent person—

i) Externally, once in every period of six months;

ii) Internally, once in every period of twelve months;

Provided that if by reason of the construction of pressure vessel or plant a thorough internal examination is not possible this examination may be replaced by hydrostatic test which shall be carried out once in every period of two years:

Provided further 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

iii) Hydrostatically tested once in every period of four years:

Provided that in respect of a 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 through external examination of any pressure vessel or plant every six months as required in sub-clause (i) of this clause, or if owing to its construction and use a pressure vessel or plant cannot be hydrostatically tested as required in sub-clauses (ii) and (iii) of this clause, 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 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.

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

(8) *Thin walled pressure vessel or plant*—(a) In respect of any pressure vessel or plant of thin walls such as sizing cylinder made of copper or any other non-ferrous metal, the maximum permissible working pressure shall be reduced at the rate of 5 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.

(b) If any information as to the date of construction, thickness of walls or maximum permissible working pressure is not available, the age of such pressure vessel or plant shall be determined by the competent person in consultation with the Chief Inspector from the other particular available with the manager.

(c) 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 times its maximum permissible working pressure.

(9) *Report by competent person*—(a) 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.

(b) A report of every examination or test carried our shall be completed in Form No. 11 and 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.

(c) Where the report of any examination under this rule specified any conditions for securing the safe working of any pressure vessel or plant the pressure vessel or plant shall not be used unless the specified condition is fulfilled.

(d) The competent person making report of any examination under this rule shall, within seven days of the completion of the examination, send to the Inspector a copy of the report in every case where the maximum permissible working pressure is reduced or the examination shows that the pressure vessel or plant or any part thereof cannot continue to be used with safety unless certain repairs are carried out or unless any other safety measure is taken.

(10) *Application of other laws*—(a) The requirements of this rule shall be in addition to and without any prejudice to and not in derogation of the requirements of any other law in force

(b) Certificates or reports of any examination or test of any pressure vessel or plant to which sub-rules (7) to (9) do not apply, conducted or required to be conducted under any 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.

64. **Water-sealed gasholder**—(1) The expression "Gasholder" means a water-sealed gasholder which has a storage capacity of not less than 141.5 cubic meters.

(2) Every gasholder shall be of adequate material and strength, sound construction and properly maintained.

(3) Where there is more than one gasholder in a factory, every gasholder shall be marked in a conspicuous position with a distinguishing number or 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 once in 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 examination raises 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, experience knowledge of the necessary precautions against risks of explosion and of persons being overcome by gas is competent to supervise such work.

(8) (a) All sample discs cut under sub-rule (5) above shall be kept readily available for inspection.

(b) A permanent register in Form No. 12 duly signed by the occupier or manager shall be maintained.

(c) The results of examinations by the competent person carried out as required under sub-rules (4) and (5) shall be recorded in Form No. 13.

(d) A copy of the report in Form No, 13 shall be kept in the register in Form No. 12 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.

COMMENTS

Rules 63 and 64 have been prescribed under Section 31 (2) of the Factories Act.

65. **Excessive weights**—(1) No woman or young person shall, unaided by another person, lift, carry or move by hand or on head, any material, article, tool or appliance exceeding the maximum limit in weight set out in the following Schedule:

SCHEDUE

Persons		Maximum weight of material, article, tool or appliance
(a) Adult female	.....	30 Kilograms
(b) Adolecent male	.....	30 Kilograms
(c) Adolecent female	.....	20 Kilograms
(d) Male child	.....	16 Kilograms
(e) Female child	.....	14 Kilograms

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

COMMENTS

This rule has been prescribed under Section 34 (2) of the Factories Act.

66. **Protection of eyes**—Effective screens or suitable goggles shall be provided for the protection of persons employed in or in the immediately 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 or 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 or infra-red or ultra radiations.

SCHEDULE

1. Breaking, cutting, dressing or carving of bricks, stone concrete slag or similar materials by means of a hammer, chisel, pick or similar hand tool, or by means of portable tool driven mechanical power, and the dry grinding of surfaces of any such material by means of wheel or disc driven by mechanical power where in 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. 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. Dividing 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. 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. Welding and cutting of metals by means of an electric, oxyacytylene or similar process.
7. Hot fettling of steel casting by means of a flux-injected nburner or air torch, and de-seaming of metal.
8. Fettling of metal castings involving the removal of metal including runners, gates and rises; and removal of any other material during the course of such fettling.

9. Chipping of metal, and chipping, knocking out, cutting out or cutting off of cold rivets, bolts, nuts, lugs, pins, collar 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.
10. Chipping or scurfing of paint, scale slag, rust or other corrosion from the surface of metal and other hard materials by means of a hand tool or by a portable tool driven by mechanical power.
11. Breaking of scrap metal by means of a hammer or by means of a tool driven by mechanical power.
12. 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 eye from molten metal.
15. Pouring or skimming of molten metal.
16. Work involving risk to the eyes from not sand being thrown off.
17. Turning or dressing of an abrasive wheel.
18. Handling in open vessels or manipulation of strong acids or dangerous corrosive liquids or materials, and 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 of injury.
19. Any other process wherein there is a risk of injury to eyes from particles or fragments thrown off during the course of the process.

SCHEDULE II

1. 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 infra-red radiations.
3. Processes such as rolling, casting or foregoing of metals, where there is risk of exposure to excessive light or infra-red radiations.
4. Any other process wherein there is a risk of injury to eyes from exposure to excessive light or infra-red or ultra-violet radiations.

COMMENTS

This rule has been prescribed under Section 35 of the Factories Act.

67. **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 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 a rectangular or oval shape, be not less than 40 centimetres long and 30 centimetres wide; and

(b) In the case of a circular shape, be not less than 40 centimetres in diameter.

COMMENTS

This rule has been framed as provided under sub-section (6) of Section 36 of the Factories Act.

68. **Exemptions**—The requirements of sub-section (4) of Section 37 shall not apply to the following processes carries on in any factory.

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

i) The gas-holder shall contain only the following gases, separately or mixed at a pressure, greater than atmospheric pressure, namely, town gas, coke-oven gas, producer gas, blast furnace gas or gases other than air, used in their manufacture.

Provided that this exemption shall not apply to any gas-holder containing acetylene or mixture of gases to which acetylene has been added intentionally; and

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

(b) The operation 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 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 manufacture.

ii. The main or service 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 operation shall be free from any inflammable or explosive gas or vapour;

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

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

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

i. The only oil contained in the tank shall have a flash point of not less than 5.5 degrees centigrade (closed test) and a certificate to this effect shall be obtained from a competent analyst;

ii. The analyst's certificate shall be kept avible for inspection by an Inspector, or by any person employed or working on the ship;

iii. The welding operation shall be carried out only on the exterior surface of the tank at a place—(a) which is free from oil or oil leakage in inflammable quantities; and (b) which is not less than 30 centimetres below the nearest part of the surface of the oil within the tank; and

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

COMMENTS

This rule has been framed as provided under sub-section (5) of Section 37 of the Factories Act.

69. **Means of escape in case of fire**—(1) Every factory shall be provided with adequate means of escape in case of fire for the persons employed therein, and without prejudice to the generality of the foregoing—

(a) Each room of factory building shall, in relation to its size and the number of persons employed in it, be provided with an adequate number of exits for use in case of fire though not necessarily confined to such use, so positioned that each person will have a reasonably free and unobstructed passage from his work place to an exits;

(b) No exit intended for use in case of fire shall be less than 90 centimetres in width nor less than two metres in height;

(c) In the case of a factory building or part of a factory building of more than one storey and in which not less than twenty persons work at any one time, there shall be provided at least one substantial stairway permanently constructed either inside or outside the building and which affords direct and unimpeded access to ground level;

(d) In the case of a factory building or part of a factory building in which twenty or more persons work at any one time above the level of the ground floor, and wherein explosive or highly inflammable materials are used or stored, or which is situated below ground level, the means of escape shall include at least two separate and substantial stairways permanently constructed either inside or outside the building and which afford direct and unimpeded access to ground level; and

(e) I very stairway in a factory which affords a means of escape in case of fire shall be provided with a substantial hand-rail which if the stairway has an open side shall be on that side, and if the stairway has two sides, such handrail shall be provided on both sides.

(2) In the case of a building constructed or converted for use as a factory after the date of the passing of the Act, the following additional requirements shall apply:

(a) At least one of the stairways provided and shall be of fire-resisting materials;

(b) Every hoist-way or lift-way inside a factory building shall be completely enclosed with fire-resistance materials and all means of access to the hoist or lift shall be fitted with doors of fire-resisting materials;

Provided that any such hoist-way or lift-way shall be enclosed only at the top by some materials easily broken by fire or be provided with a vent at the top;

(c) No fire escape stair shall be constructed at an angle greater than 45^0 from the horizontal;

(d) No part of a factory building shall be farther (along the line of travel) than 45 metres from any fire escape stair; and

(e) No stairway shall be less than 115 centimetres in width.

COMMENTS

This rule has been prescribed under Section 38 (1) of the Factories Act.

70. **Fire fighting apparatus and water supply**—(1) (a) In every factory there shall be provided and maintained adequate first-aid fire fighting equipment for fighting fire in the early stages. The types and scale of equipment to be provided and the manner of testing, installation, inspection and maintenance of these equipments shall conform to the Indian Standard I.S.: 2190-1971.

(b) For the purpose of this rule, wherever the Indian Standard referred to in Clause (a) mentions that the requirements concerning the scale of first-aid fighting appliance and other relevant matters are to be determined by the Inspecting Authority having jurisdiction, such inspecting authority shall be officers appointed under Section 8 of the Act:

Provided that if the Chief Inspector is of the opinion that other suitable fire fighting arrangements which have been provided in the factory building or room satisfies partly or fully the purpose of this sub-rule, he may by an order in writing, grant exemption (which he may at his discretion revoke) specifying the extent to which the requirements in this sub-rule are relaxed in respect of the building or room.

(2) 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 formula A+B+C+D divided by 1000, is 5.0 litre 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 meters of all floors including galleries in all buildings of the factory;

B = the total area in square meters of all floors and galleries including open spaces in which combustible materials are handled or stored;

C = the total area in square meters of all floors over 15 meters above ground level; and

D = the total area in square meters of all floors of all buildings other than those of fire resisting construction:

Provided that in areas where the fire risk involved does not require use of water such areas under B, C or D may, for the purpose of calculation, be 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 per cent but no account shall be taken of this reduction in calculating water supply required under sub-rule (7).

(3) Each trailer pump shall be provided with equipment as per Schedule A. Such equipment shall conform to Indian Standard specification whether they exist.

(4) Trailer pumps shall be housed in separate shed/sheds which shall be sited close to a principal source of water supply in the vicinity of the main risk of the factory.

(5) In factories where the area is such as cannot be reached by manhauling of trailer pumps within reasonable time, vehicles with towing attachment shall be provided at the scale of one every four trailer pumps with a minimum of one such vehicle kept available a tall time.

(6) Water supply shall be provided to gibe flow of water as required under sub-rule (2) for at least 100 minutes. At least 50 per cent of this water supply or 4,50,000 litres whichever is less, shall be in the form of static tanks of adequate capacities (not less than 450,000 litres each) distributed round the factory with due regard to potential fire risks in the factory. Where piped supply is provided, the size of the main shall not be less than 10 centimetres' diameter and it shall be capable of supplying a minimum of 4,500 litres per minute at a pressure of not less than 0.7 Kilogram per square centimetre.

(7) Each factory shall detail a trained officer who shall be responsible for the proper maintenance and upkeep of all fire-fighting equipments.

(8) If the Chief Inspector is satisfied in respect of any factory or any part of the factory that owing to the exceptional circumstances such as in adequacy of water supply or in frequency of the manufacturing process or for any other reason, to be recorded in writing, all or any of the requirements of the rules are impracticable or not necessary for the protection of workers, he may by order in writing (which he may at his discretion revoke), exempt such factory or part of that factory from all or any of the provisions of the rules subject to conditions as he may by such order prescribe.

SCAHEDULE A

For light Trailer pumps (680litres/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 lined 70 m.m. delivery of 25 meters length hose complete with quick-release couplings.
1 Diving Breaching piece.
2 Branch pipes with 15 m.m. nozzles.
1 Diffuser Nozzle.
1 Standpipe with blank cap.

1 Hydrant-key.
4 Collapsible canvas buckets.
1 Fire hook (peventer) with cutting edge.
1 25 m.m. manila rope of 30 meters length.
1 Extension ladder of 9 meters length (where necessary).
1 Heavy axe.
1 Spade
1 Pick axe.
1 Crowbar.
1 Saw
1 Hurricane lamp.
1 Electric Torch.
1 Pair Rubber Gloves.

For large trailer pump (1800 litres/minutes)

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 m.m. delivery of 25 meters length complete with quick-release couplings.
1 Diving breaching piece.
1 Collecting breaching-piece.
4 Breach pipes with one 25 m.m. two 20 m.m. and one diffuser nozzle.
2 Standpipes with blank caps.
2 Hydrant-key.
4 Collapsible canvas buckets.
1 Ceiling hook (peventer) with cutting edge.
1 50 m.m. manila rope of 30 meters length.
1 Extension ladder of 9 meters length (where necessary).
1 Pair Rubber Gloves.
1 Heavy axe.
1 Spade
1 Pick axe.
1 Crowbar.
1 Saw
1 Hurricane lamp.
1 Electric Torch.

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.

COMMENTS

This rule has been framed under sub-section (7) of Section 38 and Section 112 of the Factories Act.

71. **Safety Officers**—(1) *Qualifications*—(a) A person shall not be eligible for appointment as a Safety Officer unless he—

i. Possesses—

(aa) a recognised degree 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 2 years; or

(bb) a recognised degree in physics or chemistry and has had practical experience of working in factory in a supervisory capacity for a period of not less than 5 years; or

(cc) 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; or

ii. Possesses a degree or diploma in industrial safety recognised by the State Government in this behalf; and

iii. Has adequate knowledge of the language spoken by majority of the workers in the region in which the factory where he is to be appointed is situated.

(b) Notwithstanding the provisions contained in Clause (a) any person who--

i. 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

ii. Possesses a recognised degree or diploma in engineering or technology and has had experience of not less than 5 years' full time, on training education, consultancy, or research in the field of accidents' prevention in industry or in any institution;

Shall also be eligible for appointment as a Safety Officer:

Provided that the Chief Inspector may, subject to such conditions as he may specify, grant exemption from the requirements of this sub-rule, if in his opinion, a suitable person possessing the necessary qualifications and experience is not available for appointment;

Provided further that, in the case of a person who has been working as a Safety Officer for a period of not less than 3 years on the date of commencement of this rule, the Chief Inspector may, subject to such condition as he may specify, relax all or any of the above said qualifications

(2) *Conditions of service*—(a) Where the number of Safety Officers to be appointed in a factory as required by a notification in the official Gazette exceeds one, one of them shall be designated as the Chief Safety Officer and shall have a status higher than that of the others. The Chief Safety Officer shall be in overall charge of the safety functions as envisaged in sub-rule (3) and other Safety Officers working under his control.

(b) The Chief Safety Officer or the Safety Officers in the case of factories where only one Safety Officer is required to be appointed shall be given the status of a senior executive and he shall work directly under the control of the chief executive of the factory. All other Safety Officers shall be given appropriate status to enable them to discharge their functions effectively.

(c) The scale of pay and the 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) In the case of dismissal or discharge, a Safety Officer shall have a right to appeal to the State Government whose decision therein shall be final.

(3) *Duties of Safety Officers*—(a) The duties of the Safety Officer 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 aspects 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 purchasing and stores departments in ensuring high quality and availability of personal protective equipment;

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

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

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

viii) To investigate selected accidents;

ix) To investigate the cases of industrial disease contracted and dangerous occurrences portable under Rule 117;

x) To advice on the maintenance of such records as are necessary relating to accidents, dangerous occurrence and industrial diseases;

xi) To promote setting up of Safety Committees and act as adviser and catalysts to such Committees;

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

xiii) To design and conduct either independently or in collaboration with the training department, suitable training and educational programme for the prevention of personal injuries.

(4) *Facilities to be provided to Safety Officers*—An occupier of the factory shall provide each Safety Officer with such facilities, equipment and information as are necessary to enable him to discharge his duties effectively.

(5) *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 (3).

COMMENTS

This rule has been prescribed under Section 40-B of the Factories Act.

72. **Buildings and structures**—No building, wall, chimney, bridge, tunnel, road, gallery, stairway, ramp, floor, platform, staging, or other structure whether of a permanent or temporary character, shall be constructed, situated or maintained in any factory in such a manner as to cause risk of bodily injury.

COMMENTS

For this rule and Rules 13 to 16, see Section 41 of the Factories Act.

73. **Machinery and plant**—No machinery, plant or equipment, shall be constructed, situated, operated or maintained in any factory in such a manner as to cause risk of bodily injury.

74. **Methods of work**—No process or work shall be carried on in any factory in such a manner as to cause risk of bodily injury.

75. **Stacking and storing of materials, etc**—No materials or equipment shall be stacked or stored in such a manner as to cause risk of bodily injury.

76. **Use of polymerising machines in the printing departments of cotton textile mills**—(1) The following precautions shall be taken when fabrics are processed in polymerising or curing machine for fixing print by the emulsion technique, namely—

(a) Printed fabrics shall be thoroughly dried by passing then over drying cans or through a hot flue or other equally effective means, before the same are allowed to pass through the polymerising machine;

(b) The exhaust flap or dampers shall be provided with a hole or opening so that at least two-third of it is always open;

(c) Infra-red ray heaters of the machines shall be cut off while running the prints;

(d) The electrical heater shall be connected to a separate circuit and shall be provided with an isolation switch so as to ensure that it is completely cut off in an emergency;

(e) The electrical heater shall be so located that if there is any dropping of the solvent due to condensation, it does not directly come in contact with the heaters;

(f) The drive of the exhaust fan shall be interlocked with the main drive of the machine in such a way that if the exhaust motor stops, the machine including all heating devices shall also stop;

(g) The electrical heater shall have thermostats to regulate the temperature so that the heaters shall automatically cut off, if the temperature rises above the pre-set value;

(h) Adequate flaps shall be provided on top of the machine which can open and let off fumes outside the workroom in case of an explosion or in case any pressure is built up;

(i) Filter gauze shall be cleaned at least once a week;

(j) Exhaust duct shall be cleaned at least once a week; and

(k) Tension of the V-belt drive of the fans shall be checked every week.

(2) The machine shall be examined under the direct supervision of 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 supervise such work.

(3) A register shall be maintained in which the details of the various checks carried under sub-rule (2) shall be entered and every entry made therein shall be signed by the person making the checks.

77. **Shipbuilding and ship-repairing**—(1) *Application*—This rule shall apply as respects work carried out in any of the operation defined in sub-rule (2).

(2) *Definitions*—In this rule unless there are anything repugnant in the subject or context-

(a) "*certificate of entry*" means a certificate which is given by a person who is a competent analyst and who is competent to give such certificate, and that he has in an adequate and suitable manner tested the atmosphere in the oil-tank or oil-tanks specified in the certificate and found that having regard to all the circumstances of the case including the likelihood otherwise of the atmosphere being or becoming dangerous, entry to the oil-tanks without wearing breathing apparatus may in his opinion be permitted;

(b) "*hot work*" means any work which involves—

i. Welding, burning, soldering, brazing, sand blasting or chipping by spark producing tools;

ii. Use of non-flameproof electrical equipment or equipments with internal combustion engines; and includes any other work which is likely to produce sufficient heat, capable lighting, flammable gases or vapours;

(c) "*naked light certificate*" means a certificate which is given by a person who is a competent analyst and who is competent to give such certificates, and certifies that he has in an adequate and suitable manner tested for the presence of flammable vapour the oil-tank compartment, space or other part of the vessel specified in the certificate and found it to be free there from and that having regard to all the circumstances of the case, including the likelihood or otherwise of the atmosphere becoming flammable, the use of naked lights, fires, lamps or heated rivest or any hot work to be carried out may in his opinion be permitted in the oil-tank, compartment, space or other part of the vessel specified in the certificates;

(d) "*oil*" means any liquid which has a flash point below 132 degrees centigrade and also includes lubricating oil, liquid methane, liquid butane and liquid propane.

Explanation—Flash point wherever it occurs in this rule shall be flash point as determined by Abel Closed Cup or Pensky-Marten Closed Cup procedures as described in IS 1448-1960.

(e) "*oil-tank*" means any tank or compartment in which oil is or has been carried;

(f) "*the operations*" means—

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

ii) The scaling scurfing or cleaning of its boilers (including combustion chambers or smoke boxes); and

iii) The cleaning of its bilges or oil-fuel or any of it tanks last used for carrying oil.

For the purpose of this definition the expression "oil" means oil of any description whether or not oil within the meaning of foregoing definition of that expression;

(g) "*ship and vessel*" have the same meanings as in the Merchant Shipping Act, 1958;

(h) "*shipyard*" means any yard or dry dock (including the precincts thereof) in which ships or vessels are constructed, reconstructed, repaired, refitted or finished;

(i) "*stage*" means any temporary platform on or from which persons employed perform work in connection with operations, but does not include a boatswain's chair;

(j) "*staging*" includes any stage, and any upright thwart, thwart pin, wedge, distance dice, belt or other appliance or materials not being part of the structure of the vessel, which is used in connection with the support of any stage, and any guard-rails connected with a stage; and

(k) "*tanker*" means a vessel constructed or adopted for carrying a cargo of oil in bulk.

ACCESS AND STAGING

(3) *General access to vessels in a shipyard*—All main gangways giving general access to a vessel in a shipyard, whether from the ground or from wharf or quay, and all gross gangways leading from such a main gangway on to the vessel, shall--

(a) Be at least 60 centimetres wide;

(b) Be securely protected on each side to a height of at least 90 centimetres by strongly constructed upper and lower handrails and by a secure toe-board projecting at least 15 centimetres above the floor;

(c) Be of good construction, sound materials and adequate strength;

(d) Be stable and, whatever practicable, of permanent construction;

(e) Be kept in position as long as required; and

(f) Maintained in good repair.

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

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

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

i) Where reasonably practicable one or more ship's accommodation ladders; or

ii) One or more soundly constructed gangways or similar construction.

(b) The means so provided shall be not less than 55 centimetres' wide properly secured and fenced throughout on each side to a clear height of 90 centimetres by means of upper and lower rails, taut ropes or chain or by any other safe means, except that in the case of the ship accommodation ladders, such fencing shall be necessary on the one side only, provided where the other side is properly protected by the ship's side.

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

(6) *Access to and from bulwarks*—Where there is a gangway leading on to a bulwark of a vessel there shall be provided—

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

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

(7) *Access to staging, etc*.—(a) Where outside staging is erected in a shipyard, there shall be provided sufficient ladders giving direct access to the stages having regard to the extent of the staging and to the work to be done.

(b) Where a vessel is under construction or reconstruction and workers are liable to go forward craft or athwartship across or along uncovered deck-beams, or across or along floors, sufficient plank shall be provided on those deck-beams or on those floors of the purpose of access to or from places of work, and sufficient and suitable portable ladders shall be provided so as to give access either from the ground or other bottom plating to the top of the floor.

(c) Without prejudice to any other provision in this rule requiring a greater width, no footway or passageway constructed of planks shall be less than 45 centimetres side.

(8*) Ladders*—(a) Subject to Clauses (b) and (c) of this sub-rule, every ladder which affords a means of access, communication or support to a person shall—

i) Be soundly constructed and properly maintained, and

ii) Be of adequate strength for the purpose for which it is used, and

iii) Be securely fixed either—

(aa) as near its upper resting place as possible, or

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

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

(b) Requirements (iii) and (iv) of the preceding clause of this sub-rule shall not apply to fixed ladder of a ship or to a rope ladders. Effective measures by means of roping off or other similar means shall be taken to prevent the use of fixed ladders of a ship which do not comply with requirements (i) and (ii) of that clause.

(c) any worker who removes any ladder and sets it up in a new position shall as regards that ladder, comply with requirement (iii) of Clause (a) of this sub-rule.

(d) Rope ladders shall provide foot-hold of a depth including any space behind the ladder of not less than 12 centimetres and, so far as it reasonably practicable, suitable provision shall be made for preventing such ladders from twisting.

(9) *Lasting of ladders*—(a) A fibre rope, or a rope made with stands consisting of wire cores covered with fibre shall not be used to secure a ladder used for the purpose of the operations.

(b) A wire rope shall not be used to secure any such ladder unless its ends are ferruled, but this provision shall not apply in the case of an end which is so situated or protected that a person using the ladder is not liable to come into contact with it so as to suffer injury.

(10) *Material for staging*—(a) A sufficient supply of sound and substantial material and appliances shall be available in convenient place or places for the construction of staging.

(b) All planks and other materials and appliances intended to be used or re-used for staging shall be carefully examined before being taken into use or re-use in any staging. Every examination required by this clause shall be carried out by a person competent for the purpose.

(11) *Staging, dry dock altars and shoring sills*—(a) All staging and every part thereof shall be of good construction, of suitable and sound material and of adequate strength for the purpose for which it is used and shall be properly maintained and every upright and thwart shall be kept so fixed, secured or placed in position as to prevent, so far as is reasonably practicable, accidental displacement.

(b) All planks forming stages shall be securely fastened to prevent them from slipping unless they extend 45 centimetres or more beyond the inside edge of the thwart or support on which they rest.

(c) All staging used in connection with the operations shall be inspected before use, and thereafter at regular and frequent intervals, by a responsible person.

(d) All dry dock altars and shoring sills on or from which people perform work in connection with the operations shall be of sound construction and properly maintained.

(e) All parts of stages, all parts of footways or passageways constructed of planks, and all parts of dry dock altars or shoring sills, being on or from which persons perform work in connection with the operations, shall so far as is reasonably practicable, be kept clear of all substance likely to make foot-hold or hand-hold insecure.

(12) *Upright use for hoisting block*—(a) If any upright forming parts of staging is used as a fixing for a fully block for hoisting materials—

i) It shall be properly housed in the ground or shall otherwise be adequately secured so as to prevent it from rising; and

ii) It shall be suitably protected against damage by the action the chain or wire or other means of securing the pulley block to the upright.

(b) No upright forming part of staging shall be used as an anchorage for a load pulley block unless the upright is not likely to be displaced by such use.

(13) *Support of stages on planks*—Planks supported on the rungs of ladders shall not be used to support stages.

(14) *Suspended stages*—(a) Stages suspended by ropes or chains shall be secured as far as possible so as to prevent them from swinging.

(b) A fibre rope, or a rope made of strands consisting of wire cores covered with fibre, shall not be used for suspending a stage except that fibre ropes may be used in the case of a stage of which the suspension ropes are received through blocks.

(c) Chains, ropes, blocks and other gear used for the suspension of stages shall be of sound materials, adequate strength and suitable quality, and in good condition.

(d) Appropriate steps shall be taken to prevent ropes or chains used for supporting a stage from coming into contact with sharp edges of any part of a vessel.

(15) *Boatswains' chairs*—(a) Boatswains' chairs and chains, ropes or other gear used for their suspension shall be of sound material, adequate strength and suitable quality and the chains, ropes or other gear shall be securely attached.

(b) Suitable measures shall be taken to prevent where possible the spinning of a boatswains' chair and to prevent any occupant falling there from.

(16) Rising stage—All planks forming a rising at the bow end of a vessel shall be securely fastened to prevent them from slipping.

(17) *Width of staging*—Without prejudice to the other provisions of these sub-rules, all stages shall be of sufficient width as is reasonable in all the circumstances of the case to secure the safety of the persons working thereon.

(18) *Stage from which a person is liable to fall more than 2 metres or into water*—(a) This sub-rule applies to stages from which a person is liable to fall at a distance of more than 2 metres or into water in which there is s risk of drowning.

(b) Every stage to which this sub-rule applies—

i. Shall so far as is reasonably be closely boarded, planked or plated;

ii. Shall be so constructed or placed that a person is not liable to fall as aforesaid through a gap in the staging not being a gap it necessary and not larger than necessary having regard to the nature of the work being carried on; and

iii. Shall be at least 45 centimetres wide.

(c) Every side of a stage to which this sub-rule applies shall--

iii) If it is not a side immediately adjacent to any part of a vessel, be fenced (subject to the provisions of Clauses (d) to (g) of this sub-rule) with a guard rail or guard rails to a height of at least one meter above the stage which rail or rails shall be so placed as to prevent so far as practicable the fall of persons from the stage or from any raised standing place on the stage; or

iv) If it is a side immediately adjacent to any part of a vessel, be placed as near as practicable to that part having regard to the nature of the work being carried on and to the nature of the structure of the vessel.

(d) In the case of stages which are suspended by ropes or chains and which are used solely for painting the fencing required by sub-Clause (i) of the preceding clause may be provided by means of taut guard-rope or taut guard-ropes.

(e) No side of stage or, as the case may be, no part of the side of stages need be fenced in pursuance of Clause (c) (i) of this sub-rule in cases where, and so long as, the nature of the work being carried on, makes the fencing of that side or, as the case may be, that part impracticable.

(f) Guard-rails provided in pursuance of Clause (c) (i) of sub-rule may be removed for the time and to the extent necessary for the access of persons or for the movement of materials, but guard-rails removed for either of these purposes shall be replaced as soon as practicable.

(g) Where it is not reasonably practicable to comply with the provisions of Clause (c) (i) of this sub-rule, workers shall be provided with suitable safety belts equipped with life lines which are secured with a minimum amount of slack to a fixed structure.

(19) *Fencing of dry docks*—(a) Fencing shall be provided at or near the edges of a dry dock at ground level, including edges above flights of steps and chutes for materials. The height of such fencing shall at not point be less than one meter.

(b) Such fencing as aforesaid shall be kept in position save when and to the extent to which its absence is necessary (whether or not for the purposes of the operation) for the access of persons, or for movement of materials or vessels or the traffic or working, or for repairs, but fencing removed for any of these purposes shall be kept readily available and shall be replaced as soon as practicable.

(20) *Protection of openings*—(a) Every side or edge of an opening in a deck or tank top of a vessel being a side or edge which may be a source of danger to the workers, except where and while the opening is securely covered or where the side or edge is protected to a height of not less than 75 centimetres by a coaming or other part of the vessel, be provided with fencing to a height of not less than 90 centimetres above the edge or side and such fencing shall be kept in position save when and to the extent to which its absence is necessary (whether or not for the purposes of the operation) for the access of persons, or the movement of materials or for traffic or working, or for repair, but fencing removed for any of these purposes shall be kept readily available and shall be replaced as soon as practicable.

(b) Clause (a) of this sub-rule shall not apply—

i. To that part of an opening in a deck or tank top which is at the head of a stairway or ladder way intended to be used while the operations are being carried on; or

ii. To parts of a deck or tank top which are intended to be plated, except such parts where the plating has necessarily to be delayed so that the opening may be used for the purpose of the operations.

(21) *Fall of articles from stages*—Where workers are at work outside a vessel on a stage adjacent to part of the structure of the vessel and other workers are at work directly beneath that stage, the planks of the stage shall be in such a position that no article liable to cause injury to the workers can fall between the planks, and the inside plank of the stage shall be placed as near as practicable to the structure of the vessel having regard to the nature of the work being carried on.

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

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

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

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

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

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

RAISING AND LOWERING

(25) *Secureness of loads*—(a) Loads shall be securely suspended or supported whilst being raised or lowered and all reasonable precautions shall be taken to prevent danger from slipping or displacement.

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

(26) *Support of lifting machine and lifting tackle*—Every lifting machine and all lifting tackle shall be adequately and suitably supported or suspended having regard to the purpose for which it is used.

(27) *Wire ropes with broken wires*—No wire ropes shall be used if in any length of ten diameters the total number of visible broken wires exceeds five percent of the total number of wires, or if the rope shows signs of excessive wear or corrosion or other serious defect.

(28) *Splices in wire ropes*—A thimble or loop splice made in any wire rope shall have at least cut out of each strand. All tucks shall be against the lay of the rope;

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

(29) *Knotted chains, etc*—(a) No chain or wire rope shall be used when there is a known tide in any part thereof.

(b) No chain which is shortened or joined to another chain by means of bolts and nuts shall be used:

Provided that this does not exclude the use of a chain bolted or joined to another chain by an approved and properly constructed attachment.

(30) *Precaution against damage to chains and ropes*—Appropriate steps shall be taken to prevent, so far as practicable, the use of chains or ropes for raising or lowering in circumstances in which they are in or liable to come into contact with sharp edges of plant, materials or loads, or with sharp edges of any part of the vessel on which work is carried out.

(31) *Loads on lifting appliances*—No load shall be left suspended from a lifting appliance other than a self-sustaining, manually operated lifting appliance unless there is competent person in charge of the appliance while the load is so left.

(32) *Heavy loads*—Where there is reason to believe that a load being lifted or lowered on a lifting appliance weighs more than 20 tonnes its weight shall be ascertained by means of an accurate weighing machine or by the estimation of a person competent for the purpose, and shall be clearly marked on the load:

Provided that this sub-rule shall not apply to any load lifted or lowered by a crane which has either a fixed or a derricking jib and which is lifted with an approved type of indicator in good working order which—

a) Indicates clearly to the driver or person operating the crane when the load being carried approaches the safe working load of the crane for the radius of the job which the load is carried; and
b) Gives an efficient sound signal when the load moved is in excess of the safe working load of the crane at that radius.

PRECAUTIONS AGAINST ASPHYXIATION INJURIOUS FUMES OR EXPLOSIONS

(33) *Certification for entry into confined spaces likely to contain dangerous fumes*—A space shall not be certified under Section 36 (3) (a) of the Act, unless—

(a) Effective steps have been taken to prevent any ingress of dangerous fumes;
(b) Any sludge or other deposit liable to give off dangerous fumes has been removed and space that contains no other material liable to give of dangerous fumes; and
(c) The space has been adequately ventilated and tested for dangerous fumes and has a supply of air adequate for respiration;

Provided that no account shall be taken for the purposes of Clause (b) of this sub-rule of any deposit, or other material liable to give off dangerous fumes in insignificant quantities only.

(34) *Precautions against shortage of oxygen*—No person shall enter or remain in any confined space in a vessel, being a confined space in which there is reason to apprehend that the proportion of oxygen in the air is so low as to involve risk of persons being overcome, unless either—

(a) The space has been and remains adequately ventilated and a responsible person has tested it and certified that it is safe for entry without breathing apparatus; or
(b) He is wearing suitable breathing apparatus and a safety belt securely attached to a rope, the free end of which is held by a person standing outside the confined space.

(35) *Rivet fires*—(a) Rivet fires shall not be taken into or used in or remain in any confined space on board or in a vessel unless there is adequate ventilation to prevent the accumulation of fumes.

(b) No person employed shall move a rivet fire into any confined space on board or in a vessel unless he has been authorised by employer to move the fire into that space.

(36) *Gas cylinders and acetylene generators*—(a) No cylinder which contains or has contained oxygen or any flammable gas or vapour at a pressure above atmospheric pressure and no acetylene generating plant, shall be installed or placed within 5 meters of any substantial source of heat (including any boiler or furnace when alight) other than burner or blow-pipe operated from the cylinder or plant.

(b) No such cylinder and no such plant shall be taken below the weather deck in the case of a vessel undergoing repair, or below the top-most completed deck in the case of a vessel under construction, unless it is installed or placed in a part of the vessel which is adequately ventilated to prevent any dangerous concentration of gas or fumes.

(37) *Further provision as to acetylene generators*—(a) The following provisions shall be observed as respects any acetylene generating plant:

i) No such plant shall be installed or placed in any confined space unless effective and suitable provision is made for securing and maintaining the adequate ventilation of that space so as to prevent, so far as practicable, any dangerous accumulation of gas;

ii) Any person attending or operating any such plant shall have been fully instructed in its working and a copy of the maker's instructions for that type of plant shall be constantly available for his use;

iii) The charging and clearing of such plant shall, so far as practicable, be done during daylight; and

iv) Partly spent calcium carbide shall not be re-charged into an acetylene generator.

(b) No person shall smoke or strike a light or take a naked light or a lamp or in into any acetylene generator house or shed or in or into dangerous proximity to any acetylene generating plant in the open air or on board a vessel:

Provided that this clause shall not apply as respect a generator in the open air or on board a vessel which, since it was last charged has been thoroughly cleaned and freed from any calcium carbide and acetylene gas.

(c) A prominent notice prohibiting smoking, naked lights and lamps shall be exhibited on or near every acetylene generating plant whilst it is charged or is being charged or is being cleaned.

(38) *Construction of plant for cutting, welding or heating metal*—(a) Pipes or hoses for the supply of oxygen or any flammable gas or vapour to any apparatus for cutting, welding or heating metal shall be of good construction and sound material and be properly maintained.

(b) Such pipes or hoses shall be securely attached to the apparatus and other connections by means of suitable clips or other equally effective appliances.

(c) Efficient reducing and regulating valves for reducing the pressure of the gases shall be provided and maintained in connection with all cylinders containing oxygen or any flammable gas or vapour at a pressure above atmospheric while the gases or vapours from such cylinders are being in any process of cutting, welding or heating metal.

(d) Where acetylene gas is used for cutting, welding or hearing metal—

i) A properly constructed and efficient back-pressure valve and flame arrester shall be provided and maintained in the acetylene supply pipe between each burner or blow-pipe and the acetylene generator, cylinder or container from which it is supplied, and shall be placed as near as practicable to the burner or blow-pipe, except that these requirements shall not apply where an acetylene cylinder serves only one burner or blow-pipe; and

ii) Any hydraulic valve provided in pursuance of the preceding sub-clause shall be inspected on each day by every person who uses the burner or blow-pipe on that day and it shall be the duty of every worker who used the burner or blow-pipe to inspect the hydraulic valve accordingly.

(e) The operating valves of burners or blow-pipes to which oxygen or any flammable gas or vapour is supplied for the purpose of cutting, welding or heating metal shall be so constructed, or the operating mechanism shall be so protected, that the valves cannot be opened accidentally.

(39) *Precaution after use of apparatus for cutting, welding or heating metal*—(a) In the case of apparatus on board a vessel used for cutting, welding or heating metal with the aid of oxygen or any flammable gas or vapour supplied at a pressure above atmospheric pressure the precaution specified in the following clauses of this sub-rule shall be taken when such use ceases for the day or for a substantial period and the apparatus is to be left on board, but need not be taken when such use is discontinued merely during short interruptions of work. The requirement in Clauses (c) and (d) of this sub-rule shall not apply during a meal interval; provided that a responsible person is placed in charge of the plant and equipment referred to therein.

(b) Supply valves of cylinders, generators, and gas mains shall be securely closed and the valve key shall be kept in the custody of a responsible person.

(c) Movable pipes or hoses used for conveying oxygen or flammable gas or vapour and the welding and cutting torches shall, in the case of a vessel undergoing construction, be brought to the top most completed deck, in the case of a vessel undergoing repair, to a weather deck or in either case to some other place of safety which is adequately ventilated to prevent any dangerous concentration of gas or fumes:

Provided that where, owing to the nature of the work, it is impracticable to comply with the foregoing requirements of this clause the pipes or hoses shall be disconnected from cylinders, generators or gas mains, as the case may be.

(d) When cylinders or acetylene generating plant have been taken below deck as permitted by Clause (b) of sub-rule (36) such cylinders or acetylene generating plant shall be brought to a weather deck or, in the case of a vessel undergoing construction, to the top most completed deck.

(40) *Naked light and hot work oil carrying vessel*—(a) Subject to the provisions of Clause (b) of this sub-rule and to the provisions of sub-rule (48) and without prejudice to the provisions of sub-rule (46) and (47), naked light, fire or lamp (other than a safety lamp of a type approved for the purpose of this sub-rule)—

i) Shall be permitted to, or to be in, or any hot work permitted to be carried out in any part of a tanker, unless, since oil was last carried in that tanker, a naked light certificate has been obtained and is in force in respect of those parts of the tanker for which, in the opinion of competent analyst, a naked light certificate is necessary:

Provided that a naked light, fire or lamp of a kind specified in writing by a competent analysts may be applied tom, or be, in any hot work of a type specified by him carried on any part of the tanker so specified.

ii) Shall be permitted—

(aa) to be in any oil tank on board or in a vessel in which oil-tank the oil last carried was oil having a flash point of less than 23 degrees centigrade or was liquid methane, liquid propane or liquid butane, nor any hot work permitted to be carried out in any such oil tank or vessel, unless a naked light certificate has previously been obtained on the same day and is in force in respect of that oil-tank and of any oil-tank, compartment or space adjacent thereto;

(bb) to be applied to the outer surface of any oil-tank on board or in a vessel in which oil-tank the oil last carried was such oil as aforesaid, nor any work of such a nature which is likely to produce sufficient heat capable of igniting flammable gases or vapours permitted to be carried out on the outer surface of such oil-tank or vessel, unless a naked light certificate has previously been obtained on the same day and is in force in respect of that oil-tank;

(cc) to be applied to the outer surface of, or to be in, any compartment or space adjacent to an oil-tank on board or in a vessel in which oil-tank the oil last carried was such oil as aforesaid, nor any hot work permitted to be carried out in such compartment or space as aforesaid, nor any work of such nature which is likely to produce sufficient heat capable of igniting flammable gases or vapours, permitted to be carried out on the outer surface of such compartment or space, unless a naked light certificate has previously been obtained on the same day and is in force in respect of that compartment or space:

Provided that where in any such case referred to in paragraph (aa), (bb) or (cc) of this sub-clause a competent analyst has certified that daily naked certificates are unnecessary or are necessary only to specified extent, such a daily certificate need not be obtained or, as the case may be, need only be obtained or to the specified extent;

iii) Shall be permitted to be applied to the outer surface of, or to in, any oil tank on board or in a vessel nor any hot work permitted to be carried out in any such oil-tank or vessel, nor any work of such nature which is likely to produce sufficient heat capable of igniting flammable gases or vapours, permitted to be carried out on the outer surface of the oil-tank or vessel, unless, since oil was last carried in that oil tank, naked light certificate has been obtained and is in force in respect of that oil-tank;

iv) Shall be permitted to be applied to the outer surface of, or to be in, any compartment or space adjacent to an oil-tank on board or in a vessel nor any hot work permitted to be carried out in any such compartment or space, unless, since oil was last carried as cargo in that oil tank, a naked light certificate has been obtained and is in force in respect of that compartment or space.

(b) Notwithstanding anything in Clause (a) of this sub-rule, heated rivets may be permitted in any place without naked light certificate being in force in respect of that place if expressly so authorised by a competent analyst who certifies that after adequate and suitable testing he s satisfied regard to all the circumstances of the case, including the likelihood or otherwise of the atmosphere becoming flammable, that the place is sufficiently free from flammable vapour, but such heated rivets shall, where practicable, be passed through tubes.

(c) No person shall introduce, have or apply naked light, fire or lamp (other than safety lamp of a type approved for the purpose of this sub-rule) into, in or to any place where they are prohibited by this sub-rule.

(d) No person shall carry out hot work or any work of such nature which is likely to produce sufficient heat capable of igniting flammable gases or vapours, in any place or any surface where they are prohibited by this sub-rule.

(e) In this sub-rule the expression 'competent analyst' means an analyst who is competent to give a naked light certificate.

(41) *Entering oil-tanks*—(a) No person (other than an analyst entering with a view to issuing a certificate of entry shall, unless he is wearing a breathing apparatus of a type approved for the purpose of this sub-rule, enter or remain in an oil-tank on board or in a vessel unless, since the oil-tank last contained oil, a certificate of entry has been obtained and is in force in respect of the tank.

(b) Without prejudice to Clause (a) of this sub-rule, no person (other than an analyst entering as aforesaid) shall be allowed or required to enter or remain in an oil-tank on board or in a vessel in which oil-tank the oil last carried was oil having a flash point of less than 23 degrees centigrade unless, since the oil-tank last contained oil, an analyst has certified that the atmosphere is sufficiently free from flammable mixture.

(c) The provisions of this sub-rule are without prejudice to the requirements of sub-rule (34)

(42) *Duration of certificates*—Any naked light certificate or certificate of entry may be issued subject to a condition that shall not remain in force after a time specified in the certificate.

(43) *Posting certificates*—Every occupier for whom a naked light certificate or a certificate of entry is obtained shall ensure that the certificate or a duplicate thereof is posted as soon as may be and remains posted in a position where it may be conveniently read by all persons concerned.

(44) *Maintaining safe atmosphere*—(a) When conditions in an oil-tank in respect of which a naked light certificate has been issued are such that there is a possibility of oil vapour being released from residues or other sources, test shall be carried out by a competent analyst at such intervals as may be required so as to ensure that the conditions in the tank are maintained safely.

(b) Whenever hot work is carried on or a naked light, fire or lamp is allowed to be, on the weather deck over spaces, in respect of which a naked light certificate has not been issued, all covers of manholes and openings on deck and all valves (except those which are connected to high event pipes) connecting the weather deck with the said paces, shall be closed.

(c) A record of all the test carried out for the purpose of sub-rules (34), (40) and (41) shall be maintained in a register which should furnish the date, time, location and results of the test.

(45) *Cleaning of oil-tank*—(a) Subject to the provisions of sub-rule (48), before a test for flammable vapour is carried out with a view to the issue of a naked light certificate for the purposes of sub-rule (40) in respect of an oil-tank on board or in a vessel, that oil-tank shall, since oil was last introduced into the tank, be cleaned and ventilated in accordance with Clause (b) of this sub-rule.

(b) The said cleaning and ventilation shall be carried out by the following method:

i) The oil-tank shall be treated in such manner and for such period as will ensure the vaporisation of all volatile oil;

ii) All residual oil and any sludge or other deposit in the oil-tank shall be removed there from; and

iii) After the oil-tank has been so cleaned—

(aa) all covers of manholes and other openings therein shall be removed and it shall be thoroughly ventilated by mechanical or other efficient means with a view to the removal of all oil vapour; and then.

(bb) the interior surfaces, if any deposit remains thereon, shall be washed or scraped down;

(46) *Invalidation of certificates*—(a) If during the course of work in, or to the outer surface of, any part of a tanker or aircraft carrier, any pipe or tank joint is opened or broken or any other event occurs so that there is a risk of oil vapour entering or arising in that part of the tanker or air, craft carrier, that work shall be suspended and thereafter any certificate of entry previously issued in respect of any oil-tank in that part and any naked light certificate previously issued in respect of that part shall be no longer in force.

(b) If (in the case of a vessel other than a tanker or aircraft carrier) during the course of work in any oil-tank or any compartment or space adjacent thereto, any pipe or tank joint is opened or broken or any other event occurs so that there is a risk of oil vapour entering or arising in the oil-tank or in nay compartment or space adjacent thereto that work shall be suspended and thereafter any certificate of entry previously issued in respect of the oil-tank and any naked light certificate thereto shall be no longer in force.

(47) *Provisions as to work in other compartments or space*—(a) Without prejudice to the other provisions of this rule, if the presence of oil in such quantity and in such position as to be likely to give rise to fire or explosion is detected in any part of a vessel, being a part to which this sub-rule applies and in which repairs of the following kind are to be or are being undertaken that is to say, repairs, involving the use of a naked light, fire or lamp (other than a safety lamp of a type approved for the purpose of sub-rule (40), or involving hot work, such repairs shall not be started or continued until a naked light certificate has been issued or, as the case may be, reissued in respect of that part of the vessel.

(b) This sub-rule shall apply to bilges, shaft tunnels, pump rooms and to compartment and space other than those to which Clause (a) (iv) of sub-rule (40) applies.

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

PRECAUTION IN USE OF ELECTRICAL ENERGY

(49) *Earthing*—Electrical energy other than that generated by an independent generating unit on board shall not be taken fir use, or used in, or in connection with any of the operations unless the body of the ship is insecurely earthed in such a manner as to ensure an immediate and safe discharge of energy to the earth. A ship or vessel shall not be considered as securely earthed for the purpose of the sub-rule only on account of it being partly submerged in water.

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

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

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

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

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

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

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

MISCELLANEOUS SAFETY PROVISIONS

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

(53) *Work in boilers, etc.*—(a) No work shall be permitted in any boiler furnace or boiler flute until it has been sufficiently cooled to make work safe for the workers.

(b) Before any worker enters any steam boiler which is one of a range of two or more boilers—

i) All inlets through which steam or hot water might otherwise enter the boiler from any part of the range shall be disconnected from that part; or

ii) All valves or taps controlling such entry shall be closed and securely locked.

(c) While workers remain in any steam boiler to which Clause (b) of this sub-rule applies all such inlets as are referred to in that clause shall remain disconnected or all such valves or taps as are therein referred to shall remain closed and securely locked.

(d) No worker shall be allowed or required to enter or remain in and no person shall enter or remain in, any steam boiler to which Clause (b) of this sub-rule applies unless the provisions of that clause are being compiled with.

(54) *Hatch beams*—The hatch beams of any hatch in use for the operations shall, if not moved, be adequately secured to prevent their displacement.

(55) *Jumped-up bolts*—Bolts which have been jumped up and rescrewed shall not be used for securing plates on the sides of vessels, and no workers shall use such bolts for this purpose.

(56) *Worker in or on life bolts*—(a) Before workers are permitted to work in or on any life boat, either stowed or in suspended position, precaution shall be taken to prevent the boat from falling due to accidental trapping of the releasing gear or movement of the davits, and capsizing of the boat if in docks.

(b) Workers shall not be permitted to remain in life boat while the life boats are being hoisted into final stowed position.

PROTECTIVE WEAR

(57) *Hand protection*—Adequate protection for the hands shall be available for all workers when using, cutting or welding apparatus to which oxygen or any flammable gas or vapour is supplied at a pressure greater than atmospheric pressure or when engaged in machine caulking or machine riveting or in transporting or staking plates or in handling plates at machines.

(58) *Protection in connection with cutting and welding*—(a) Suitable goggles fitted with tinted eye-pieces shall be provided and maintained for all persons employed when using, cutting or welding apparatus to which oxygen or any flammable gas or vapour is supplied at a pressure above atmospheric pressure.

(b) There shall be provided and maintained for the use of all persons employed when engaged in the process of electric welding—

i) Suitable helmets or suitable head-shields or suitable hand shields to protect the eyes and face from hot metal and from rays likely to be injurious; and

ii) Suitable gauntlets to protect the hands and fore-arm from hot metal and from rays likely to be injurious.

(c) When electric welding is in progress at any place and persons other than those engaged in that process are employed in a position where the rays are likely to be injurious to their eyes, screens shall, where practicable, be provided at that place for the protection of those persons. Where it is not practicable to provide effective protection of those persons by screening, suitable goggles shall be provided for their use.

(59) *Eye protection for other processes*—Suitable goggles or effective screens shall be provided to protect the eyes of all workers in any of the following processes:

(a) The cutting out or cutting off of cold rivets or bolts from boilers or other plant or from ships;

(b) The chipping, scaling or scurfing of boiler or ship plates

(c) Drilling by means of portable machine tools; and

(d) Dry grinding of metals.

(60) *Head protection*—When workers are employed in areas where there is danger of falling objects they shall be provided with suitable safety helmets.

(61) *Safety belts and life lines*—(a) Whenever any worker is engaged on work at a place in which he is liable to fall more than 5 metres, he shall be provided with safety belts equipped with life lines which are secured with a minimum of slack, to a fixed structure unless any other effective means such a provision of guard rails or rope are taken to prevent his failing.

(b) All safety belts and life lines shall be examined at frequent intervals by a competent person to ensure that no belt or life line which is not in good condition is used.

HEALTH AND WELFARE

(62) *Prohibition of employment of young persons in certain processes*—No young person shall be employed in—

(a) The application of asbestos by means of a spray:

(b) The breaking down for removal of asbestos logging;

(c) The cleaning of sacks or other containers which have a contained asbestos;

(d) The cutting of materials containing asbestos by means of portable power driven saws; or

(e) The scaling, scurfing, or cleaning of boiler, combustion chambers, or smoke boxes, where his work exposes him to dust of such a character and to such an extent as to be likely to be injurious or offensive to persons employed in such work.

(63) *Lead processes*—(a) Lead point shall not be applied in the form of a spray in the interior painting of any part of a ship or vessel.

(b) Wherever lead sheathing work is carried on for making cold storage chambers in the ships, efficient exhaust draughts with portable extractors should be provided to remove the lead fumes from the confined spaces.

(64) *Stretchers, ambulances and ambulance rooms, etc*—(a) In every shipyard there shall be provided and kept readily available—

i) A sufficient number of suitably constructed sling stretchers or other similar appliances for raising injured person;

ii) A sufficient number of carrying or wheel stretchers; and

iii) A sufficient supply of suitable reviving apparatus and oxygen and the stretchers, appliances and apparatus so provided shall be properly maintained.

(b) In every shipyard there shall always be readily available during working hours a responsible person or responsible persons whose duty it is to summon an ambulance or other means of transport if needed in cases of accident or illness. Legible copies of a notice indicating that person or, as the case may be, those persons shall be affixed in prominent positions in every shipyard.

(c) In every shipyard other than a dry dock available for hire—

i) In which the number of persons employed normally exceeds five hundred; or

ii) In which the number of persons employed normally exceeds one hundred and which is more than ten miles from a hospital;

There shall be provided and maintained in good order and in clean condition a properly constructed ambulance room containing at least the equipment prescribed in the rules framed under Section 45 of the Act. The room shall be used only for the purpose of treatment and rest and shall be in the charge of a suitably qualified person who shall always be readily available during working hours, and record shall be kept of all cases of accident or sickness treated at the room.

TRAINING AND SUPERVISION

(65) *Young person's*—(a) No young person shall, until he has been employed in a shipyard for at least six months, be employed in connection with the operations in a shipyard or a stage from which, or in any part of a ship where, he is liable to fall a distance of more than 2 meters or into water in which there is a risk of drowning.

(b) Any young person under the age of sixteen years shall, when employed in the operations in shipyard, be placed under the charge of an experienced workman.

(66) *Safety supervision*—In the case of every shipyard other than a dry dock available for hire, being a shipyard where the number of workers regularly or from time to time exceeds five hundred, a person experienced in the work of such yards shall be appointed and employed exclusively to exercise general supervision of the observance of these rules and to promote the safe conduct of the work generally.

78. **Reaction vessels and kettles**—(1) This rule applies to reaction vessels and kettles (hereinafter referred to as reaction vessels) which normally work at a pressure not above the atmospheric pressure but in which there is likelihood of pressure being created above the atmospheric pressure due to reaction getting out of control or any other circumstances.

(2) In the event of the vessel 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 arrangements 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 end 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 vessel as soon as process conditions deviate from the normal limits to an extent which can be considered as dangerous.

(7) Wherever 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 wherever process conditions exceed the present limits. 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.

COMMENTS

Rules 76 to 78 have been prescribed under Ss. 41 and 112 of the Factories Act.

CHAPTER V
WELFAREE

79. **Washing facilities**—(1) There shall be provided and maintained in every factory for the use of employed persons adequate and suitable facilities for washing which shall include soap and nail brushes or other suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.

(2) Without prejudice to the generality of the foregoing provisions the washing facilities shall include –

(a) A trough with taps or jets at intervals of not less than 60 centimetres; or

(b) Wash-basins with taps attached thereto; or

(c) Taps on stand pipes; or

(d) Showers controlled by taps; or

(e) Circular trough of the fountain type:

Provided that the Inspector may, having regard to the needs and habits of the workers, fix the proportion in which the aforementioned types of facilities shall be installed.

(3) (a) Every trough and basin shall have a smooth, impervious surface and shall be fitted with a waste pipe and plug.

(b) The floor or ground under and in the immediate vicinity of every trough, tap, jet, wash-basin, stand-pipe and shower shall be so laid or finished as to type a smooth impervious surface and shall be adequately drained.

(4) For persons whose work involve contact with any injurious or noxious substance there shall be at least one tap for every fifteen persons; and for persons whose work does not involve such contact the number of taps shall be as prescribed in the Schedule annexed hereto.

SCHEDULE

Number of workers		Number of taps
Up to 20	.....	1
21 to 35	.....	2
36 to 50	.....	3
51 to 150	.....	4
151 to 200	.....	5
Exceeding 200 but not exceeding 500		5 plus one tap for every 50 or fraction of 50
Exceeding 500		11 plus one tap for every 100 or fraction of 100.

(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 bear conspicuous notice “For Women Only” in the language understood by the majority of the workers and shall also be indicated pictorially.

(6) The water supply to the washing facilities shall be capable of yielding at least 27 litres 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 5 litres per day for every person employed in the factory.

COMMENTS

This rule has been framed as provided in sub-section (2) of Section 42 of the Act.

80. **Faculties for keeping clothing**—All classes of factories mentioned in the Schedule annexed hereto shall provide facilities for keeping clothing not worn during working hours and for the drying of wet clothing. Such facilities shall include the provision of arrangement approved by the Chief Inspector of Factories.

SCHEDUKE

Class of works

Engineering Workshop
Iron and Steel Works.
Oil Mills.
Chemicals Works.
Automatic Workshops.
Dyeing Works.

COMMENTS

This rule has been framed under Section 43 of the Factories Act.

81. **First-aid appliances**—The first-aid boxes or cupboards shall be distinctively marked with a red cross on a white background and shall contain the following equipments:

(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 equipments:

i) 6 small sterilized dressings.
ii) 3 medium size sterilized dressings.
iii) 3 large size sterilized dressings.
iv) 3 large size sterilized burn dressings.
v) One (60 ml.) bottle of cetrimide solution (1%) or a suitable antiseptic solution.
vi) One (60 ml.) bottle of mercurochrome solution (2%) in water.
vii) 1 (30 ml.) bottle containing sal-volatile having the dose and mode of administration indicated on the label.
viii) 1 pair of scissors.
ix) One roll of adhesive (2 cm*1 m).
x) Six pieces of sterilized eye-pads in separate sealed packets.
xi) A bottle containing 100 tablets (each of 325 mg.) of aspirin or any other analgesic.
xii) Polythene wash bottle (1/2 litre, i.e., 500 cc) or washing eyes.
xiii) A snake-bite lancet.
xiv) 1 (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 Institute, Government of India, Bombay.

(b) For factories in which mechanical power is used and in which the number of persons employed exceeds tem but does not exceed fifty-Each first-aid box or cupboard shall contain the following equipments:

i) 12 small size sterilized dressings.

ii) 6 medium size sterilized dressings.
iii) 6 large size sterilized burn dressings.
iv) 6 large size sterilized burn dressings.
v) 6 (15 gms.) packets sterilized cotton wool.
vi) One (120 ml.) bottle of cetrimide solution (1%) or a suitable antiseptic solution.
vii) One (120 ml.) bottle of mercurochrome solution (2%) in water.
viii) 1 (60 ml.) bottle containing sal-volatile having the dose and mode of administration indicated on the label.
ix) 1 pair of scissors.
x) 2 rolls of adhesive plaster (2 cm.*1 m).
xi) Eight pieces of sterilized eye-pads in separate sealed packets.
xii) One tourniquet.
xiii) One dozen safety pins.
xiv) A bottle containing 100 tablets (each of 325 mg.) of 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) 1 (30 ml.) bottle containing potassium permanganate crystals.
xviii) One copy of first aid leaflet issued by the Directorate General of Factory Advice service and Labour Institute, Government of India, Bombay.

(c) For factories employing more than 50 persons-Each first-aid box or cupboard shall contain the following equipments:

i) 24 small size sterilized dressings.
ii) 12 medium size sterilized dressings.
iii) 12 large size sterilized dressings.
iv) 12 large size sterilized burn dressings.
v) 12 (15 gms.) packets sterilized cotton wool.
vi) One (200ml.) bottle of cetrimide solution (1%) or a suitable antiseptic solution.
vii) One (200) bottle of mercurochrome (2 percent) solution in water.
viii) 1 (120 ml.) bottle of sal-volatile having the dose and mode of administration indicated on the label.
ix) 1 pair of scissors.
x) One roll of adhesive plaster (6 cm.*1 m).
xi) Two rolls of adhesive (2 cm.*1 m.)
xii) Twelve pieces of sterilized eye-pads in separate sealed packets.
xiii) A bottle containing 100 tablets (each of 325 mg.) of aspirin or any other analgesic.
xiv) One polythene wash bottle (500 cc) for washing eyes.
xv) 12 roller bandages 100 cm. wide.
xvi) 12 roller bandages 5 cm. wide.
xvii) 6 triangular bandages.
xviii) 1 tourniquet.

xix) A supply of suitable splints.

xx) 2 packets of safety pins.

xxi) Kidney tray.

xxii) 1 snake-bite lancet.

xxiii) 1 (30 ml.) bottle containing potassium permanganate crystals.

xxiv) One copy of the first-aid leaflet issued by the Directorate General of Factory Advice service and Labour Institute, Government of India, Bombay:

Provided that items (xiv) to (xxi) inclusive, need not 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.

(d) In lieu of the dressings required under items (i) and (ii), there may be substituted adhesive wound dressings approved by the Chief Inspector of Factories and other equipment or medicines that may be considered essential and recommended by the Chief Inspector of Factories from time to time.

COMMENTS

This rule has been framed under sub-section (1) of Section 45 of the factories Act.

82. **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 cupboard shall be pasted in every factory at a conspicuous place and near each such box or cupboard. The notice shall also indicate work-room where the said persons shall be available. The name of the nearest hospital and its telephone number shall also be mentioned prominently in the said notice.

COMMENTS

This rule has been prescribed under Section 45 (3) of the Factories Act, read with Section 112 thereof.

83. **Ambulance room**—(1) The ambulance room or dispensary shall be in-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 the 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 and shall be adequately smooth, hard and impervious walls and floors, and shall be adequately ventilated and lighted by both natural and artificial means. An adequate supply of wholesome drinking water shall be laid on 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 cm. Etimes 105 cm;

iii) Means for sterilizing instruments;
iv) A couch;
v) Two stretchers;
vi) Two buckets or containers with close fitting lid;
vii) Two rubber hot water bags;
viii) A kettle and spirit stove or other suitable means of boiling water;
ix) Twelve plain wooden splints 900 mm100 mm*6 mm;
x) Twelve " " "350 mm*75 mm*6 mm.
xi) Six " " "250 mm*50 mm*12 mm.
xii) Six woollen blankets;
xiii) Three pairs of artery forceps;
xiv) One bottle of spiritus ammoniac acromaticus (1.20 ml)
xv) Smelling salts (60 gm);
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) Two tea spoons;
xxiii) Two graduated (120 ml.) measuring glasses;
xxiv) Two mini measuring glasses;
xxv) One wash bottle (1000 c.c.) 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 standards prescribed under item (c) of Rule 81;
xxxi) An adequate supply of anti-tetanus toxide;
xxxii) Injections—morphia, pethidine, atropine, adrenaline, coramine, novocan (6 each)
xxxiii) Coramine liquid (60 ml);
xxxiv) Tablets—Antihistaminic, antispasmodic (25 each);
xxxv) Syringes with needles—2 c.c., 10 c.c. and 50 c.c.;
xxxvi) Three surgical scissors;
xxxvii) Two needle holders, big and small;
xxxviii) Suturing needles and material;
xxxix) Three dissecting forceps;
xl) Three dressing forceps;
xli) Three scalpels.
xlii) Rubber bandage—pressure bandage;

xliii) One stethoscope;

xliv) Oxygen cylinder with necessary attachments.

(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 arrangements for obtaining such a conveyance from a hospital.

(5) The Chief Inspector of Factories may, by an order in writing, exempt any factory from the requirements of this rule, subject to such conditions as he may specify in that order, if a hospital ambulance room or dispensary is maintained at or within 200 meters of the precincts of the factory and such arrangements are made as to ensure the immediate treatment of all injuries sustained by workers within the factory and for providing rest to workers so injured.

Explanation—For the purpose 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 Act, 1956.

COMMENTS

This rule has been framed as provided under sub-section (2) of Section 45 of the Factories Act.

84. **Canteens**—(1) The occupier of every factory notified by the State Government, and wherein more than two hundred and fifty workers are ordinarily employed shall provide in or near the factory an adequate canteen according to the standards prescribed in these rules.

(2) The manager of a factory shall submit for the approval of the Chief Inspector plans and site plan, in duplicate, of the building, to be constructed or adopted for use as a canteen.

(3) The canteen building shall be situated not less than 15 meters from any latrine, uniral, boiler house, coal stacks, ash dumps and any other sources of dust smoke or obnoxious fumes.

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

(4) 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 and washing places separately for workers and for utensils.

(5) In a canteen the floor and inside walls up to a height of 1.2 meters 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 in any other manner approved by the Chief Inspector.

(6) The doors and windows of a canteen building shall be of fly-proof construction and shall allow adequate ventilation.

(7) The canteen shall be sufficiently lighted at all times when any persons have access to it.

(8) (a) In every canteen—

i) All inside walls of rooms and all ceilings and passages and stairs cases shall be line-washed or colour-washed at least once in each year, or painted once in three years dating from the period when last lime-washed, colour-washed or painted, as the case may be;

ii) All wood work shall be varnished or painted once in three years dating from the period when last varnished or painted;

iii) All internal structural iron or steel work shall be varnished or painted once in three years dating from the period when last varnished or painted:

Provided that inside walls of the kitchen shall be lime-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 prescribed Register (Form No. 7)

(9) The precints of the canteen shall be maintained in a clean and sanitary condition. Waste water shall be carried away in suitable covered drains and shall not be allowed to accremulate so as to cause a nuisance. Suitable arrangements shall be made for the collection and disposal of garbage.

85. **Dining hall**—(1) The dining hall shall accommodate at a time at least 30 per cent of the workers working at a time:

Provided that in any particular factory or in any particular class of factories, the State Government may, by a notification 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 than 0.93 square meter dinner 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 number. Washing places for women shall be specified and screened to secure privacy.

(4) Sufficient tables, chairs or benches shall be available for the number of dinners to be accommodated as prescribed in sub-rule (1).

86. **Equipments**—(1) There shall be provided and maintained sufficient utensils, crockery, 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 and maintained.

(2) The furniture, utensils and other equipment shall be maintained in a clean and hygienic condition. A service counter, if provided, shall have a top of smooth and impervious material. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipment.

87. **Prices to be changed**—(1) Food, drink and other items served in the canteen shall be sold a non-profit basis and the prices charged shall be subject to the approval of the Canteen Managing Committee:

Provided that where a canteen is managed by workers' co-operative society, the prices to be charged may include a margin of profit up to maximum of 5 per cent of its working capital.

(2) In computing the prices referred to in sub-rule (1) the following items of expenditure shall not be taken into consideration, but will be borne by the occupier:

(a) The rent for land and building;
(b) The depreciation and maintenance charges of the building and equipment provided for the canteen;
(c) The cost of purchase, repair 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) The charges per portion of food-stuff, beverages and any other items served in the canteen shall be conspicuously displayed in the canteen.

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

(2) The accounts pertaining to the canteen shall be audited, once in every twelve months by registered accountants and auditors. The Balance-sheet prepared by the said auditors shall be submitted to the Canteen Managing Committee not later than two months after 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:

Provided further that where the canteen is managed by a co-operative society registered under the Co-operative Societies Act, the account, pertaining to such canteen may be audited in a accordance with the provisions of the Co-operative Societies Act.

89. **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 food-stuffs to be served in the canteen;
(b) The arrangements of the menus;
(c) The time of meals in the canteen; and
(d) Any other matter as may be directed by the Committee;

Provided that where the canteen is managed by a co-operative society registered under the Co-operative Societies Act, 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 one for every 1,000 workers employed in the factory; provided that in no case shall there be more than 5 or less than 2 workers on the Committee.

(3) The Manager shall determine and supervise the procedure for elections to the Canteen Managing Committee.

(4) A Canteen Managing Committee shall be dissolved by the Manager two years after the last election, no account being taken of byte-election.

90. **Annual medical examination**—(1) Annual medical examination for fitness of each member of the canteen staff who handle foodstuff shall be carried out by the factory medical officer or the Certifying Surgeon, which should include the follows:

(a) Routine blood examination;

(b) Routine and bacteriological testing, of faeces and urine for germs of dysentery and typhoid fever; and

(c) Any other examination including chest X-ray that may be considered necessary by the factory medical officer or the Certifying Surgeon.

(2) Any person who, in the opinion of the factory medical officer or the Certifying Surgeon, is unsuitable for employment on account of possible risk to the health of others shall not be employed as canteen staff.

COMMENTS

Rules 84 to 90 have been prescribed under Section 46 of the factories Act.

91. **Shelters, rest-rooms and lunch-rooms**—(1) the shelters or rest-rooms and lunch-rooms shall conform to the following standards and the manager of a factory shall submit for the approval of the Chief Inspector a site-plan in supplicate of the building to be constructed or adopted:

(a) The building shall be soundly constructed and all the walls and roofs shall be of suitable heat resisting materials and shall be water proof. The floor and walls to a height of 90 centimetres shall be so laid or finished as to provide a smooth, hard and impervious surface;

(b) The height of every room in the building shall be not less than 3.65 meters from floor level to the lowest part of roof and there shall be at least 1.12 square meters of floor area for every person employed:

Provided that—(i) workers who habitually go home for the their meals during the rest periods may be excluded in calculating the number of workers to be accommodated; and (ii) in the case of factories in existence at the date of commencement of the Act, where it is impracticable, owing to lack of space to provided 1.12 square meters of floor area for each person, such reduced floor area per person shall be provided as may be approved in writing by the Chief Inspector;

(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 back-rests; and

(e) Sweepers shall be employed whose primary duty it is to keep the rooms, building, and precincts thereof in a clean and tidy condition.

92. **Crèches**—(1) The cresh shall be conveniently accessible to the mother of the children accommodated therein and so far as is reasonably practicable it shall not be situated in close proximity to any part of the factory where obnoxious fumes, dust or odours are given off or in which excessively noisy processes are carried on.

(2) The building in which the crèche is situated shall be soundly constructed and all the walls and roofs shall be of suitable heat resisting materials and shall be water-proof. The floor and internal walls of the crèche 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 3.65 meters from the floor to the lowest part of the roofs and there shall be not less than 1.86 sq. Meters 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 crèche shall be adequately furnished and equipped and in particular there shall be one suitable cot or cradle with the necessary bedding for each child; (provided that for children over two years of age it will be sufficient if suitable bedding is made available); at least one chair or equivalent seating accommodation for the use of each mother while she is feeding or attending to her child, and a sufficient supply of suitable toys for the older children.

(6) A suitably fenced and shady open air play ground shall be provided or the older children;

Provided that the Chief Inspector may, be 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 play ground.

93. **Wash rooms**—(1) There shall be in for adjoining the crèche a suitable wash room for the washing of the children and their clothing. The wash-room shall conform to the following standards:

(a) The floor and internal walls of the room to a height of 90 centimeters shall be so laid or finished as to provide a smooth impervious surface. The room shall be adequately lighted ventilated and the floor shall be effectively drained and maintained in a clean and tidy condition;

(b) There shall be at least one basin or similar vessel for every four children accommodated in the crèche at any one time together with a supply of water provided, if practicable, through taps from a source approved by the Health Officer. Such source shall be capable of yielding for each child a supply of at least 23 litres of water a day; and

(c) An adequate supply of clean clothes, soap and clean towels shall be made available for each child while it is in the crèche.

(2) Adjoining the washing-room referred to in sub-rule (1), a latrine shall be provided for the sole use of the children in the crèche. The design of latrine and the scale of accommodation to be provided shall either be approved by the Public Health Authorities, or where there is no such Public Health Authority, by the Chief Inspector of the factories.

94. **Supply of milk and refreshment**—At least half a pint of clean pure milk shall be available for each child on every day it is accommodated in the crèche and the mother of each child shall be allowed in the course of her daily work three hour's intervals of at least 2 minutes each time to feed the child. For children above two years of age there shall be provided in addition an adequate supply of wholesome refreshment.

95. **Clothes for crèche staff**—The crèche staff shall be provided with suitable clean clothes for use while on duty in the crèche.

COMMENTS

Rules 92 to 95 have been prescribed under sub-section (3) of Section 48 of the factories Act.

96. **Exemption from the provision of crèche**—(1) In factories where the number of married women or widows employed does not exceed 15 or where the factory works for less than 180 days in a calendar year, or where number of children kept in the crèche was less than 5 in the preceding year, the Chief Inspector may exempt such factories from a the provisions of Section 48 and Rules 92 to 95 made there under, 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 a crèche building which has a minimum accommodation at the rate of 2 square meters per child and constructed in accordance with plans approved by the Chief Inspector.

i) A suitable washroom for washing of the children and their clothing;

ii) Adequate supply of soap and clean clothes and towel; and

iii) Adequate number of female attendants who are provided with suitable clean clothes for use while on duty to lock after the children in the crèche.

(3) The exemption granted under sub-rule (1) may at any time be withdrawn by the Chief Inspector if he finds after such enquiry as he may deem fit, that the factory has committed a breach of this rule.

97. **Welfare officers**—(1) *Number of Welfare Officers*—(a) The occupier of every factory employing between 500 and 2,000 workers shall appoint at least one Welfare Officer, and where the number of workers exceed 2,000 there shall be an Additional Welfare Officer for every additional two thousand workers or fraction thereof over 500. In a factory where both men and women workers are employed, the number of Women Welfare Officers to be appointed shall be in proportion to the women workers employed; provided that where the number of women employed is more than 100 and the total number of workers does not exceed 2,500 an additional Women Welfare officer shall be appointed.

(b) Where there are more than one Welfare Officers appointed, one of them shall be called the Chief Welfare Officer and the other Assistant Welfare Officers.

(2) *Qualifications*—A person shall not be eligible for appointment as Welfare Officer, unless he—

(a) Possesses a degree of a University, recognised by the State Government in this behalf;

(b) Has obtained a Degree or Diploma in Social Science from any institution recognised by the State Government in this behalf; and

(c) Had adequate knowledge of the language spoken by the majority of the workers in the factory to which he is to be attached.

Provided that the State Government may, by notification in the official Gazette, grant exemption from the provisions of Clause (b) in suitable cases till such time as better facilities in the matter of training in Social Science are made available:

Provided further that in the case of person who is acting as a Welfare Officer at the commencement of these rules the State Government may, subject to such conditions as it may specify, relax all or any of the aforesaid qualifications.

(3) *Recruitment of Welfare Officers*—(a) The post of a Welfare Officer shall be advertised in at least two newspaper having a wide circulation in the State, one of which shall be an English newspaper.

(b) The selection shall be made from among the candidates applying for the post by a Committee appointed by the occupier of the factory.

(c) The appointment when made shall be noticed by the occupier to the State Government or such authority as the State Government may specify for the purpose, giving full details of the qualifications, etc. of the officer appointed and the conditions of the service.

(4) *Conditions of service of Welfare Officers*—(a) A Welfare Officer shall be given appropriate status corresponding to the status of the other executive heads of the factory and he shall be started on a suitable scale of pay the minimum of which shall not be less than Rs. 950 per month.

(b) The conditions of service of a Welfare Officer shall be the same as of other members of the staff of corresponding status in the factory.

Provided that, in the case of discharge or dismissal, the Welfare Officer shall have the right to appeal to the State Government whose decision thereon shall be final and finding upon the occupier.

(5) *Duties of Welfare Officers*—The duties of a Welfare Officer shall be—

(a) To establish contacts and hold consultations with a view to maintaining harmonious relations between the factory management and workers;

(b) To bring to the notice of the factory management the grievances of the workers, individual as well as collective, with a view of securing their expeditions redress and to act as a liaison officer between the management and labour;

(c) To study and understand the point of view of labour in order to help the factory management to shape and formulate labour policies and to interpret these policies to the workers in a language they can understand;

(d) To watch industrial relations with a view to using his influence in the event of a dispute between the factory management and workers and to help to bring about a settlement by persuasive effort;

(e) To advise on fulfilment by the management and the concerned departments of the factory of obligations, statutory or otherwise, concerning regulation of working hours, maternity benefit, medical care, compensation for injuries and sickness and other welfare and social benefit measures;

(f) To advice and assist the management in the fulfilment of its obligations, statutory or otherwise, concerning prevention of personal injuries and maintaining a safe work environment, in such factories where a Safety Officer is not required to be appointed under the enabling provisions under Section 40-B;

(g) To promote relations between the concerned departments of the factory and workers which will bring about productive efficiency as well as amelioration in the working conditions and to help workers to adjust and adapt themselves to their working environments;

(h) To encourage the formation of Works and Joint Production Committees, Co-operative Societies and Welfare Committees, and to supervise their work;

(i) To encourage provisions of amenities such as canteens, shelters for rest, crèche, adequate latrine facilities, drinking water, sickness and benevolent scheme payments, pension and superannuation funds gratuity payments, granting of loans and legal advice to workers;

(j) To help the factory management in regulating the grant of leave with wages and explain to the workers the provisions, relating to leave with wages and other leave privileges and to guide the workers in the matter of submission of application for grant of leave for regulating authorised absence;

(k) To advice on provision facilities, such as housing facilities, foodstuffs, social and recreational facilities, sanitation, advice on individual personal problems and education of children;

(l) To advice the factory management on question relating to training of new starters, apprentices, workers on transfer and promotion, instructors and supervisors, supervision and control of notice board and information bulletins to further of workers and to encourage their attendance at technical; and

(m) To suggest measures which will serve to raise the standards of living of workers in general, and promote their well-being.

(6) *Welfare Officers not to deal with disciplinary cases or appeal on behalf of the management against workers*—No Welfare Officer shall deal with any disciplinary case against workers or appeal a conciliation officer in a Court or Tribunal on behalf of the factory of the management against a worker or workers.

(7) *Power of exemption*—The State Government may, by notification in the official Gazette, exempt any factory or class or description of factories from the operation of any of the provisions of these rules subject to compliance with such alternative arrangements as may be approved.

COMMENTS

This rule has been framed as provided in sub-section (2) of Section 49 and Section 50 of the Factories Act.

CHAPTER VI
WORKING HOURS OF ADULTS

98. **Compensatory holidays**—(1) Except in the case of worker 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 53 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 months and of the dates thereof, at the place at which the notice of periods of work prescribed under Section 61 is displayed. Any subsequent change in the notice in respect of any compensatory holidays shall be made not less than three days in advance of the date of that holiday.

(3) Any compensatory holiday or holidays 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) (a) The Manager shall maintain a Register in Form No. 14:

Provided that if the Chief Inspector of Factories is of the opinion that any muster-roll or register maintained as part of the routine of the factory or return made by the Manager, gives in respect of any or all of the workers in the factory the particulars required for the enforcement of Section 53, 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 for that factory.

(b) The register maintained under Clause (a) shall be preserved for a period of three years after the last entry in it and shall be produced before the Inspector on demand.

COMMENTS

This rule has been framed as provided in sub-section (2) of Section 53 of the Factories Act.

99. **Muster-roll for exempted workers**—The Manager of every factory in which workers are exempted under Section 64 or 65 from the provisions of Section 51 or 54 shall keep a muster-roll in Form No. 15 showing the normal, piece-work rate of pay, or the rate of pay per hour, of all exempted employees. In this muster-roll shall be correctly entered the overtime hours of work and payments therefore of all exempted workers. The muster-roll shall always be available for inspection.

COMMENTS

This rule has been framed under in sub-sections (4) and (5) of Section 59 of the Act.

100. **Notice of periods of work for adults**—The notice of periods of work for adult workers shall be in Form No. 16

COMMENTS

This rule has been prescribed under Section 61 (8) of the Act.

101. **Register of adult workers**—The register of adult workers shall be in Form No. 17

COMMENTS

This rule has been prescribed under Section 62 (2) of the Act.

102. **Persons defined to hold positions of supervision or management**—The following persons shall be deemed to hold positions of supervision or management:

(a) All persons specified in the Schedule annexed hereto; and

(b) Any other person who, in the opinion of the Inspector holds a position of supervision of management.

SCHEDULE

List of persons to hold position of or management in factories:

i) Managers.
ii) Assistant Managers.
iii) Engineers.
iv) Foremen.
v) Weaving Masters and Spinning Masters in Textile Mills.
vi) Head Electricians.
vii) Supervisors and Inspectors.

103. **Persons defined to hold confidential position**—All time keepers employed in a factory within the meaning of sub-section (1) of Section 62 shall be deemed to be employed in a confidential position in the factory.

104. **List to be maintained of persons holding confidential position or position of supervision or management**—A list showing the names and the designations of all persons to whom the provisions of sub-section (1) of Section 64 have been applied shall be maintained in every factory.

105. **Exemption of certain adult male workers**—An adult male workers engaged in factories specified in column 2 of the Schedule hereto annexed on the work specified in column 3 of the said Schedule shall be exempted from the provisions of the sections specified in column 4 subject to the conditions, if any, specified in column 5 of the said Schedule.

SCHEDULE

Section of the Act empowering grant of exemption	Class of factory	Nature of exempted work	Extent of exemption	Remarks
(1)	(2)	(3)	(4)	(5)
64 (2) (a) and 64 (3)	All factories	Urgent repairs	Sections 51, 52, 54, 55, 56 and 61	i) No worker shall be employed on such repairs for more than 15 hours on any one day, 39 hours during any three consecutive days, or 66 hours during each period of seven consecutive days commencing from his first employment on such repairs.
				ii) Within 24 hours of the commencement of the work, notice shall be sent to the Inspector describing the nature of the urgent repairs and the period probably required for their completion.
				iii) Exemption from the provisions of Section 54 shall apply only in the case of adult male workers.

64 (2) (b) and 64 (3)	All factories	(a) Work in the machine shop, the smithy or the foundry or in connection with the mill gearing, the electric driving or lighting apparatus, the mechanical or electrical lifts or the steam or water pipes or pumps of a factory.	Sections 51, 54, 55, 56 and 61	The limits of work inclusive of overtime shall not exceed those mentioned in sub-section (4) of Section 64.
		(b) Work of examining or repairing any machinery or other part of the plant which is necessary for carrying on work in the factory	Sections 51, 54, 55 and 61	The limits of work inclusive of overtime shall not exceed those mentioned in sub-section (4) of Section 64.
		(c) Work in boiler houses and engine rooms such as lighting fires in order to raise steam or generate gas preparatory to the commencement of regular work in the factory	Do.	Do.
64 (2) (c) and 64 (3)	All factories	(a) Work performed by drivers on lighting ventilating and humidifying apparatus	Do.	Do.
		(b) Work performed by fire pumpmen	Do.	Do.
64 (2) (d) and 64 (3)	(1) Oil tank installations	Work performed by workers connected with pumping operations.	Sections 51, 52, 54, 55, 56 and 61	In the absence of a worker who has failed to reopen for duty, a shift worker shall be followed to work the whole or part of a subsequent shift; provided that— i) The next shift of the shift worker shall not commence before a period of 16 hours has elapsed.

				ii) Within 24 hours of the commencement of the sub-sequent shift, notice shall be sent to the Inspector describing the circumstances under which the worker is required to work in the subsequent shift; iii) The exemption will be restricted to only male adult workers; and iv) The limits of work inclusive of overtime shall not exceed those mentioned in sub-section (4) of Section 64.
	(2) Public hydroelectric supply factories	Operation and maintenance of prime movers and auxiliaries, transformers and switches.	Sections 52, 54 and 55	Do.
	(3) Public electric supply companies generating.	Work of engine drivers and assistants, generator attendants, oilers and greasers, switch board operators and pump men electricity from oil in internal combustion engines.	Do.	Do.
	(4) Electrical transforming factories	Work of operation and maintenance of the transforming plant, switches and synchronous condensers.	Do.	Do.
	(5) Distilleries	Work on the extraction of sugar from various bases, fermentation of sugar juice and distillation of fermented wash.	Do.	Do.

	(6) Sugar factories.	Extraction of the juice from the cane, clarification, evaporation and boiling of the juice; curing of the massecuite; and bagging.	Do.	Do.
	(7) Chemical factories.	Work on the sulphur burners, chambers, concentrators and pumps, roasting furnace, manufacture of hydrochloric and nitric acid, sulphates, sulphides, nitrates, superphosphates and chlorides; and work chlorides; and work on the steam service.	Do.	Do.
	(8) Vegetable hydrogenera tion factories	Work of refining bleaching, filtering, generation of hydrogen; hydrogenerating; deodorising processes; compression of oxygen and cylinder filling; and work on the electrical power plant.	Do.	Do.
	(9) Ice-factories	Work of the engine compressor drivers and assistants and oilers.	Do.	Do.
	(10) Oil mills	All work	Sections 54 and 55	Do.
	(11) Flour mills.	All work	Sections 52 and 55	Do.
	(12) Glass factories	(a) Work in attending to furnace.	Do.	Do.
		(b) All work and processes from mixing of batch to removal of the manufactured glassware from the lears.	Sections 52	Do.
	(13) Paper factories	(a) All work on paper-making machinery and on the generation and supply of power connected therewith.	Sections 54 and 55	Do.
		(b) Work on choppers, digesters, kneaders, strainers and washers, beaters, paper-making machines, pumping plant reelers, cutters and power plant.	Sections 52, 54 and 55	Do.
	(14) Rubber tyre factories.	(a) All work on curing process	Section 55.	Do.
	(15) Iron and steel factories	All work on steel furnaces.	Section 51, 52, 54, 55 and 56	Do.
64 (2) (i)	Newspapers printing factories	Tele-printer Service	Section 51, 54 and 56	Do.
64 (2) (i)	All factories	Loading and unloading of railway wagons, lories or trucks.	Section 51, 52, 54, 55 and 56	Do.

Explanation—(1) The following shall be considered to be urgent repairs:

(a) Repairs to any part of the machinery, plant or structure of a factory which are of such a nature that delay in their execution would involve danger to human life or safety or the stoppage of the manufacturing process;

(b) Breakdown repairs to the prime movers, transmission or other essential plant of other factories, collieries, railways, dock-yards, harbours, tramways, motor transport, gas, electric generation and transmission, pumping or other similar essential or public utility services carried out in general engineering works and foundries, and which are necessary to enable such concerns to maintain their main manufacturing process, production or services during normal working hours;

(c) Repairs to deep-sea ships and repairs to commercial aircraft done in a factory which are essential to enable such ships or aircraft to leave port at proper time or continue their normal operations in a sea-worthy or air-worthy condition, as the case may be; and

(d) Repairs in connection with a change of motive power i.e., from steam to electricity or *vice-versa*, which such work, cannot possibly be done without stoppage of the normal manufacturing process.

(2) Periodical cleaning is not included in the terms "examining" or "repairing".

COMMENTS

Rules 102 to 105 have been prescribed under Section 64 of the Act.

CHAPTER VII

EMPLOYMENT OF YOUNG PERSONS

106. **Notice of periods of work for children**—The notice of periods of work for child workers shall be in Form No. 18.

COMMENTS

This rule has been framed under Section 72 (3) of the factories Act.

107. **Register of child workers**—The register of child workers shall be in Form No. 19

COMMENTS

This rule has been prescribed under Section 73 (2) of the Factories Act.

CHAPTER VIII

LEAVE WITH WAGES

108. **Register of Leave with Wages**—(1) The manager shall keep a register in Form No. 20 hereinafter called the Register of Leave with Wages:

Provided that if Chief Inspector is of the opinion that any muster roll or register 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 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 that factory.

(2) The Register of Leave with Wages shall be prescribed for a period of three years after the last entry in it and shall be produced before the Inspector on demand.

109. **Leave Book**—(1) The manager shall provide each worker who has become entitled to leave during a calendar year, with a book in Form No. 21 (hereinafter called the Leave Book) not later than the 31st January of the following calendar year. The Leave Book shall be the property of the worker and the manager or his agent shall not demand it except to make entries of the dates of holidays or interruptions in service, and shall not keep it for more than a week at a time.

Provided that in the case of a worker who is discharged or dismissed from service during the course of the year i.e., who is covered under sub-section (3) of Section 79 of the Factories Act, 1948, the manager shall issue an abstract from the "Register of Leave with Wages" (Form No. 20) within a week from the date of discharge or dismissal, as the case may be.

(2) If a worker loses his Leave Book, the manager shall provide him another copy on the payment of 50 paise and shall complete it from his record.

110. **Medical Certificate**—If any worker is absent from work and it appears that his absence is due to his illness, he shall, if required by his manager by a notice in writing, submit a medical certificate signed by a registered medical practitioner or by a registered or recognised Valid or Hakim stating the cause of the absence and the period for which the worker is, in the opinion of such medical practitioner, Valid or Hakim, unable to attend to his work.

111. **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 Register of Leave with Wages and the Leave Book in respect of each worker concerned.

112. **Notice by worker—**Before or on the completion of a period of twelve months' continuous service in the factory, as defined in Section 79, a worker may give notice to the manager of his intention not to avail himself of holidays falling due in the following period of twelve months. The manager shall make an entry to that effect in the Leave Book of the worker concerned.

113. **Notice to leave with wages**—(1) Except in regard to a worker who has given notice of his intention not to avail himself of holidays in the year in which these fall due, the manager shall, by a notice displayed at the place at which the notice of the period of work required by Section 61 is displayed, fix the dates on which leave with wages shall be allowed to each worker or group of workers including any worker who has accumulated his leave. This date shall not, in an individual case, be earlier than four weeks from the date of notice unless the worker agrees to take the leave earlier. The necessary entries shall be made in the Register of Leave with Wages and the leave book of the worker concerned.

(2) As far as circumstances permit, members of the same family comprising husband, wife and children shall be allowed leave on the same date.

(3) The manager may earlier alter the dates fixed for leave only after giving a notice of four weeks to the worker.

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

114. **Payment of wages if the worker dies**—If a worker dies before he resumes work, the balance of his pay due for the period of holidays 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. 22 duly signed by himself and attested by who witnesses. The nomination shall remain in force until it is cancelled or revised by another nomination.

115. **Register to be maintained in case of exemption under Section 84**—(1) Where an exemption is granted under Section 84, the manager shall maintain a register showing the position of each worker as regards 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 without its previous sanction.

COMMENTS

Rules 108 115 have been framed under Sections 83 and 112 of the Act.

CHAPTER IX

Special provisions

116. **Dangerous manufacturing processes or operations**—(1) The following manufacturing processes operations when carried on in any factory are declared to be dangerous operations under Section 87:

I. Manufacture of aerated water and processes identical thereto.
II. Electrolytic plating or oxidation of metal articles by use of an electrolyte containing chromic acid or other chromium compounds.
III. Manufacture and repair of electric accumulators.
IV. Glass manufacture.
V. Grinding or glazing of metals.
VI. Manufacture and treatment of lead and certain compounds of lead.
VII. Generating petrol gas from petrol.
VIII. Cleaning or smoothing, roughening, etc., of articles by a jet of sand metal shot or grit or other abrasive propelled by a blast compressed air or steam.
IX. Liming and tanning of raw hides and skins and processes incidental thereto.
X. Certain lead processes carried on in printing press and type foundries.
XI. Manufacture of pottery.
XII. Chemical works.
XIII. Manufacture of articles from refractory materials.
XIV. 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.
XV. Handling or manipulation of corrosive substances.
XVI. Processing of cashew nut.
XVII. Compression of Oxygen and Hydrogen produced by the electrolysis of water.
XVIII. Process of extracting oils and fats from vegetable and animal sources in solvent extraction plants.
XIX. Manufacture or manipulation of manganese and its compounds.
XX. Manufacture or manipulation of dangerous pesticides.
XXI. Manufacture, handling and usage of benzene and substances containing benzene.
XXII. Manufacturing process or operations in carbon disulphide plants.

XXIII. Manufacture of manipulation of carcinogenic dye intermediaries.

(2) The provisions specified in the Schedules annexed hereto shall apply to any class or description of factories wherein dangerous manufacturing processes or operations specified in each Schedule are carried on.

(3) (a) For the medical examination of workers to be carried out by the Certifying Surgeon as required by the Schedule annexed to this rule, the occupier of the factory shall pay fees at the rate of Rupees Five per examination of each worker every time he is examined.

(b) The fees prescribed in sub-rule (3) (a) shall be exclusive of any charges for biological, or other tests which may have to be carried out in connection with the medical examinations. Such charges shall be paid by the occupier.

(c) The fees to be paid for medical examinations shall be paid into the local treasury under the head of account 087—Labour and Employment—E—Fees realised under the Factories Act, 1948.

(4) Notwithstanding the provisions specified in the Schedule annexed to these rules the Inspector may by issue of order in writing to the manager or occupier of both, direct them to carry out such measures and within such time, as may be prescribed in such order with a view to removing conditionals dangerous to the health of the workers, or to suspend any process, where such process constitutes, in the opinion of the Inspector, imminent danger of poisoning or toxicity.

SCHEDULE I

Manufacture of Aerated waters and processes incidental thereto

1. *Fencing of machines*—All machines for filling bottles or siphons shall be so constructed, placed or fence as to prevent, as far as may be practicable, a fragment of a bursting bottle or siphon or from 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 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:

Provided further that where a machine is so constructed that only one arm of the bottle at work upon 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 siphons:

(a) Suitable face-guards to protect the face, neck and throat, and

(b) Suitable gauntlet 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 process, wear the face-guards and gauntlets provided under the provisions of this paragraph.

SCHEDULE II

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

(a) *Definitions*—For the purposes of this Schedule—

(a) "*Electrolytic chromium process*" means the electrolytic plating or oxidation of metal articles by the use of an electrolyte containing chromic acid or other chromium compounds;

(b) "*Bath*" means any vessel used for an electrolytic chromium process or for any subsequent process;

(c) "*Employed*" means in paragraphs 5, 7, 8 and 9 of this Schedule, employed in any process involving contact with liquid from a both; and

(d) "Suspension" means suspension from employment in any process involving contact with liquid from any bath by written certificate in the Health Register (Form No. 24) signed by the Certifying Surgeon, who shall have power of suspension as regards all persons employed in any such process.

(b) *Exhaust draught*—An efficient exhaust draught shall be applied to every vessel in which an electrolytic chromium process is carried on. Such draught shall be provided by mechanical means and shall operate on the vapour of 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.

(c) *Prohibition relating to women and young person*—No woman, adolescent or child shall be employed or permitted to work at a bath.

(d) *Floor of work-rooms*—The floor of every work room containing a bath shall be impervious to water. The floor shall be maintained in good and level condition and shall be washed down at least once a day.

(e) *Protective clothing*—(1) The occupier of the factory shall provide and maintain in good and clean condition the following articles of protective clothing 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 clothing shall be worn by the persons concerned.

(a) Water-proof aprons and bibs, and

(b) For persons actually working at a bath, loose-fitting rubber gloves and rubber boots or other water proof footwear.

(2) The occupier shall provide and maintain for the use of all person employed suitable accommodation for the storage and adequate arrangements for the drying of the protective clothing.

(f) *Cautionary placard*—A cautionary placard in the form specified by the Chief Inspector 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.

(g) *Medical requisites*—The occupier shall provide and maintain a sufficient supply of suitable ointment and impermeable water-proof plaster in a separate box readily accessible to the workers and used solely for the purpose of keeping the ointment and plaster.

(h) *Medical examination*—(1) Every person employed in electrolytic chrome process shall be examined by a Certifying Surgeon within 30 days of his first employment in the said process and if found, fit, shall be granted by the Certifying Surgeon a certificate of fitness in Form 23, and enter the first examination shall be examined by the Certifying Surgeon at intervals of not more than 3 months:

Provided that when Chief Inspector of Factories is of the opinion that conditions of work in the said process are unsatisfactory, he may, by order in writing, require the manager of the factory to have the person employed in the said process medically examined by a Certifying Surgeon at more frequent intervals.

(2) If at any time, the Certifying Surgeon is of opinion that any person is no longer fit for employment in the said process on the grounds that continuance therein would involve special danger to the health of the worker, he shall cancel the certificate of fitness issued to him.

(i) *Weekly examination*—(1) The occupier of every factory shall appoint a qualified medical practitioner where appointment shall be subject to confirmation by the Chief Inspector.

(2) No person shall be employed in electrolytic chrome process unless he has been examined and found fit for the said process by the qualified medical practitioner. Such examination shall include inspection of hands, forearms and nose and will be carried out at intervals of not more than one week. The results of such examination shall be maintained in a health register in Form 24. The register shall be kept by the manager ans shall contain the names of all persons employed in the said process and the certificate of fitness in respect of each person issued by the Certifying Surgeon shall be attached thereto.

(3) If at any time, the qualified medical practitioner is of opinion that any person is no longer fit for employment in the electrolytic chrome process, he shall make a record of his findings in the health register and intimate the manager in writing that the said person in unfit for work in the said process.

(4) No person so found unfit by the registered practitioner shall be sent by the manager to the Certifying Surgeon with a report from the qualified medical practitioner. The Certifying Surgeon after examination may suspend the said person from working in the said process. No person after suspension shall be employed without written sanction from the Certifying Surgeon entered in or attached to the health register.

SCHEDULE III

Manufacture and repair of electric accumulator

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, if 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 oxide of led 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 certificate in the Health Register (Form 6) signed by the Certifying Surgeon, who shall have power of suspension as regards all persons employed in any such process; and
   (d) "First employment" means first employment in a lead process in a factory or workshop and also re-employment there in a lead process following any cessation of employment in such process for a period exceeding three calendar months.
3. *Prohibition relating to women and young person*—No woman 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 any other process:
   (a) Manipulation of raw oxide of lead;
   (b) Pasting;
   (c) Drying of pasted plates;
   (d) Formation with lead burning (tacking) necessarily carried on in connection therewith; and
   (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 14.2 cubic meters of air space for each person employed therein, and in computing this air space no height over 3.65 meters shall be taken into account.
6. *Ventilation*—Every work-room shall be provided with inlets and outlets of adequate size as to secure and maintain efficient ventilation in all 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 work-rooms*—(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 obstruction 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 cleansed daily after being thoroughly sprayed with water at a time when no other work is being on in the room.

   (3) In grid casting stops the floor shall be cleansed daily.

   (4) Without prejudice to the requirements of paragraphs (1), (2) and (3), where manipulation of raw oxide of lead or pasting is carried on, the floor, 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 pipes.
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; and
   (b) Be kept free from all materials or plant not required for, or produced in, the process carried on the thereat;
   and all such work-benches other than those in grid casting shops shall—
   (c) Be 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;
   and all such work-benches in grid casting shops shall—
   (d) Be cleansed daily;
   and every-work bench used for pasting shall—
   (e) Be covered throughout with sheet lead or other impervious materials;
   (f) Be provided with raised edges; and
   (g) Be kept constantly moist while pasting is being carried on.
10. *Exhaust draught*—(1) The following processes shall not be carried on without the use of an efficient exhaust draught;
   (a) Melting of lead or materials containing lead;

(b) Manipulation of raw oxide of lead, unless done in an enclosed apparatus so as to prevent the escapes of dust into the work-room;
(c) Pasting;
(d) Trimming, brushing, filling or any other abrading or cutting of pasted plates giving rise to dust; and
(e) Lead burning, other than—
  i) Tacking in the formation room; and
  ii) Chemical burning for the making of lead lining for cell cases necessarily carried on in such a manner that the application of efficient exhaust is impracticable.

(2) 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 its point of origin, so as to prevent it entering the air of any room in which persons work.

11. *Fumes and gases from melting pots*—The products of combustion produced in the heating of any melting pot shall not be allowed to escape into a room in which persons work.
12. *Container for dross*—A suitable receptable with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptable shall be kept covered while in the work-room, except when dross is being deposited therein.
13. *Container for lead waste*—A suitable receptable shall be provided in every work-room in which old plates and waste material which may give rise to dust shall be deposited.
14. *Racks and shelves in drying room*—(1) The rack or shelves provided in any drying room shall not be more than 2.4 meters from the floor nor more than 60 centimetres in width:
    Provided that as regards racks or shelves set or drawn down from both sides the total width shall not exceed 120 centimetres.
    (2) Such racks or shelves shall be cleansed only after being thoroughly damped unless an efficient suction cleaning apparatus is used for this purpose.
15. *Protective clothing*—(1) Protective clothing shall be provided and maintained in good repair for all persons employed in—
    (a) Manipulation of law oxide of lead;
    (b) Pasting; and
    (c) The formation room;
    and such clothing shall be worn by the persons concerned.

(2) The protective clothing shall consist of a water-proof apron and water-proof footwear; and in addition, as regards persons employed in the manipulation of raw oxide of lead or in pasting, head coverings. The head coverings shall be washed daily.

16. *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, and adequate means for warming food. The mess-room shall be placed under the charge of a responsible person, and shall be kept clean.
17. *Cloak-room*—There shall be provided and maintained for the use of all persons employed in a lead process—
    (a) A cloak-room for clothing put off during working hours with adequate arrangements for drying the clothing if wet, which accommodation shall be separated from any mess-room;
    (b) Separate and suitable arrangements for the storage of protective clothing provided under paragraph 15.
18. *Washing facilities*—(1) 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 under cover, 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 centimetres for every five such persons employed at any one time, an 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 five such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water laid on;

(b) A sufficient supply of clean towels made of suitable materials renewed daily, which supply, in the case of pasters and persons employed in the manipulation of raw oxide of lead, shall include a separate marked towel for each such worker; and

(c) A sufficient supply of soap or other suitable cleansing material and of nail brushes.

(2) There shall, in addition, be provided means of washing in close proximity to the rooms in which manipulation of raw oxide of lead or pasting is carried on if required by notice in writing from the Chief Inspector.

19. *Time to be allowed for wishing*—Before each meal and before the end of day's work, at least ten minutes, in addition to the regular meal time, shall be allowed for washing to each person who has been employed in the manipulation of raw oxide of lead or in pasting:

Provided that if there be one basin or 60 centimetres of trough for each such person this rule shall not apply.

20. *Facilities for bathing*—Sufficient bath accommodation to the satisfaction of the Chief Inspector shall be provided for all persons engaged in the manipulation of raw oxide of lead or in pasting and a sufficient supply of soap and clean towels.

21. *Food, drinks, etc., prohibited in work-rooms*—No food, drink, pan and supari or tobacco be consumed or brought by any worker into any workroom in which any lead process is carried on.

22. *Medical examination*—(1) Every person employed in a lead process shall be examined by the Certifying Surgeon within seven days preceding or following the date of his first employment in such process and thereafter shall be examined by the Certifying Surgeon once in every calendar month, or at such other interval as may be specified in writing by the Chief Inspector, on a day of which due notice shall be given to all concerned.

(2) A Health Register in Form No. 6 containing the names of all person employed in a lead process shall be kept.

(3) 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

Glass manufacture

1. *Definitions*—For the purposes of this Schedule—

(a) "*Efficient exhaust draught*": means localised ventilation affected 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 in carried on. No draught shall be deemed efficient which fails to remove smoke generated at the point where such gas, vapour, fume, or dust originates.

(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 and 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.

The method of treatment shall be as follows:

A weighted quantity of the material which has been dried at 100 degrees

C and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an aqueous solution of hydrochloric acid containing 0.25 per cent by weight of hydrogen chloride. This solution shall thereafter be allowed to stand for one hour and then filtered. The lead salt contained in the clear filtrate 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 the Health Register Form No. 6 signed by the Certifying Surgeon who shall have power of suspension as regards all persons employed in any such process.

2. *Exhaust draught*—The following processes shall not be carried on except under an efficient exhaust draught or under such other conditions as may be approved by the Chief Inspector:
   (a) The mixing of raw materials to form a "batch";
   (b) The dry grinding, glazing and polishing of glass or any article of glass;
   (c) All processes in which hydrochloric acid fumes or ammoniac vapours are given off;
   (d) All processes in the making of furnace moulds or "pots" including the grinding or crushing of used "pots"; and
   (e) All processes involving the use of a dry lead compound.
3. *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 2 or at any place where such operations are carried on.
4. *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:
   (a) The floor shall be—
      i) Of cement or similar material so as to be smooth and impervious of water;
      ii) Maintained in sound condition; and
      iii) Cleansed daily after being thoroughly sprayed with water at a time when no other work is being carried on in the room; and
   (b) The work-benches shall—
      i) Have a smooth surface and be maintained in sound condition; and
      ii) Be 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.
5. *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 be covered with guttaparcha and be tight and shall slope gently down to a covered drain;
   (c) The work-place shall be so enclosed in projecting hoods that openings required for bringing in the objects to be treated shall be as small as practicable; and
   (d) The efficient exhaust draught shall be so contrived that the gases are exhausted downwards.
6. *Storage and transport of hydrofluoric acid*—Hydrofluoric-acid shall not be stored or transported except in cylinder or receptacles made of lead or rubber.

7. *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 sterilising his blow pipe.
8. *Food, drinks, etc., prohibited in workroom*—No food, drink, pen and supari or tobacco shall be brought into or consumed by any worker in any room or work-place wherein any process specified in paragraph 2 is carried on.
9. *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 2 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.
10. *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 process specified in paragraph 20—
    (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 centimetres 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 five such persons employed at any one time, fitted with a waste pipe and a plug and having an adequate supply of water laid on or always readily available;
    (b) A sufficient supply of clean towels made of suitable material renewed daily with a sufficient supply of soap or other suitable cleaning material and of nail brushes; and
    (c) A sufficient number of stand pipes with taps—the number and location of such stand pipes shall be to the satisfaction of the Chief Inspector.
11. *Medical examination*—(1) Every person employed in any process specified in Paragraph 2 shall be examined by the Certifying Surgeon within seven days preceding or following the date of his first employment in such process and thereafter shall be 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.
    (2) A Health Register in Form No. 6 containing the names of all persons employed in any process specified in Paragraph 2 shall be kept.
    (3) No person after suspension shall be employed in any process specified in Paragraph 2 without written sanction from the Certifying Surgeon entered in or attached to the Health Register.
12. *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, by certificate in writing, authorise such suspension or relaxation, as may be indicated in the certificate for such period and on conditions as he may think fit.

SCHEDULE

Grinding or glazing of metals and processes incidental thereto

1. *Exception*—(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 metal carried on intermittently and at which no person is employed for more than 12 hours in any week.

2. *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 to 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 track or similar tool; and
   (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.
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;
   (b) A dust 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 dust; and
   (c) An 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 efficient for the interception, removal and disposal of dust thrown off as a hood, duct and fan would be.
4. *Restriction of 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 an adequate supply of water is laid on at the upper surface of the grindstone, or adequate for the interception of dust are provided in accordance with the requirements of paragraph 3.
7. *Examination of dust equipment*—(1) All equipments for the extraction or suppression of dust shall at least once in every months be examined and tested by a competent person, and any defect disclosed by such examination and test shall be rectified as soon as practicable.

(2) A register containing particulars of such examination and test shall be kept in Form No. 25.

8. *Examination*—The Chief Inspector may, by certificate in writing subject, to such conditions as he may specify therein, relax or suspend any of the provisions of this Schedule in respect of any factory if owing to the special methods of work or otherwise such relaxation or suspension is practicable without danger to the health or safety of the person employed.

SCHEDULE VI

Manufacture and treatment of lead and certain compounds of lead

1. *Application*—This Schedule shall apply to all factories or parts of factories in which any of the following operations are carried on:
   (a) Work at a furnace where the reduction or treatment of zinc or lead ores is carried on.
   (b) The manipulation, treatment or reduction of ashes containing lead, the desilverising of lead or the melting of scrap lead or zinc.
   (c) The manufacture of solder or alloys containing more than ten per cent of lead.
   (d) The manufacture of any oxide, carbonate, sulphate, chromate, acetate, nitrate or silicate of lead.
   (e) The handing or mixing of lead tetra-ethyl.
   (f) Any other operation involving the use of a lead compound.
   (g) The cleaning of work-rooms where any of the operations aforesaid are carried on.
2. *Definitions*—For the purposes 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 acqueous 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 100^0 C and thoroughly mixed shall be continuously shaken for one hour, at the common temperature with 1,000 times its weight of an acqueous 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. This lead salt contained in the clear filtrate shall then be precipitated as lead sulphide 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, fumes or dust originate.
3. *Prohibitions 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 1.

4. *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 person employed therein are liable to be splashed with any lead compound in the course of their employment unless the provisions of paragraph 6 to 14 are complied with.
5. *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 so contrived as to operate on the dust, fume, gas or vapour as closely as possible to the point of origin.
6. *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 work-room in which the process is carried on and no person shall remain in any such room during intervals for meals or rest.
7. *Protective clothing*—Suitable protective overalls and head coverings shall be provided, maintained and kept clean by the factory occupier and such overalls and head coverings shall be worn by the person employed.
8. *Cleanliness, of work rooms, tools, etc*—The rooms in which the persons are employed and all fools and apparatus used by them shall be kept in a clean state.
9. *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 smooth impervious surface fitted with a waste pipe without plug and of sufficient length to allow at least 60 c.m. for every ten 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 c.m. ; 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 and clean towels.

   (2) The facilities so provided shall be placed under the charge of a responsible person and shall be kept clean.
10. *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 workroom which shall be furnished with sufficient tables and benches, and unless a canteen serving hot meals is provided, adequate means of warming food. The room shall be adequately by the circulation of fresh air, shall be placed under the charge of a responsible person and shall be kept clean.
11. *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.
12. *Certificate of fitness*—A person medically examined under Paragraph 13 and found fit for employment shall be granted by a Certifying Surgeon a certificate of fitness in Form No. 26 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.

13. *Medical examination*—(1) The person so employed shall be medically examined by a Certifying Surgeon within 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 12.

    (2) It 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 heath, 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.

14. *Exemptions*—Where the Chief Inspector is satisfied that all or any of the provisions of this Schedule are not necessary for the protection of the persons employed, he may, by certificate in writing, exempt any factory from all or any of such provisions, subject to such conditions as he may specify therein.

SCHEDULE

Generating petrol gas from petrol

1. *Prohibition relating to women and young person*—No woman or young person shall be employed or permitted to work in or shall be allowed to enter any building in which the generation of gas from dangerous petroleum is carried on
2. *Flame traps*—The plant for 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 from leaks.
3. *Generating building or room*—All plants for 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 the "generating building"). In the case of such plant erected before the coming into force of the provisions specified in this Schedule there shall be no direct communication between the room where such plants are erected (hereinafter referred to as the "generating room") and the remainder of the factory building. So far as practicable, such generating rooms shall be constructed of fire-resisting materials.
4. *Fire extinguishers*—An efficient means of extinguishing fires from dangerous petrol shall be maintained in an easily accessible position near the plant for generation of gas from dangerous petroleum.
5. *Plant to be approved by Chief Inspector*—Petrol gas shall not be manufactured except in a plant for generating petrol gas the design and construction of which has been approved by the Chief Inspector.
6. *Escape of petrol*—Effective steps shall be taken to prevent petrol 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 spark in the generating room or building or in the vicinity thereof and warning notice in the language understood by the majority of the workers shall be pasted 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 danger petrol or container*—No unauthorised person shall have access to any petrol or to a vessel containing or having actually contained 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 constructed to open outwards or to slide and no door shall locked or obstructed or fastened in 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 petrol shall be required in a generating room or building and no repairs to any such vessel shall be undertaken unless live steam has blown into the vessel and until the interior is thoroughly steamed out or other equally effective steps have been taken to ensure that it has been rendered free from petrol or inflammable vapour.

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

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 as an abrasive of a jet of sand, metal shot, 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 casting*" where done as an incidental or supplement process in connection with the making or metal castings, means the freeing of the casting, from adherent sand or other substance and includes the removal of cores and the general smoothing of a casting, bur 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.

PRECAUTIONS IN CONNECTION WITH BLASTING OPERATION

3. *Blasting to be done in blasting enclosure*—(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 plants 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) 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) 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) There shall be provided and maintained in connection with every blasting enclosure efficient ventilating plant to extract by exhaust draught affected 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 any room; and every other filtering or setting device situated in a room in which persons are employed, other than persons attending to such bag or other filtering or setting device, shall be completely separated from the general air of that room in an enclosure ventilated to the open air.

(5) 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 a 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 forth while 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 his use while 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 170 litres 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 so 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 paragraph 5, and with the removal of dust from filtering or setting devices all practicable measures shall be taken to dispose of the dust in such a manner that it does not enter the sir 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 paragraph 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 clothing provided and worn for the purpose of this schedule, shall be kept in good condition and so far as is reasonably practicable shall be cleaned on every week day 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 person's*—(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 6.0960 meters 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 supplement to making of metal castings) and that the manufacture or process cannot be carried on without the use of such abrasive or that owing to the special conditions or special method of work or otherwise any requirement of this Schedule can be suspended either temporarily or permanently, or can be relaxed without endangering the health of the persons employed or that application of any 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 provision 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-paragraph (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 warning notice as to anthrax in the form specified by the Chief Inspector shall be given to each 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 notices specified in sub-paragraphs (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) A waterproof footwear, leg coverings, aprons and rubber 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 or skins other than in processes specified in Clause (a):

   Provided that the gloves, aprons leg coverings or boots may be of rubber or leather, but the gloves and boots to be provided under sub-paragraphs (a) and (b) shall be of rubber;

   Provided that the gloves may not be provided to persons fleshing by hand or employed in processes in which there is no risk of contact with lime, sodium sulphide or other caustic liquor.

3. *Washing facilities, mess-room and clock-room*—There shall be provided and maintained in a cleanly 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 persons employed at any one time, and having a constant supply of water from laps or jets above the trough at intervals of not more than 60 centimetres; or at least one wash basin for every ten such persons employed at any one time, fitted with a waste pipe and plug and having a constant supply of water together with, in either case, a sufficient supply of nail brushes, soap or other suitable cleaning material and clean towels;
   (b) A suitable mess-room, adequate for the number remaining on the premises during the meal intervals, which shall be furnished with (1) sufficient tables and benches, and (2) adequate means for warming food and for boiling water;

   The mess-room shall—
      i) Be separate from any room or shed in which hides or skins are stored, treated or manipulated;
      ii) Be placed under the charge of a responsible person; and

(c) Suitable accommodation for clothing put off during working hours and another accommodation for protective clothing and with adequate arrangements for drying up, the clothing 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 work-rooms*—No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work-room or shed in which hides or skins are stored, 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 solutions to be made twice a week by a responsible person; and
   (b) Provide and maintain a sufficient supply of suitable ointment and impermeable waterproof plaster in a box readily accessible to the worker and used solely for the purpose of keeping the ointment and plaster.

SCHEDULE X

Printing presses and type foundries and certain lead processes carried therein

1. *Definitions*—For the purposes of this Schedule—
   (a) "*Lead materials*" means materials containing not less than five per cent of lead;
   (b) "*Lead process*" means—
      i) The melting of lead or any lead material for casting and mechanical composing; and
      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 heat or mechanical means, for the removal of gas, vapour, dust, or fumes so as to prevent them from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which fails to remove gas, vapour, fume or dust at the point where they originate.
2. *Exhaust draught*—(1) None of the following processes shall be carried on except with an efficient exhaust draught or, unless carried on in such a manner as to prevent free escape of gas, vapour, fumes or dust into any place in which work is carried on or, unless carried on in electrically heated and thermostatically controlled melting pots—
   (a) Melting lead material; or slugs; and
   (b) Heating lead material so that vapour containing lead is given off;
   (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.
3. *Prohibition relating to women and young person*—No woman or young person shall be employed or permitted to work in any lead process.
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 any other process:
   (a) Melting of lead or any lead material;
   (b) Casting of lead ingots; and
   (c) Mechanical composing.

5. *Container for dross*—A suitable receptacle with tightly fitting cover shall be provided and used for dross as it is removed from every melting pot. Such receptacle shall be kept covered while in the work-room near the machine except when the dross is being deposited therein.
6. *Floor of work-room*—The floor of every work-room 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) Shall be cleansed throughout daily after being thoroughly damped with water at a time when no other work is being carried on at the place.
7. *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.
8. *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 60 cms, 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
      iii) A sufficient supply of clean towels made of suitable material renewed daily with a sufficient supply of soap or other suitable cleansing material.
9. *Food, drinks, etc., prohibited in work-room*—No Food, drinks, pan and supari or tobacco shall be consumed or brought by any worker into any work-room in which any lead process is carried on.
10. *Medical examination*—(1) Every person employed in lead process shall be examined by the Certifying Surgeon within 14 days of his first employment in such processes and thereafter shall be 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 No. 26.
    (2) A Health Register containing names of all persons employed in any lead process shall be kept in Form No. 6.
    (3) No person after suspension shall be employed in a lead process without the written sanction from the Certifying Surgeon, entered in the Health Register.
11. *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 of such provisions subject to such conditions as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector.

SCHEDULE XI
Manufacture of pottery

1. *Savings*—These provisions shall 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.

2. *Definitions*—For the purposes of this Schedule—

(a) "*Pottery*" includes earthenware, stoneware, porcelain, china tiles and any other articles made from clay or from a mixture containing clay and other materials such as quartz, flint, filedspar and gypsum;

(b) "*Efficient exhaust draught*" means localised ventilation effected by mechanical or other means for the removal of dust or fume so as to prevent it from escaping into the air of any place in which work is carried on. No draught shall be deemed efficient which falls to remove effectively dust or fumes generated at the point where dust or fume originates;

(c) "*Fettling*" includes scalloping, towing, and 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 100^0 centigrade 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 be precipitated as lead sulphide and weighed as lead sulphate.

(f) "*Ground or powdered flint or quartz*" does not include natural sands; and

(g) "*Pottery shop*" includes all places where pottery is formed by pressing or by any other processes and all places where shaping, fettling or other treatment of pottery articles prior for the biscuit fire is carried on.

3. *Efficient exhaust draught*—The following processes shall not be carried on without the use of an efficient exhaust draught;

(a) All processes involving the manipulation or use of a dry and unfritted lead compound.

(b) Fettling operations of any kind, whether on greenware or biscuit; provided that this shall not apply to the wet fettling, and to the occasional finishing of pottery articles without the aid of mechanical power;

(c) The shifting of clay dust or any other materials for making tiles or other articles by pressure, except where—

i) This is done in a machine so enclosed as to effectually prevent the escape of dust; or

ii) The material to be sifted is so damp that no dust can be given off;

(d) Pressing of tiles from clay dust, an exhaust opening being connected with each press; and the pressing from clay dust of articles other than tiles, unless the material is so damp that no dust is given off;

(e) Fettling of tiles made from clay dust by pressure, except where the fettling is done wholly on, or with damp material; and the fettling of other articles made from clay dust, unless the material is so damp that no dust is given off;

(f) Process of loading and unloading of saggars where handling and manipulation ground and powdered flint, quartz, alumina or other materials are involved;

(g) 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;

(h) 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;

(i) Ware cleaning after the application of glaze by dipping or other process.

(j) 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;

(k) 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;

(l) Grinding if tiles on a power driven wheel unless an efficient water spray is used on the wheel;

(m) Lifting and conveying of materials by elevators ad 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;

(n) The preparation or weighing out of flow material, lawning of dry colours, colour dusting and colour blowing;

(o) In mould making unless the bins or similar receptacles used to holding plaster of paris are provided with suitable covers ; and

(p) The manipulation of calcined material unless the material has been made and remains so wet that no dust is given off.

4. *Separation of processes*—Each of the following processes shall be carried on in such a manner and under such conditions so as to secure effectual separation from one another wet process—

(a) Crushing and dry grinding or sleving of materials, fettling pressing of tiles, drying of clay and greenware, loading and unloading of saggars;

(b) All processes involving the use of dry lead compound.

5. *Prohibition on use of glaze*—No glaze which is not a leadless glaze or low solubility glaze shall be used in a factory in which pottery is manufactured.

6. *Prohibition relating to women and young person*—No woman and young person shall employed or permitted to work in any of the operations specified in paragraph 4 or at any place where such operations are carried on.

7. *Provision of screen to potter's wheels*—The potter's wheel (Jolly and Jaggers) shall be provided with screens or so constructed as to prevent clay scrapping being thrown off beyond the wheel.

8. *Control of dust during cleaning*—(1) All practical measures shall be taken by damping or otherwise to prevent dust arising 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.

9. *Floor of certain workrooms*—The floors of potter's shops. Slip houses, dipping houses ware cleaning rooms shall be hard, smooth and impervious and shall be thoroughly daily by an adult male using a moist method.

10. *Protective equipment*—(1) The occupier shall provide and maintain suitable overalls and head coverings for all persons employed in process included under paragraph 3.

(2) The occupier shall provided and maintain suitable aprons of a waterproof or similar material, which can be sponged daily for the use of the dippers, dippers assistants, throwers, jolly workers, casters, mould makers and filter press and pug mill workers.

(3) Aprons provided in pursuance of paragraph 10 (2) shall be thoroughly cleaned daily by the wearers by sponging or other wet process. All overalls and head coverings shall be washed cleansed 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 dusty materials, weighing out and mixing of dusty materials and charging of ball mills and plungers without wearing a suitable and efficient dust respirator.

11. *Washing facilities*—The occupier shall provide and maintain, in a cleanly state and in good repair for the use of all persons employed in any of the processes specified in paragraph 3—
   (a) A wash place under cover, with either—
      i) A trough with smooth impervious surface fitted with a waste pipe without plug, and of sufficient length to allow at least two feet for every five such persons employed at any time, and having a constant supply of clean water from taps or jets above the trough at intervals of not more than two feet; or
      ii) At least one tap or stand pipe for every five such persons employed at any one time, and having a constant supply of clean water, the tap or stand pipe being spaced not less than 4 feet apart; and
   (b) A sufficient supply of clean towels made of suitable material changed daily, with sufficient supply of nail brushes and soap.
12. *Time allowed for waiting*—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 paragraph 3.
13. *Mess-room*—(1) There shall be provided and maintained for the use of all persons remaining within the premises during the rest intervals, a suitable mess-room providing accommodation of 0.93 square meter per head and 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; and
      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.

14. *Food, drinks, etc., prohibited in work-room*—No food, drink, pan and supari or tobacco shall be brought into or consumed by any worker in any work-room in which any of the processes mentioned in paragraph 3 are carried on and no person shall remain in any such room during intervals for meal or rest.
15. *Cloak-room*—There shall be provided and maintained for use of all persons employed in any of the processes mentioned in Clause 2—
   (a) A cloak-room for clothing put off during working hours and such accommodation shall be separate from any mess-room; and
   (b) Separate and suitable arrangements for the storage of protective equipment provided under paragraph 10.

16. *Medical examination*—(1) All persons employed in any process included under paragraph 3 shall be examined by the Certifying Surgeon within 7 days preceding or following the date of their first employment in such process; thereafter all persons employed in any process included under sub-paragraphs 3 (i) and (xiv) shall be examined by the Certifying Surgeon once in every three calendar months, and those employed in any process included in sub-paragraph 3 (ii) to (xiii) and (xv) and (xvi) once in every 12 months by the Certifying Surgeon. Records of such examinations shall be entered by the Certifying Surgeon in the Health Register and certificate of fitness granted to him under paragraph 17.
17. *Certificate of fitness*—A person medically examined under paragraph 16 and found fit for employment shall be granted by the Certifying Surgeon a certificate of fitness in Form 26 and such certificate shall be in the custody of the manager of the factory. The certificate shall be 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.
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 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 XII
Chemical works

1. *Application*—This Schedule shall apply to all manufacture and processes incidental thereto carried on in chemical works.
2. *Definitions*—For the purposes of this Schedule—
   (a) '*Chemical works*' means any factory or such parts of any factory as are named in Schedule (1) to these Rules;
   (b) '*Breathing Apparatus*' means (i) a helmet or face-piece with necessary connections by means of which a person using it in a poisonous asphyxiating or irritant atmosphere breathes ordinary air, or (ii) any other suitable apparatus approved in writing by the Chief Inspector;
   (c) '*Life-belt*' means a belt made of leather or other suitable materials which can be securely fastened around the body, with a suitable length of rope attached to it, each of which is sufficiently strong to sustain the weight of a man;
   (d) '*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 out;
   (e) '*Suspension*' means suspension by written certificate in the Health Register signed by the Surgeon, from employment in any process mentioned in the certificate;
   (f) '*Bleaching powder*' means the bleaching powder commonly called chloride of lime;
   (g) '*Chlorate*' means chlorate or perchlorate;
   (h) '*Caustic*' means hydroxide of potassium or sodium;
   (i) '*Caustic pot*' means a metal pot fixed over a furnace of flue and surrounded by brick-work such as is commonly used for concentrating caustic liquor, whether such pot be used for concentrating or boiling caustic or other luquor;

(j) '*Chrome process*' means the manufacture of chromate or bichromate of potassium or sodium, or the manipulation movement or other treatment of these substances in connection with their manufacture; and

(k) '*Nitro or Amino-process*' means the manufacture of nitro or amino derivatives of phenol and of benzene or its homologues, and the making of explosive with the use of any of these substances.

PART 1
APPLYING TO ALL THE WORKS IN APPENDIX A
A—GENERAL

3. *House-keeping*—(1) Every part of the ways, works, machinery and plant shall be maintained in a clean and tidy condition.

   (2) Any spillage of materials shall be cleaned up without delay.

   (3) Floors, platforms, stairways and gangways shall be kept free of temporary obstructions.

   (4) There shall be provided easy means of access to all parts of the plant to facilitate cleaning, maintenance and repairs.

4. *Improper use of chemicals*—(a) No chemicals or solvents shall be used by workers for any purpose apart from the processes for which they are supplied.

   (b) Workers shall be instructed on the possible dangers arising from such misuse. These instructions shall further be displayed in bold letters in prominent places in different sections.

5. *Storage of food*—No food, drink, tobacco, pan or similar articles shall be stored or consumed on in near any part of the plant.

6. *Testing of materials*—Workers shall be instructed on the possible dangers arising from the testing of materials, or of the use for drinking purposes of any vessel used in, or in connection with the manufacture of chemicals. These instructions shall further be displayed in bold letters in prominent places in the different sections.

7. *Process hazards*—(1) Before commencing any large scale experimental work, or any new manufacture, all possible steps shall be taken to ascertain definitely all the hazards involved both from the actual operations and the chemical reactions. The properties of the raw materials used, the final products to be made, and any by-products arising manufacture, shall be carefully studied and provisions shall be made for dealing with any hazards including effects on workers, which may arise during manufacture. Where necessary, advice shall be obtained from the Chief Inspector of Factories on measures to be taken in this regard.

   (2) Information in writing giving details of the process, its hazards and the steps taken or proposed to be taken for the safety of workers as in (1) above should be sent to the Chief Inspector before commencing manufacture, handling or storage of any of the items covered under Appendix A, whether on experimental, pilot plant or large plant scale basis.

   (3) The design of the buildings and plant shall be based on information so obtained as in (1) above.

8. *Unauthorised personnel*—(1) Unauthorised persons shall not be permitted to enter any section of the factory or plant where there are special dangers.

   (2) Visitors—Visitors shall be provided, where necessary, with suitable safety equipment and shall be accompanied round dangerous plant by a responsible official.

9. *Instrument*—All instruments, such as pressure gauges, thermometers, flow meters and weighing machines shall be tested at regular intervals by a competent person, and records of these tests shall be kept in a register.

10. *Cocks and valves*—Suitable valves shall be provided in all service lines at sufficiently short intervals for conveyance in blanking off, etc. All cocks and valves shall be operated at least once a month, and tested periodically by a competent person, and records of these tests shall be kept in a register. A plan of all service installations shall be kept readily available for perusal.
11. *Manhole*—No manhole shall be opened for entry until effective fencing has been erected around it.
12. *Emergency instruction*—Simple and special instructions shall be framed to ensure that effective measures will be carried out in cases of emergency, to deal with escapes of inflammable, poisonous of deleterious gases, vapours, liquids, or dusts. These instructions shall further be displayed in bold letters in prominent places in the different sections. All workers shall be trained and instructed in the action to be taken in such emergencies, and the general hazards of their employment.
13. *Protection of reaction mixtures*—Suitable arrangements shall be made to ensure that foreign matter of any sort can fall into reaction mixtures.
14. *Electrical apparatus*—Electrical plant, fitting, and conductors, shall, if exposed to a damp or corrosive atmosphere, be adequately protected. Periodic tests shall be carried out on all circuits.
15. *Place of work*—(a) Workers shall only be allowed in those places in which they have been given orders to work.
    (b) In dangerous sections of a factory, the number of workers shall be kept to a minimum compatible with the need of the process.
16. Packing, storage and transport of chemicals—Chemicals shall be packed and stored in containers suitable for the purpose and of adequate strength or storage of transport. All such containers shall be suitably labelled so that they will be stored and transported in suh a manner as to ensure that in the event of a spillage, they will neither produce a reacting mixture, nor cause the development of toxic or fire risks in contact with other products in its vicinity, or with walls, floors, or dust thereon.

B—FIRE AND EXPLOSION RISKS

17. Requirements regarding location of site, buildings, etc—Buildings and plants shall be sited with due regard to the dangers which may arise from the processes involved, and in particular shall be spaced at distances which are deemed safe from the fire and explosive risks connected with the processes in adjacent buildings. Due consideration shall be given to the effect of any processes carried out in adjacent factories.
    (2) Where special dangers exist, separate buildings shall be used for the different parts of a process. They shall be placed at sufficient distances apart and shielded to prevent damage to each other in the event of fire or explosion, and shall be safeguarded by the provision of suitable blow-out panels or roofs. Where the risk of fire or explosion is considerable the building shall be divided by blast or protective screen walls.
    (3) *Fire resistance*—No combustible materials shall be used in the erection of working buildings, unless there are special reasons necessitating their use, when they shall be rendered fire resistant. The roof shall be of light fire-resistant construction and floor shall be of impervious, fire-resistant material and shall be regularly maintained in such condition.
18. *Dangers of ignition (including lighting installation)*—(1) No internal combustion engine, and no electric motor or other electric equipment, and fittings and fixtures capable of generating sparks or otherwise causing combustion shall be installed or used in a building or danger zone. Electrical conductor shall be fitted with screwed steel conduit.

(2) All hot exhaust pipes shall be installed outside a building and other hot pipes shall be suitably protected.

(3) Portable electric hand lamps shall not be used unless of an intrinsically safe type, and portable electric tools connected by flexible wires shall not be used, unless of the flame-proof type.

(4) Where an inflammable atmosphere may occur the soles of footwear worn by workers shall have no metal on them, and the wheels of trucks of conveyors shall be of conducting non-sparking materials. Adequate precautions shall be taken to prevent the ignition of explosive or inflammable substance by sparks emitted from locomotives or other vehicles operated in the factory or on public lines.

(5) No electric are lamps, or naked light, fixed or portable, shall be used, and no person shall have in his possession any matches or any apparatus of any kind for producing naked light or spark in or on, or about any part of the factory where there is liability to fire or explosion from inflammable gas, vapour or dust and all incandescent electric lights in such parts shall be in double air-tight glass covers.

(6) Prominent notices in the language understood by the majority of the workers and legible by day and by night, prohibiting smoking, the use of naked light, and the carrying of matches or any apparatus for producing a naked light or spark, shall be affixed at the entrance of every room or place where there is the risk of fire or explosion from inflammable gas, vapour or dust. In the case of illiterate workers, the contents of the notices shall be fully and carefully explained to them when they commence work in the factory for the first time and again when they have completed one work at the factory.

(7) *Non-sparking tools*—A sufficient supply of spades, scrapers and pails made from non-sparking material shall be provided for the use of persons employed in cleaning out or removing residues from any chamber, still, tank, or other vessel where an inflammable or explosive danger may occur.

Note—The risk is not always obvious and may arise, for example, through the production of hydrogen in acid tanks.

19. *Static electricity*—(1) All machinery and plant, particularly pipe lines and belt drives, on which static electricity is likely to accumulate shall be effectively earthed. Receptacles for inflammable liquids shall have metallic connections to the earthed supply tanks to prevent static sparking. Where necessary, humidity shall be controlled.

    (2) Mobile tank wagons shall be earthed during filling and discharge and precautions shall be taken to ensure that earthing is effective before such filling or discharge takes place.

20. *Lighting protection*—Lighting protection apparatus shall be fitted where necessary and shall be maintained in good condition.

21. *Process heating*—The method of providing heat for a process shall be as safe as possible and where the use of naked flame is necessary, the plant shall be so constructed as prevent any escaping inflammable gas, vapour or dust coming into contact with the flame, or exhaust gases or other hot agency likely to cause ignition. So far as practicable, the heating medium shall be automatically controlled at a pre-determined temperature below the danger temperature.

22. *Escape of materials*—(1) Provision shall be made in all plants, sewers, drains, flues, ducts, culverts and buried pipes to prevent the escape and spread of any liquid, gas, vapour, fume or dust likely to give rise to fire or explosion, both during normal working and in the event of accident or emergency.

(2) If escape occurs, such substances shall be removed expeditiously and efficiently at the point of liberation. The effluents shall be trapped and rendered safe outside the danger area.

23. *Leakage of inflammable liquids*—(1) Provision shall be made to confine by means of bund walls, sumps, etc., possible leakages from vessels containing inflammable liquids.

    (2) Adequate and suitable fixed fire-fighting appliances shall be installed in the vicinity of such vessels.

24. *Cleaning of empty container, etc*—(1) All empty containers which have held inflammable liquids, and metal containers which have held sulphuric acid shall be rendered permanently safe as soon as practicable and shall not be repaired or destroyed until such cleaning has been completed.

    (2) *Storage of combustible materials*—Combustible and inflammable materials shall not be stored in close proximity to chemicals which are liable to cause ignition.

    (3) Rubbish shall be removed from building without delay and placed in special metal containers provided with close fitting lids. The contents shall be removed daily and suitably dealt with Waste products containing inflammable or explosive materials shall not be placed on rubbish heaps but shall be destroyed in an appropriate manner.

25. *Installing of pipe lines for inflammable liquids*—All pipe lines for the transport of inflammable liquids shall be protected from breakage, shall be arrange so that there is no risk of mechanical damage from vehicles and shall be so laid that they drain throughout without the collection of deposits at any part. All flanged joints, bends and other connections shall be regularly inspected. Cocks and valves shall be so constructed that explosive residues cannot collect therein. The open and closed positions of all cocks and valves shall be clearly indicated on the outside.

26. *Packing of reaction vessels*—Packing and jointing materials for reaction vessels (including covers, manhole covers, and exhaust pipes) and in pipe lines and high or low temperature insulating material shall not contain materials which are combustible or which react with the products of the plant.

27. *Safety valves*—Every still and every closed vessel in which gas is evolved or into which gas is passed, and in which the pressure is liable to rise to a dangerous degree, shall have attached to it a pressure gauge, and a proper safety valve or other equally efficient means to relieve the pressure, maintained in good condition. Nothing in these rules shall apply to metal bottles or cylinders used for the transport of compressed gases.

28. *Vigorous or delayed reactions*—Suitable provision, such as automatic and distant control shall be made for controlling the effects of unduly vigorous or delayed reactions. Automatic flooding or blanketing shall be provided for in the event of an accident.

29. *Examination, testing and repair of plant*—Examination, testing and repair of plant parts which have been in contact with explosive and inflammable materials, or which is under pressure, shall only be carried out under proper supervision.

30. *Alarm systems*—(1) Gravity or pressure feed systems of supplying inflammable materials to the various parts of the buildings or plant shall be fitted with alarm systems, automatic cut-offs or other devices to prevent over-charging or otherwise endangering the plant.

    (2) The amount of inflammable material taken into a building in bulk containers at any one time shall be kept as low as practicable.

    (3) Adequate steps shall be taken to prevent the escape of inflammable and explosive vapours from any container into the atmosphere of any building.

C—GAS, VAPOUR, FUME OR DUST RISKS

31. *Escape of gases, etc*.—(1) Effective step shall be taken to prevent the escape of dangerous gases, vapours, fumes or dust from any part of the plant by the total enclosure of the process involved or by the provision of efficient exhaust draught. Effective arrangements shall be made to ensure that in the event of failure of the control measure provided in compliance of the foregoing, the process shall stop immediately.

(2) In the event of any such escape, provision shall be made to trap the materials and render them safe.

32. *Danger due to effluents*—(1) Adequate precautions shall be taken to prevent the mixing of effluents which may cause dangerous or poisonous gases to be evolved.

(2) Effluents which may contain or give rise in the presence of other effluents to such gases shall be provided with independent drainage system to ensure that they may be trapped and rendered safe.

33. *Staging*—(1) Staging shall not be erected over any open vessel unless the vessel is so constructed and ventilated as to prevent the emission of vapour or fumes about such staging

(2) Where such staging is provided to give access to higher levels in large plants, effective means shall be provided at all levels with direct means of access to the outside of the room or building and hence to ground level.

(3) Such staging shall be fitted with suitable handrails and toeboards and the floors and staging shall be impervious and easily cleaned.

34. *Instructions as regards risk*—Before commencing work, every worker shall be fully instructed on the properties of the materials they have to handle, and of the dangers arising from any gas, fume, vapour or dust which may be evolved during the process. Workers shall also be instructed in the measures to be taken to deal with such an escape in the event of emergency.

35. *Breathing apparatus*—(1) There shall be provided in every factory where dangerous gas or fume is liable to escape sufficient supply of—

(a) Breathing apparatus of an approved make for the hazards involved;

(b) Oxygen and suitable means of its administration; and

(c) Life-belts.

(2) The breathing apparatus and other appliances required by this rule shall--

i) Be maintained in good order and kept in an ambulance room or in some other place approved in writing by the Chief Inspector; and

ii) Be thoroughly inspected once in every month by a competent person, appointed in writing by the occupier, and a record of their condition shall be entered in a book provided for that purpose, which shall be produced when required by an Inspector.

(3) Workers shall be trained, and given a periodic refresher course in the use of breathing apparatus and respirators.

(4) Respirators shall be kept properly labelled in clean dry light-proof cabinets, and if liable to be affected by fumes shall be protected by suitable containers. Respirators shall be dried and cleaned after use and shall be periodically disinfected.

36. *Treatment of persons*—In very room or place whenever required in writing by the Chief Inspector there shall be affixed official cautionary notice regarding gasing and burns. Such notice shall be legible by day and by night and shall be printed in the language understood by the majority of the workers.

37. *Personal protective equipment*—(1) Suitable protective clothing shall be provided for the use of operatives—

(a) When operating valves or cocks controlling fluids which by their nature, pressure or temperature would be highly dangerous if a blow-out occurred or when cleaning chokes in systems containing such fluids if pressure is likely to exit behind the chokes;

(b) When there is danger of injury by absorption through the skin during the performance of normal duties or in the event of emergency;

(c) Whenever there is the risk of injury in handling corrosive substances, hot or cold articles and sharp or rough objects; and

(d) When there is the risk of poisonous materials being carried away on their clothes.

(2) There shall be provided for the use of all persons employed in the processes specified in Appendix B an adequate supply of suitable protective equipment including gloves, overalls, and protective footwear, and goggles and respirators. Respirators shall be of a type approved in writing by the Chief Inspector.

(3) Protective equipment shall be provided and stored in the appropriate place for use during abnormal conditions or in an emergency.

(4) Arrangements shall be made for the proper and efficient cleaning of all such protective equipments.

38. *Cloak-rooms*—There shall be provided and maintained for the use of all persons employed in the processes specified in Schedule II to these rules a suitable cloak room, for clothing put off during 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.

39. *Special bathing accommodation*—(1) There shall be provided for the use of all persons employed in the processes specified in Appendix C separate sanitary conveniences and sufficient and suitable bathing facilities, which shall be to the satisfaction of the Chief Inspector.

(2) A bath register shall be kept containing the names of all persons employed in these processes and an entry of the date when each person takes a bath.

40. *Entry into vessels*—(1) Before any person enters, for any purpose except that of rescue, any absorber, boiler, culvert, drain, flue, gas purifier, sewer, still, tank, tower, vitriol chamber or other place where there is reason to apprehend the presence of dangerous gas or fume, a responsible person appointed in writing by the occupier for the purpose, shall personally examine such place and shall certify in writing in a book kept for the purpose either that such place is isolated and sealed from every source of such gas or fume and is free from danger, or that it is not so isolated and sealed and free from danger. No person shall enter any such place which is certified not to be so isolated and sealed and free from danger unless he is wearing a breathing apparatus, and (where there are no cross stays or obstructions likely to cause entanglement) a life-belt, the free end of the rope attached to which shall be left with a man outside whose sole duty shall be to keep watch and to draw out the wearer if he appears to be affected by gas or fume. The belt and rope shall be so adjusted and worn that the wearer can be drawn up head foremost through any manhole or opening.

(2) A person entering for the purpose of rescue any such place for which a clearance certificate has not been issued shall wear breathing apparatus and a life-belt in the manner specified in sub-paragraph (1) above.

41. *Examination and repair of plant*—Where poisonous materials are likely to be present the examination and repair of plant and piping shall only be done under the supervision of a competent person, and after the plant and piping has been thoroughly cleaned and ventilated. When opening vessels and breaking joints in pipe lines, respirators, goggles and protective clothing shall be worn to the extent required by the competent person.
42. *Storage of acid carboys*—Carboys containing nitric acid or "mixed" acid shall be stored in open-sided sheds detached from other buildings, and placed on a flooring of sandstone, brick, or other suitable inorganic materials. A passageway shall be provided and kept free from obstruction between every four rows of such carboys. An ample supply of water shall be available for washing away spilt acid and all precautions shall be taken to prevent workers being exposed to fumes.

RISKS OF CORROSIVE OR DELETERIOUS SUBSTANCES

43. *Buildings*—All buildings and plants shall be sited with due regard to possible dangers from accidental liberation or splashing of corrosive and deleterious liquids, and shall be so designed as to facilitate thorough washing and cleaning. The construction of staging and other parts of buildings shall be carried out with materials impervious and resistant to corrosion so far as practicable.
44. *Leakage*—(1) All plants shall be so designed and constructed as to obviate the escape of corrosive liquid. Where necessary, separate buildings, rooms, or protective structures shall be used for the dangerous stages of the process and the buildings shall be so designed as to localise any escape of liquid.

    (2) Catch pits, bund walls, or other suitable precautions shall be provided to restrict the serious effects of such leakages. Catch pits shall be placed below joints in pipe lines where there is danger involved to maintenance and other workers from such leakage.

    (3) Passages and work-stations shall not be situated directly below any part of plant where there is risk of escape of dangerous liquid. Access to such parts shall, so far as practicable, be prohibited and danger notices shall be affixed at suitable points.
45. *Precautions against escape*—Adequate precautions shall be taken to prevent the escape of corrosive or deleterious substances and means shall be provided for rendering safe any such escape.
46. *Drainage*—Adequate drainage shall be provided and shall lead to special treatment tanks where deleterious material shall be neutralised or otherwise rendered safe before it is discharged into ordinary drains or sewers.
47. *Covering of vessels*—(1) Every fixed vessel or structure containing any dangerous material, and not so covered as to eliminate all reasonable risk of accidental immersion in it of any portion of the body of a worker, shall be so constructed that there is no foothold on the top or the sides.

    (2) Such vessel shall, unless its edge is at least 90 cms. above the adjoining ground or platform be securely fenced to a height or at least 90 cms. above such adjoining ground or platform.

    (3) No plank or gangway shall be placed across or inside any such vessel, unless such plank or gangway is at least 45 cms. wide, and is securely fenced on both sides by rails spaced at 22.5 cms. apart to a height of at least 90 cms. or by other equally efficient means.

    (4) 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 cms. or more 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—

i) Saturators used in the manufacture of sulphate of Ammonia, and

ii) The part of the sides of brine evaporating pans which require raking drawing or filling.

48. *Ventilation*—Adequate ventilation shall be provided and maintained at all times in rooms or buildings where dangerous gas, vapour, fume or dust may be evolved.

49. *Means of escape*—Adequate means of escape from rooms or buildings in the event of a leakage of corrosive liquids shall be provided and maintained.

50. *Treatment of personnel*—(1) In all places strong acids or dangerous corrosive liquids are used there shall be provided for use in an emergency—

(a) Adequate and readily accessible means of drenching with cold water for persons, and the clothing of persons, who have become splashed with such liquid;

(b) Adequate special arrangements to deal with any person who has been splashed with poisonous material that can be absorbed through the skin;

(c) A sufficient number of eye-wash bottles filled with distilled water or other suitable liquid, kept in boxes or cupboards conveniently situated and clearly indicated by a distinctive sign which shall be visible at all times.

(2) Except where the manipulation of such corrosive liquids is so carried on as to prevent risk of personal injury from splashing or otherwise there shall be provided for those who have to manipulate such liquids, sufficient and suitable goggles and gloves or other suitable protection for the eyes and hands. If gloves are provided they shall be collected, examined, and cleansed at the close of the day's work and shall be repaired or renewed when necessary.

51. *Maintenance*—(1) Before any examination or repairs are carried out on plant or pipe lines, a competent person shall issue a clearance certificate permitting such examination or repairs.

(2) Adequate precautions shall be taken to liberate any pocket of gas or liquid which may have been formed in pipe lines, and which may cause corrosive spray at the point where dismantling takes place.

52. *Washing facilities*—(1) There shall be provided and maintained in every factory for the use of employed persons adequate and suitable facilities for washing which shall include soap and nail brushes or other suitable means of cleaning and facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.

(2) 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 'For Women Only' in the language understood by the majority of the workers and shall also be indicated pictorially.

53. *Mess-room facilities*—In every factory there shall be provided and maintained for the use of those remaining on the premises during the rest intervals, suitable and adequate mess room or canteen accommodation which shall be furnished with sufficient tables and chairs or benches with back rests and where sufficient drinking water is available.

54. *Ambulance Room*—(1) In every factory in which more than 250 persons are employed on the processes to which this Schedule applies there shall be provided and maintained in good order an Ambulance Room.

(2) The Ambulance Room shall be a separate room used only for the purpose of treatment and rest. It shall have a floor space of not less than 90 square meters and smooth, hard and impervious walls and floor, and shall be provided with ample means of natural and artificial lighting. It shall contain all the items shown in Schedule IV.

(3) Where persons of both sexes are employed, arrangements shall be made at the Ambulance Room for their separate treatment.

(4) The Ambulance Room shall be placed under the charge of a qualified nurse or other person trained in First Aid, who shall always be readily available during working hours and shall keep a record of all cases of accidents of a sickness, treated in the room.

55. *Ambulance van*—In every factory there shall be provided and maintained in good condition a suitably constructed ambulance van for the purpose of removal of serious cases of accidents or sickness, unless arrangements have been made with hospital or other place in telephonic communication with the factory for obtaining such a carriage immediately when required.

56. *Medical Personnel*—There shall be a whole time Medical Officer in every factory employing 250 persons or more.

57. *Medical examination*—(1) Workers engaged in the manufacture processing, formulation or use of the following shall be examined once in three months by the Certifying Surgeon and records maintained;

(a) Haxeathyl tetraphosphate;
(b) Tetra ethyl pyrophosphate;
(c) O. O-diethyl o-p-nitrophenyl thiophosphate (Parathion);
(d) Nicotine and nicotine sulphate;
(e) Mercury derivatives;
(f) Methyl bromide;
(g) Cyanides;
(h) Arsenical derivatives;
(i) Chrome process compounds; and
(j) Nitro or amino process compounds.

(2) A Health Register containing the names of all persons employed in the process shall be kept in a form approved by the Chief Inspector.

(3) No person shall be newly employed for more than 14 days without a certificate of fitness granted after examination by the Certifying Surgeon, by a signed entry in the Health Register.

(4) Every person so employed shall present himself at the appointed time for examination by the Certifying Surgeon as provided in sub-paragraph: (3) of this Paragraph.

(5) The Certifying Surgeon shall have power of suspension as regards all persons employed and no person after suspension shall be employed without written sanction from the Certifying Surgeon and entered in the Health Register.

58. *Duties of workers*—(1) Every person employed shall—

(a) Report his foreman, any defect in any fencing, breathing apparatus, appliance or other requisite provided in pursuance of this Schedule as soon as he becomes aware of such defect.
(b) Use the articles, appliances or accommodation required by this Schedule for the purpose for which they are provided;
(c) Wear the breathing apparatus and life-belt where required under sub-paragraph 40 (1) and (2).

(2) Every person employed--

(a) In a process to which paragraph 37 applies shall wear protective clothing, footwear, respirators, goggles or gloves provided under paragraph 37 shall deposit overalls or suits or working clothing so provided, as well as clothing put off during working hours, to the place provided under paragraph 38;
(b) In process to which paragraph 39 applies shall carefully wash the hands and face before partaking of any food or leaving the premises; and

(c) In any process to which Part II of the Schedule applies shall use protective appliances supplied in respect of any process in which he is engaged.

(3) No person shall--

(a) Remove any fencing provided in pursuance of paragraph 47 unless duly authorised;

(b) Stand on the edge or on the side of any vessel to which paragraph 47 applies;

(c) Pass or attempt to pass any barrier erected in pursuance of paragraph 47;

(d) Place across or inside any vessel to which paragraph 47 applies any plank or gangway which does not comply with that paragraph or make use of any such plank or gangway while in such position;

(e) Take a naked or any lamp or matches or any apparatus for producing a naked light or spark into, or smoke in, any part of the works where there is liability to explosion from inflammable gas vapour or dust;

(f) Use a metal, spade, scraper or pail when cleaning out or removing the residues from any chamber, still, tank or other vessel which has contained sulphuric acid or hydrochloric acid or other substances which may cause evolution of arseniuretted hydrogen.

(g) Remove from a First Aid box or cupboard or from the Ambulance Room any First Aid appliance or dressing except for the treatment of injuries in the works.

59. *Exemptions*—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 infrequency of the process or for other reasons all or any of the requirements of this Schedule are not necessary for the protection of persons employed in any factory or process, he may, by order in writing which he may in his discretion revoke, exempt such factory or process from all or any of the provisions of this Schedule subject to such conditions as he may by such order prescribe.

PART II
APPLYING TO THE WORKS IN APPENDIX E

60. *Entry of gas, tar or coal tar still*—Before any person enters a gas, tar or coal tar still for any purpose except that of rescue, it shall be completely isolated from adjoining tar stills, by disconnecting either—

(a) The pipe leading from the swan neck to the condenser worm; or

(b) The waste gas pipe fixed to the worm and/or receiver;

and in addition, blank flanges shall be inserted between the disconnected parts, and the pitch discharge pipe or cock at the bottom of the still shall be disconnected.

61. *Entry into bleaching powder chambers*—(1) No person shall enter a chamber for the purpose of withdrawing the charge of bleaching unless and until—

i) The chamber is efficiently ventilated; and

ii) The air in the chamber has been tested and found to contain not more than 2.6 grains of free chlorine gas per cubic foot.

(2) A register containing details of all such tests shall be kept in a form approved by the Chief Inspector of Factories.

62. *Special precautions for nitro and amino processes*—In a nitro or amino process—

(a) If crystallised substances are broken or any liquor agitated by hand means shall be taken to prevent, as far as practicable, the escape of dust or fume into the air of any place in which any person is employed. The handless of all implements used in the operations shall be cleansed daily;

(b) Cartridges shall not be filled by hand except by means of a suitable scoop;
(c) Every drying stove shall be efficiently ventilated to the outside air in such a manner that hot air from the stove shall not be drawn into any workroom;
(d) No person shall enter a stove to remove the contains until a free current of air has been passed through it; and
(e) Every vessel containing nitro or amino derivatives of phenol or of benzene or its homologues shall, if steam is passed into or around it, or if the temperature of the contents be at or above the temperature of boiling water, be covered in such a way that steam or vapour shall be discharged into the open air at a height of not less than 7.6 meters from the ground or the working platform, and at a point where it cannot be blown back again into the workroom.

63. *Precautions during caustic grinding, etc*—Every machine used for grinding or crushing caustic shall be enclosed; and where any of the following processes are carried on—
i) Grinding or crushing of caustic;
ii) Packing of ground caustic;
iii) Grinding, sieving, evaporation or packing in a chrome process; and
iv) Crushing, grinding or mixing of material or cartridge filling in a nitro or amino process;
an efficient exhaust draught shall be provided.

64. *Chlorate manufacture*—(1) Chlorate shall not be crystallised ground on packed except in a room or place not used for any other purpose, the floor of which room or place shall be of cement or other smooth, impervious and incombustible material, and shall be thoroughly cleansed daily.
(2) Wooden vessels shall not be used for the crystallisation of chlorate, or to contain crystallised or ground chlorate; provided that the requirement shall not prohibit the packing of chlorate for sale into wooden casks or other wooden vessels.

65. *Restrictions on the employment of young persons and women*—(1) Persons under 18 years of age and women shall not be employed in any process in which hydrofluoric acid fumes of ammonical vapours are given off or in any of the following operations:
(a) Evaporation of brine in open pans;
(b) Stoving of salt;
(c) Work at a furnace where the treatment of zinc ores is carried on; and
(d) The cleansing of workrooms where the process mentioned in (c) is carried on.
(2) No person under 18 years of age shall be employed in a chrome process in a nitro or amino process or in a process in which the following materials are used or where the vapour of such materials is given off:
(a) Carbon bisulphide, (b) chloride of sulphur, (c) benzene, (d) carbon tetrachloride, (e) trichloroethylene, (f) any carbon chlorine compound, and (g) any mixture containing any of such materials.

APPENDIX A

Any works or that of a part of works in which—
(a) The manufacture or recovery of any of the following is carried on:
i) Carbonate, chromate, chlorates, oxides or hydroxides of potassium, sodium, iron, aluminium, cobalt, nickel, arsenic antimony, zinc or magnesium.
ii) Ammonia and the hydroxide and salts or ammonium.
iii) Sulphurous, sulphuric, nitric, hydrochloric, hydrofluoric, hydriodic, hydrosulphuric, boric, phosphoric, oxalic, arsenious, arsenic, lactic, acetis, tartaric or citric acids and their metallic or organic salts, and

iv) Cyanogens compounds;

(b) A wet process is carried on—

i) For the extraction of metal from ore or from any by-product or residual material; or

ii) In which electrical energy is used in any process of chemical manufacture;

(c) Alkali waste or the drainage there from is subject to any chemical process for the recovery of sulphur; or for the utilisation of any constituent of such waste or drainage;

(d) Carbon bisulphide is made or hydrogen sulphide is evolved by the decomposition of metallic sulphides or hydrogen sulphide is used in the production of such sulphides;

(e) Bleaching powder is manufactured or chlorine gas is made or is used in any process of chemical manufacture;

(f) (i) gas tar or coal tar or any compound product or residue of such tars is distilled or is used in any process of chemical manufacture;
(ii) synthetic colouring matters or their intermediaries are made;

(g) Refining if crude shale oil or any process incidental thereto is carried out;

(h) Nitro acid is used in the manufacture of nitro compounds;

(i) Explosive are made with the use of nitro compound;

(j) Phosgene (carbonyl chloride) is manufactured or is used in the process of chemical manufactured; and

(k) Alipathic or artomatic compounds or their derivatives or substituted derivatives are manufactured or recovered.

APPENDIX B

1. A nitro or amino process.
2. Grinding raw materials in chrome process.
3. The crystal department and the packing in a chrome process.
4. Packing in a chrome process.
5. Any room or place in which chlorate is crystallised, ground or packed.
6. Any room in which caustic is ground or crushed by machinery.
7. Bleaching powder chambers, or in packing charges drawn from such chambers.
8. Drawing off of molten sulphur from sulphur pots in the process of carbon disulphide manufacture.

APPENDIX C

1. A nitro or amino process.
2. The crystal department and the packing room in a chrome process.
3. The process of distilling gas tar (other than blast furnace tar) and any process of chemical manufacture in which such tar is used.

APPENDIX D

1. A glazed sink with hot and cold water always available;
2. A table with a smooth top;
3. Means for sterilising instruments;
4. A couch;
5. A stretcher;
6. Two buckets or containers with close-fitting lids;
7. Two rubber not water bags;
8. A kettle and spirit stove or other suitable means of boiling water;
9. Twelve plain wooden splints, 900 m.m.*100 m.m.*6 m.m.;

10. Twelve plain wooden splints, 350 m.m.*75 m.m.*6 m.m.;
11. Six plain wooden splints, 250 m.m.*50 m.m.*12 m.m.;
12. Three woollen blankets;
13. One pair artery forceps;
14. One bottle of brandy;
15. Two medium size sponges;
16. Three hand towels;
17. Two kidney trays;
18. Four carbolic soaps;
19. Two glass tumblers and two wine glasses;
20. Two clinical thermometers;
21. Graduated measuring glass with teaspoon;
22. One eye bath;
23. One bottle (900 gms.) carbolic lotion 1 in 20;
24. Two chairs;
25. One screen;
26. One electric hand torch;
27. An adequate supply of anti-tetanus serum;
28. Two first aid boxes, each containing (a) 24 small sterilized dressings, (b) 12 medium size sterilized dressings, (c) 12 large size sterilized dressings, (d) 12 large size sterilized burn dressings (e) 12 half once packets sterilized cotton wool, (f) one snake bite lancent, (g) one pair of scissors, (h) two (1 oz.) bottles of potassium permanganate crystals, (i) one (4 oz.) bottle containing a two per cent alcoholic solution of iodine, (j) one (4 oz.) bottle of sal-violatile having the dose and mode of administration indicated on the label, and (k) one copy of the first aid leaflet issued by the Directorate General, Factory Advice Service and Labour Institutes (Government of India) Bombay.

APPENDIX E

1. *Any works or part thereof in which—*
   (a) Caustic pots are used;
   (b) Chlorate or bleaching powder is manufactured;
   (c) (i) gas tar or coal tar is distilled or is used in any process of chemical manufacture;
   (ii) a nitro or amino process is carried on;
   (ii) a chrome process is carried on;
   (d) Crude shale oil is refined or processes incidental thereto are carried on;
   (e) Nitric acid is used in the manufacture of nitro compounds;
   (f) The evaporation of brine in open pans and the stoving of salt are carried on; or
   (g) The manufacture or recovery of hydrofluoric acid or any of its salts is carried on.

SCHEDULE XIII
MANUFACTURE OF ARTICLES FROM REFRACTORY MATERIALS

1. *Application and exemption*—This Schedule shall apply to the following processes—
   (a) Handling, moving, breaking, crushing, grinding or sieving of any refractory materials, containing not less than 25 per cent total silica for the purpose of manufacture—
      i) Of articles used in the construction of furnaces and flues;
      ii) Of crucible; and
      iii) Of compositions or other materials used in the preparation of moulds in which metals are cast; or
   (b) Any process in the manufacture of refractory bricks as hereinafter defined;

Provided that nothing in this Schedule shall apply—

i) To handling, moving, mixing or sieving of natural sand; or

ii) To the manipulation of rotten rock in the preparation of moulds, used in metal foundries;

Provided further that if the Chief Inspector of Factories is satisfied in respect of any factory or part thereof that owing to the special conditions of work or otherwise, that any of the requirements of this Schedule can be suspended or relaxed without any danger to the health of the person employed therein, he may by an order in writing grant such suspension or relaxation for such period and on such conditions as he may think fit. Any such order may be revoked at any time.

2. *Definitions*—For the purposes of this Schedule—
   (a) *"refractory materials"* means any refractory material containing not less than 25 per cent total silica;
   (b) *"refractory brick"* means any brick or article is composed of refractory material and containing not less than 25 per cent total silica; and
   (c) *"efficient exhaust draught"* means localised ventilation by mechanical means for removal of dust so as t prevent dust 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 the dust produced at the point where such dust originates.
3. *Refractory material not to be broken*—No refractory material shall be broken in places by material labour unless the process is carried out in the open air:

Provided that where it is not practicable to carry out this process in open air, the process shall be carried out under an efficient exhaust draught.

4. *Crushing or grinding of refractory material*—No refractory material unless it is so wet that dust will not be produced, shall be crushed or ground in a stone crushing or in grinding machine unless such machine is provided with--
   (a) An efficient exhaust draught and efficient dust collecting appliances; or
   (b) An efficient water or steam spray:

Provided that every grinding machine wherein any refractory material is ground in dry state, shall be, totally enclosed and connected to a mechanical exhaust system so as to prevent effectively any escape of dust outside the casting of the machine by maintaining a pressure below the atmospheric pressure within the casing of the machine:

Provided further that all processes of crushing and grinding shall be effectively isolated from other processes.

5. *Refractory material handling equipment to be enclosed*—All chutes, conveyors, elevators, screens, sieves and mixers used for manipulating refractory material shall, unless the material is so wet that dust will not be produced, be enclosed and be provided with an efficient exhaust draught.
6. *Precautions in handling refractory material*—No refractory material so dry as to produce dust shall—
   (a) Be loaded into any wagon or other receptacle for transport unless it has been placed in a suitable dust-proof container so damped as to preclude dust;
   (b) Be unloaded from any wagon on other receptacle for transport unless it has been so damped as to preclude dust or unless the work is done under as efficient exhaust; or
   (c) Be shovelled or racked or otherwise manipulated by means of hand tools in any manufacturing process unless it has been so damped as to preclude dust or unless the work is done under an efficient exhaust draught:

Provided that sub-paragraph (b) of this Paragraph shall not apply to refractory material in the form of rock or pebbles before it is manipulated to any manufacturing process.

7. *Maintenance of floor*—(1) The floors of all places where refractory bricks are dried, other than the floors of tunnel ovens or chamber driers not normally entered by persons employed shall, after each lot of refractory bricks has been removed, be carefully cleaned of all debris and the part being cleaned shall be kept damp while the cleaning is being done.

   (2) There shall be provided in every such place a constant supply of water laid on under adequate pressure with sufficient connection and a flexible branch pipe and sprinkle to enable water to be supplied direct to every part of the floor.

8. *Prohibition of use of drying stove*—No drying stove in which refractory bricks are baked by fires before being placed in the kilns shall be used.

9. *Cleaning of floors and suppression of refractory dust*—The surface of every floor or place where persons are liable to pass shall be cleaned of debris of refractory materials once at least during each daily period of any employment or where shifts are worked, once during each shift. Such debris unless it is immediately required for use in the processes, shall be effectively damped and either be placed in covered receptacle, or be otherwise stored in such a manner as to prevent the escape of dust into the air in or near to any place where person is employed.

10. *Suppression of refractory dust while drying*—Where plates are used whether portable or forming part of the floor, on which refractory bricks are dried such plates shall be freed from adherent materials only by wet method or by such other method as will prevent the escape of dust into the air.

11. *Prohibition of use of refractory dust for moulding*—The dust or powder of refractory materials shall not be used for sprinkling the moulds in refractory brick-making:

    Provided that nothing in this paragraph shall be deemed to prevent the use of natural sand for the purpose of sprinkling the moulds.

12. *Workers not to work in refractory dust atmosphere*—No worker shall be allowed to work on any dust process or at any place where dust of any refractory materials is present in the atmosphere:

    Provided that in an emergency a worker may be allowed to work at such process or place if he wears a suitable and efficient dust mask or breathing apparatus.

13. *Medical examination*—(1) Every worker employed on any of the process specified in sub-paragraphs (a) and (b) of Paragraph 1 shall be medically examined in such manner and at such intervals as may be specified by any rules made under the Workmen's Compensation Act, 1923 or if no such rule has been framed under the said Act, every such worker shall be medically examined by the Certifying Surgeon before employment on any of the aforesaid processes and at an interval not exceeding six months thereafter.

    (2) Subject to sub-paragraph (3), an X-ray examination of the chest of any worker referred to in sub-paragraph (1) shall be carried out--

    (a) If he is already in employment on the date of coming into force on the sub-paragraph within six months of such dates and at an interval of every three years thereafter;

    (b) If he is employed after such date within one month of the date of his employment and at interval of every three years thereafter;

    And the result of every such X-ray examination shall be produced before the Certifying Surgeon within a month of the examination.

(3) If the Certifying Surgeon, during the course of medical examination of any worker under sub-paragraph (1) has reason to suspect on set off of any chest disease, he may direct the manager or the occupier to get an X-ray examination of the worker done and to produce the X-ray plate before him within a specified time and on receipt of such direction the manager or the occupier, as the case may be, shall carry out the direction.

(4) The Certifying Surgeon shall grant to each worker examined a certificate specifying therein whether or not the worker was considered fit to be employed on any of the aforesaid process.

(5) The manager shall maintain a register in which the findings and recommendations of the Certifying Surgeon in respect of every worker and in respect of every medical examination shall be maintained duly signed by the Certifying Surgeon.

(6) A worker not declared fit shall not be employed on any of the aforesaid processes and he shall be employed on only such other process or he shall be subjected to such other examination or treatment as may be directed by the Certifying Surgeon.

(7) No fees shall be charged from any worker for the medical examination and it shall be the responsibility of the occupier and the manager to comply with the provisions of this Schedule.

14. *Time limit for compliance in respect of existing plants*—In case any existing plant or machinery needs alteration, modification or replacement or in case any new plant is required to be installed, to comply with the requirements of this Schedule, such alteration, modification, replacement or installation of the plant or machinery shall be carried on within the period not exceeding one year from the date of publication of this Schedule:

Provided that the Chief Inspector of Factories in consideration of special and exceptional circumstances by an order in writing may extend this period for such reasonable length of time as he may think fit.

SCHEDULE XIV

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.

1. *Application and exemption*—This Schedule shall apply to 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 process;
   (c) Making of insulation slabs or section, composed wholly or partly asbestos and process incidental thereto;
   (d) Making or repairing of insulating mattresses, composed wholly or partly asbestos, and processes incidental thereto;
   (e) Manufacture of asbestos card board and paper;
   (f) Manufacture of asbestos or cement goods;
   (g) Application of asbestos by spray method;
   (h) Sawing, grinding, turning, abrading and polishing, in the dry state, or articles composed wholly or partly of asbestos;
   (i) Cleaning of any room, vessel, chambers, fixtures or appliance for the collection of asbestos dust:

Provided that if the Chief Inspector is satisfied that in respect of any factory or workshop of part thereof by reason of the restricted use of asbestos, of the method of working of occasional nature of work, or otherwise all or any of the provisions of this Schedule can be suspended or relaxed without danger to the health of the persons employed therein, he may grant suspension or relaxation in writing under such conditions as he may think fit. Any such certificate may be revoked at any time.

2. *Definitions*—For the purposes of this Schedule—
   (a) '*asbestos*' means any fibrous silicate mineral, and any admixture containing any such mineral, whether crude, crushed or opened;
   (b) '*asbestos textiles*' means yarn or cloth composed of asbestos or asbestos mixed with any other material;
   (c) '*preparing*' means crushing, disintegrating and any other process in or incidental to the opening of asbestos;
   (d) '*approved*' means approved for the time being on writing by the Chief Inspector;
   (e) '*breathing apparatus*' means a helmet of face place with necessary connection by means of which a person using it breathes air free from dust, or any other approved apparatus.
3. *Exhaust draught*—An exhaust draught effected by mechanical means which prevents the escape of asbestos dust into the air of any room in which persons work, shall be provided and maintained for—
   (a) Manufacturing and conveying machinery, namely:
      i) Preparing, grinding or dry mixing machines;
      ii) Carding, card waste-end, ring spinning machines and looms;
      iii) Machines or other part fed with asbestos; and
      iv) Machines used for the sawing, grinding, turning, abrading or polishing in the dry state, of articles composed wholly or partly of asbestos;
   (b) Cleaning and grinding of the cylinders or other part 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 of asbestos by hand;
   (e) Work places 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;

   Provided that this clause shall not apply (i) to a machine or other plant which does not give rise to asbestos dust, or is so enclosed as to prevent escape of asbestos dust into the air of any room in which persons work, or (ii) where the asbestos is so wet or so treated with grease or other material as to prevent the evolution of dust, or (iii) to the making or repairing of insulating mattresses, or (iv) to mixing or blending by hand of asbestos.
4. *Mixing or blending*—(1) Mixing or blending by hand of asbestos shall not be carried on except with an exhaust draught effected by mechanical means so designed and maintained as to ensure as far as practicable the suppression of dust during the processes.

   (2) In premises which were constructed or reconstructed after the Schedule comes into force, mixing or blending by hand of asbestos shall not be done except in a special room or place in which to other work is ordinarily carried on.

   (3) (a) The making or repairing of insulating mattresses composed wholly or partly of asbestos shall not be carried on in any room in which any work is done.

(b) In every room in which the making or repairing of insulating mattresses is carried on—

i. Adequate exhaust and inlet ventilation in accordance with arrangements to be approved in each case shall be provided and maintained;

ii. No person other than those engaged in filling, beating or levelling shall be present whilst such processes are being carried on and work shall not be resumed in the room after filling, beating or levelling for at least ten minutes;

iii. The floors and benches shall be kept damped so as to prevent dust arising there from effectively; and

iv. The covers shall be effectively damped immediately after being cut out and in the case of fibre filled mattresses, shall be kept damp whilst filling, beating or levelling is being carried on.

(4) (a) Storage chambers or bins for loose asbestos shall, in the case of premises constructed or reconstructed after this Schedule comes into force, be effectively separated from any workroom and, in the case of other premises be effectively separated from any workroom in which the asbestos is not required for the purposes carried on in the room.

(b) Chambers or apparatus for dust settling and filtering shall not be allowed in any work-room.

(c) Arrangement shall be made to prevent asbestos dust discharged from exhaust apparatus being drawn into the air of any work-room.

(5) All machinery used in preparing, grinding of asbestos carding, card roller cleaning and grinding, and sack cleaning and all card waste-end machines lattices, elevators, chutes and conveyers shall be so constructed and maintained that dust or debris containing asbestos cannot escape from any part thereof other than dust removed by air exhaust draught provided in accordance with Paragraph 3 of the Schedule.

(6) (a) Cleaning by hand of the cylinders (including the doffer cylinders) of a carding machine, shall not be done whilst any person other than those performing or assisting at the cleaning is present.

(b) After six months from the date on which this Schedule comes into force such cleaning as aforesaid shall not be done by means of hand strickles or other hand tools:

Provided that the Inspector or the Chief Inspector may direct such other measures and precautions to be taken, as may be considered necessary for securing the health of the workers employed on processes and work specified in Paragraph 4.

5. *Maintenance of floors and work places*—(1) In every room in which any of the requirements of this Schedule apply—

(a) The floors, work benches 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;

(b) The floors shall be kept free from any material, plant or other articles not immediately required for the work carried on in the room which would obstruct the proper cleaning of the floor.

(2) Every room as aforesaid shall be adequately lighted.

6. *Asbestos sack not to be cleaned by hand*—(1) A sack which has contained asbestos shall not be cleaned by hand beating or by a machine, complying with Paragraph 3 and sub-paragraph (5) of Paragraph 4.

(2) All sacks used as containers for the purpose of transport of asbestos within the factory shall be constructed of impermeable material and shall be kept in good repair.

7. *Testing of ventilating plant*—(1) All ventilating plants used for the purpose of extracting or suppressing dust as required by this Schedule shall at least once in every six months be thoroughly examined and tested by a competent person and any defect disclosed by such examination and test shall be rectified forthwith.

   (2) A register containing particularly of such examination and test and the state of the plant and the repairs or alterations (if any) found to be necessary shall be kept, and shall be available for inspection by an Inspector.

8. *Provision of breathing apparatus*—A breathing apparatus shall be provided for every person employed—
   (a) In chambers containing loose asbestos;
   (b) In cleaning dust, settling or filtering chambers or apparatus;
   (c) In cleaning the cylinders, including the doffer cylinders, or other part of the carding machine by means of hand-strikes; and
   (d) In filling, beating or levelling in the manufacture or repair of insulating mattresses.

9. *Protective equipment*—There shall be provided and maintained for the use of all persons employed in the cleaning of dust, settling and filtering chambers, tunnels and ducts, suitable overalls and hand coverings.

10. *Prohibition of employment of young persons*—No young person shall be employed in or in connection with the manufacture of insulating mattresses, in mixing or blending of asbestos by hand, in sack cleaning, in chambers of apparatus for dust settling or filtering, in chambers containing loose asbestos, or in stripping or grinding the cylinders including the doffer-cylinders or other part of a carding machine.

11. *Medical examination*—(1) No worker shall be employed in any factory on any of the processes specified in paragraph 1, unless he has been medically and radiologically examined by the Certifying Surgeon, has been declared fit and has been granted a certificate of fitness in Form No. 27.

    (2) Every worker employed on any of the aforesaid processes on the date on which this Schedule comes into force shall be medically and radiologically examined by the Certifying Surgeon within three months of the said date.

    (3) Every worker employed on any of the aforesaid processes shall be medically examined by the Certifying Surgeon at intervals of six months after the first medical examination conducted under sub-paragraphs (1) and (2) and radiologically examined at an interval of 3 years after the first radiological examination conducted under sub-paragraphs (1) and (2).

    (4) A worker already in employment and declared unfit by the Certifying Surgeon shall not be allowed to work on any of the processes specified in paragraph 1, unless he has been examined again and has been certified to be cured and fit to work on the said process again.

    (5) A worker declared to be unfit to work on any of the aforesaid processes, may be employed on such other work or process as may be considered safe and as may be advised by the Certifying Surgeon

    Provided that if the Certifying Surgeon declares that a worker has been completely incapacitated and he is not fit to be employed on any process, such worker shall not be allowed to continue to work on any work or process.

    (6) The Certifying Surgeon may direct that a worker may be X-rayed or he may be subjected to further examination by a specialist or to any other examination, clinical, pathological or otherwise or that he should undergo a specified treatment and it shall be the responsibility of the occupier or manager to arrange for the specified examination and/or treatment and to bear all expenses thereof or in connection therewith.

(7) The Certifying Surgeon shall after each examination grant a certificate in Form No. 27.

(8) The manager shall maintain all the certificates in a proper register or file and shall produce all the certificates before an Inspector whenever demanded.

(9) The manager shall maintain the details of every medical examination in Form 6 and the register shall be produced before an Inspector whenever demanded.

SCHEDULE XV
HANDLING OR MANIPULATING 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, carbolic acid, phosphoric acid, liquid chlorine, liquid bromine, bromine, ammonia, sodium hydroxide and potassium hydroxide and a mixture thereof, and any other substances which the State Government by notification in the official Gazette specify to be a corrosive substance.
2. *Flooring*—The floor of every workroom of a factory in which corrosive operation is carried on shall be made of any impervious, corrosive and fire resistant 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*—(1) 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 equipments 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 whenever necessary.

   (2) 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 centimeters from a pipe of 1.25 centimeters diameter and fitted with a quick acting valve so that in case of injury to the workers 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 centimeters, 120 centimeters and 60 centimeters respectively or such dimensions as are approved by the Chief Inspector shall be provided as the sources 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 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 vapour thereof may be extremely hazardous. In case of content, immediately flood the part affected with plenty of water of at least 15 minutes.

Get medical attention quickly.

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6. *Transport*—(1) Corrosive substances shall not be filled, moved or carried except in containers and when they are to be transported, they shall be placed in creates of sound construction and of sufficient strength.

   (2) A container with a capacity of 11.5 litres or more of a corrosive substance shall be placed in a receptacle or create and then carried by more than one person at a height below the waist line unless a suitable rubber wheeled truck is used of the purpose.

   (3) Containers for corrosive substances shall be plainly labelled.

7. *Devices for handling corrosive*—(1) Suitable tilting or lifting device shall be used for emptying jars, carboys and other containers of corrosives.

   (2) Corrosive substance shall not handled by bare hands 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*—(1) 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 materials shall be used to prevent production of arseniuretted hydrogen (arsine).

   (2) Whenever it is necessary for the purpose of cleaning or other maintenance work for any worker to enter a chamber, tank, vat, pit or other confined space where a corrosive substance has been stored, all possible precautions required under Section 36 of the Act shall be taken to ensure the workers' safety.

   (3) Whenever 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*—(1) Corrosive substance 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.

    (2) 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 substances overflowing and causing injury to any person.

    (3) 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 regular shall be maintained of every examination made and shall be produced before the Inspector whenever required.

11. *Fire extinguishers and fire fighting equipment*—An adequate number of suitable type of fire extinguishers or other fire fighting equipment, depending on the nature of chemicals stored shall be provided. Such extinguishers or other equipment shall be regularly tested and refilled. Clear instructions as to how the extinguishers or other 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 an application made by the manager, the Chief Inspector is satisfied that owing to the exceptional circumstances or the frequency of the process or for any other reason to the recorded by him in writing, all or any of the provisions of this Schedule are not necessary for the protection of the persons employed therein he may by a certificate in writing, which he may at any time revoke, exempt the factory from such of the provisions and subject to such conditions as he may specify therein.

SCHEDULE XVI
PROCESSING OF CASHEWNUT

1. *Application*—This Schedule shall apply to all factories in which roasting, scrubbing and shelling of cashew nut or extracting oil from cashew nut or cashew nut shells are carried on.
2. *Prohibition of employment of women and young person*—No woman or young person shall be employed in any of the processes specified in paragraph 1 except in shelling of roasted cashew nuts.
3. *Protective clothing and equipment*—The occupier shall provide and maintain for the use of all persons employed in roasting and scrubbing of cashew nuts or extracting oil from cashew nut shells—
   (a) Suitable rubber or washable leather gloves;
   (b) Suitable type of impervious aprons with sleeves to cover body down to knees and shoulders; and
   (c) Suitable type of footwear to afford protection to feet and legs against cashew nut oil; and for the workers employed in cashew nut shelling either—
   (d) A protective ointment clothing 10 per cent of shelzac, 55 per cent of alcohol, 10 per cent of sodium perborate, 5 per cent carbitol and 20 per cent talc; or
   (e) Sufficient quantity of kaolin and coconut oil; and
   (f) Any other material or equipment which the Chief Inspector of Factories may deem to be necessary for the protection of the workers.
4. *Use of Protective clothing and equipment*—Every person employed in processes specified in paragraph 1 shall make use of protective clothing and equipment supplied and arrangements shall be made by the occupier to supervise its use, maintenance and cleanliness.
5. *Disposal of shells, ashes or oil of cashew nut*—(1) Shells, ashes or oil of cashew nut shall not be stored in any room in which workers are employed and shall be removed at least twice a day to any pit or enclosed place in the case of shell and ashes and to closed containers kept in a separate room in the case of oil.
   (2) No worker shall be allowed to handle shells or oil of cashew nuts without using the protective clothing or equipment provided under paragraph 3 above.
6. *Floors of workrooms*—The floor of every workroom in which processes specified in paragraph 1 are carried on, shall be of hard material so as to be smooth and impervious and of even surface and shall be cleaned daily, and spillage of any cashew nut oil in any workroom shall be washed with soap and cleansed immediately.
7. *Seating accommodation*—Workers engaged in shelling of cashew nuts shall be provided with adequate seats or work benches which shall be cleansed daily.
8. *Mess rooms*—(1) There shall be provided and maintained for the use of all persons employed in processes specified in paragraph 1, as suitable restroom furnished with sufficient tables and chairs or benches.

(2) Separate lockers shall be provided where food, etc., shall be stored, by workers before it is consumed in the restroom.

9. *Food, drinks, etc., prohibited in workrooms*—No food, drink, pan, supari or tobacco shall be brought or consumed by any worker in any room in which processes specified in paragraph 1 are carried out and no person shall remain in any such room during intervals for meal or rest.
10. *Washing facilities*—Where roasting, scrubbing and shelling of cashew nuts or extracting oil from cashew nut shells is carried on, there shall be provided and maintained in a clean state and good repair washing facilities, with a sufficient supply of soap, account oil, nail brushes and towels at the scale of one tap or stand pipe for every 10 workers, and the taps or stand pipes shall be spaced not less than 1.2 meters apart.
11. *Time allowed for washing*—Before each metal and before the end of the day's work, at least ten minutes, in addition to the regular meal time, shall be allowed for washing to each person employed in processes specified in paragraph 1.
12. *Smoke or gas produced by roasting cashew nuts*—Where smoke or gas is produced in the operation of roasting, provision shall be made for removing the smoke or gas through a chimney of sufficient height and capacity or by such other arrangements as may be necessary to prevent the gas or smoke escaping into the air or any place in which workers are employed.
13. *Storage of protective equipment*—A suitable room or a portion of the factory suitably partitioned off shall be provided exclusively for the storage of all the protective equipment supplied to the workers and no such equipment shall be stored in any place other than the room or places so provided.
14. *Medical examination*—(1) Every person employed in processes specified in paragraph 1 shall be examined by the Certifying Surgeon once in every three months, or at such other intervals as may be specified in writing by the Chief Inspector of Factories on a day of which due notice shall be given to all concerned. The Certifying Surgeon shall examine and certify the workers in the premises of the factory.

    (2) Every person employed shall present himself at the appointed time for examination by the Certifying Surgeon as provided in sub-paragraph (1).

    (3) A health register in Form 6 containing the names of all persons employed in the process specified in paragraph 1 shall be kept.

    (4) The Certifying Surgeon shall record the results of the examination against the name of each worker in the health register.

    (5) No person after suspension shall be employed in any process specified in paragraph 1 without the written sanction from the Certifying Surgeon entered in the health register.

    (6) The occupier shall appoint a person trained in first aid who shall inspect daily the hands and feet of the persons employed in processes specified in paragraph 1. The occupier shall keep a record of such inspections in a register in a form approved by the Chief Inspector of Factories and any cases of blistering shall be brought to the notice of Certifying Surgeon who shall direct them for treatment as may deem to be necessary.

    (7) The first-aid box shall also contain Burrow's solution 1 to 20 and aqueous solution tannic acid 10 per cent for treatment of cases of determatitis.
15. *Exemption*—The Chief Inspector of Factories may grant exemptions from the operation of any of these where he is satisfied that their observance is not necessary for safeguarding the health of the workers.

SCHEDULE XVII

COMPRESSION OF OXYGEN AND HYDROGEN PRODUCED BY ELECTROLYSIS OF WATER

1. *Location of electrolyser plant*—The room in which electrolyser plant is installed shall be separate from the plant for storing and compressing the oxygen and hydrogen and also the electric generator room.
2. *Testing of purity*—(1) The purity of oxygen and hydrogen shall be tested by a competent person at least once in every shift at the following posts:
   i) In the electrolyser room;
   ii) At the gas holder in-let; and
   iii) At the suction end of the compressor.
   (2) The purity figures shall be entered in a register and signed by the person carrying out such tests:
   Provided, however, that if the electrolyser plant is fitted with automatic reorder of purity of oxygen and hydrogen with alarm lights, it shall be sufficient if the purity of the gases is tested at the suction end of the compressor only.
3. The oxygen and hydrogen gases shall not be compressed if their purity as determined under paragraph 2 above falls below 98 per cent at any time.
4. *Limit switch for gas holder*—The bell of any gas holder shall not be permitted to go within 30 c.m. of its lowest position when empty, and a limit switch shall be fitted of the gas holder in such a manner as to switch off the compressor motor when the limit is reached.
5. *Provision of negative pressure switch*—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 motor in the event of the gas holder being emptied to the extent as to cause vacuum.
6. *Purity of caustic soda*—The water and caustic soda used for making lye shall be chemically pure within pharmaceutical limits.
7. *Precautions against reversal of polarity*—Electrical connections at the electrolyser cells and at the electric generator terminals shall be so constructed as to preclude 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. *Colouring of gas pipes*—Oxygen and hydrogen gas pipes shall be painted with distinguishing colours and in the event of leakage at the joints of the hydrogen gas pipe, the pipe after reconnection shall be purged of all air before drawing in hydrogen gas.
9. *Use of flame-proof fittings*—All electrical wrong and apparatus in the electrolyser room shall be of flame-proof construction or enclosed in flame-proof fittings, and no naked light or flame shall be allowed to be taken either in the electrolyser room or where compression and filling of the gases is carried on and such warning notices shall be exhibited in prominent places.
10. *Prohibition of hot work*—No part of the electrolyser plant and the gas holders and compressor shall be subjected to welding, blazing, 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 substances shall be allowed to enter that part until the metal has cooled sufficiently to prevent risk of explosion.

11. *Repair etc., to be done under supervision*—No work of operation, repair or maintenance shall be undertaken except under the direct supervision of a person who, by his training, experience and knowledge of the necessary precautions against risk of explosion is competent to supervise such work. No electric generator after erection or repairs shall be switched on to the electrolysers unless the same is certified by the competent person 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 paragraph 7.
12. *Checking of plant*—Every part of the electrolyser plant and the gas holders and compressor shall have a regular schedule of overhaul and checking and every defect noticed shall be rectified forthwith.

SCHEDUKE XVIII
PROCESS OF EXTRACTING OILS AND FATS FROM VEGETABLE AND ANIMAL SOURCES IN SOLVENT EXTRACTION PLANTS

1. *Definitions*—For the purposes of this Schedule—
   (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;
   (b) "*solvent*" means an inflammable liquid such as pentane, hexane and heptanes is used for recovery of vegetable oils;
   (c) "*flame-proof enclosure*" as specified to electrical machinery or apparatus means an enclosure that will withstand, when covers or other access doors are properly secured as internal explosion of the flammable gas or vapour which may enter or which may originate inside the enclosure without suffering damage and without communicating internal inflammation or explosion to the external flammable gas or vapour;
   (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 specialised knowledge of oils and fats and with a minimum experience of 5 years in a solvent extraction plant shall also be considered to a competent person:

   Provided further that the State Government may accept any other qualifications if in its opinion they are equivalent to the qualifications aforesaid.
2. *Location and layout*—(1) No solvent extraction plant shall be permitted to be constructed or extended within a distance of 30 meters from the nearest residential locality.

   (2) A 1.5 metre high continuous wire fencing shall be provided around the solvent extraction plant up to a minimum distance of 15 metres from the plant.

   (3) No person shall be allowed to carry any matches or an open flame or fire inside the area bound by the fencing.

   (4) Boiler houses and other building where open flame processes are carried on shall be located at least 30 metres away the solvent extraction plant.

   (5) If go downs and preparatory processes are at a distance of less than 30 metres from the solvent extraction plant, there shall be at least 15 metres distance from the plant and as continuous barrier wall of non-combustible materials 1.5 metres high shall be erected at a distance of not less than 15 metres from the solvent extraction plant so that it extends to at least 30 metres of vapour travel around its end from the plant to the possible sources of ignition.
3. *Electrical installations*—(1) All electrical motors and wiring and other electrical equipment installed or housed in solvent extraction plant shall be of flame proof construction.

(2) 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 energised 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 metres' distance from solvent extraction plant. For this purpose, 'No Smoking' signs shall be permanently displayed in the area.
5. *Precautions against friction*—(1) All tools and equipments including ladders, chains and other lifting tracks required to be used in solvent extraction plant shall be of non-sparking type.

   (2) No machinery or equipment in solvent extraction plant shall be belt driven unless the belt used is of such a type that it does not permit accumulation of static electricity to any dangerous level.

   (3) 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*—(1) Adequate number of portable fire extinguishers suitable for use against flammable liquid fires shall be provided in the solvent extraction plant.

   (2) An automatic water sprays sprinkler system on a wet pipe or open head deluge system with sufficient supply of storage water, shall be provided over solvent extraction plant and throughout the building housing such plant.
7. *Precautions against power failure*—Provision shall be made for 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 conveyer through a hopper and a magnetic separator shall be provided to remove any pieces of iron during its transfer.
9. *Venting*—(1) Tanks containing solvents shall be protected with emergency venting to relieve excessive internal pressure in the event of fire.

   (2) All emergency relief vents shall terminate at least 6 metres above the ground and be 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 a sump which should be located within the fenced area but not closer than 8 metres to the fence.
11. *Ventilation*—The solvent extraction plant shall be well ventilated and if the plant is housed in a building shall be provided with mechanical ventilation with provision for at beast six air charges per hour.
12. *House-keeping*—(1) Solvents shall not be stored in an area covered by a solvent extraction plant except in small quantities which shall be stored in approved safety cans.

    (2) Waste materials such as oil rags, other waste and absorbants used to wipe off solvent and paints and oil shall be deposited in approved containers and removed from the premises at least once a day.

    (3) Space within the solvent extraction plant and within 15 metres 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*—(1) The solvent extraction plant shall be examined by the competent person to determine any weakness or corrosion and wear once in every 12 months. Report of such examination shall be supplied to the Inspector with his observation as to whether or not the plant is in safe condition to work.
    (2) No repairs shall be carried out to the machinery or plant except under the direct supervision of the competent person.
    (3) Facility shall be provided for purging the plant with inert gas or steam before opening for cleaning or repairs and before introducing solvent after repairs.
14. *Operating personnel*—The operation of the plant and machinery in the solvent extraction plant shall be in the charge of such duly qualified and trained persons as are certified by the competent person to be fit for the purpose and no other person shall be allowed to operate the plant and machinery.
15. *Employment of women and young persons*—No woman or young person shall be employed in the solvent extraction plant.
16. Vapour detection—A suitable type of 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 locations as approved by the Chief Inspector shall be drawn out and entered in a register maintained for the purpose.
17. Exemption—If in respect of any factory, the Chief Inspector is satisfied that owing to exceptional circumstances or frequency of process or for any other reasons, all or any of the provisions of this Schedule is not necessary for the protection of the workers in the factory, the Chief Inspector may, by a Certificate in writing (which he may in his discretion revoke at any time), exempt such factory from all or any of such provisions subject to conditions, if any, as he may specify therein.

SCHEDULE XIX

MANUFACTURE OR MANIPULATION OF MANGANESE AND ITS COMPOUNDS

1. *Application*—This Schedule shall apply to every factory in which or in any part of which any manganese process is carried on.
2. *Definitions*—For the purposes of this Schedule—
   (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 of 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 any ore or any mixture containing manganese; and
   (d) "*efficient exhaust ventilation*" means localised ventilation effected by mechanical means for the removal of dust or fume or mist as 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.
3. *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 processes may not be effected by the same.

4. *Ventilation process*—No process in which any dust, vapour or mist containing manganese is generated, shall be carried out except under efficient exhaust ventilation which shall be applied as near to the point of generation as practicable.
5. *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.
6. *Prohibition relating to women and young persons*—No woman or young person shall be employed or permitted to work in any manganese process.
7. *Food, drinks, etc., prohibited in the workrooms*—No food, drink, pan and supari or tobacco shall be allowed to be brought into or consumed by any worker in any workroom in which any manganese process is carried on.
8. *Messroom*—There shall be provided and maintained for the use of the persons employed in a manganese process a suitable messroom which shall be furnished with sufficient tables and benches and adequate means for warning of food. The messroom shall be placed under the charge of a responsible person and shall be kept clean.
9. *Washing facilities*—There all be provided and maintained in clean state and in good condition, for the use of persons employed on manganese process—
   (a) A wash place undercover, 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 60 centimeters for every ten such persons employed at any one time, and having a constant supply of water from taps or jet above the trough at intervals of not more than 60 centimeters; 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 a constant supply of water; and
   (b) Sufficient supply of soap or other suitable cleaning material and nail brushed and clean towels.
10. *Cloakroom*—If the Chief Inspector so requires there shall be provided and maintained for the use of persons employed in manganese process a cloakroom for clothing put off during working hours with adequate arrangements for drying the clothing.
11. *Cautionary placard and instructions*—Cautionary notices in the form specified in Appendix and printed in the language of the majority of the workers employed shall be affixed in prominent places in the factory where they can be easily and conveniently be read by the workers and arrangements 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.
12. *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 26 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 any 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 sad person shall always carry the said token on the 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 management process.

(4) (a) 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.

(b) 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 directions 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 be may advise the manager or the occupier to employ the said person on such other job as may be 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 his purpose of which the Medical Inspector of Factories shall be a member. The decision of the Medical Inspector or the Committee as the case may be, shall be final in the matter.

13. *Exemption*—If in respect of any factory, the Chief Inspector is satisfied that owing to any exceptional circumstances, or in frequency 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 person 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 of such conditions and for such period as he may specify in the said order.

APPENDIX

CAUTIONARY NOTICE

Manganese and Manganese Compounds

1. Dust fumes and mists of manganese and its compounds are toxic when inhaled or when ingested.
2. Do not consume food or drink near the workplace.
3. Take a good wash before taking meals.
4. Keep the working area clean.
5. Use the protective clothing and equipment 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 head-aches, prolonged sleeplessness or abnormal sensations on the body, report to the manager who would make arrangements for your examination and treatment.

SCHEDULE XX

MANUFACTURE OR MANIPULATION OF DANGEROUS PESTICIDES

1. *Application*—This Schedule shall apply in rest of all factories or any part thereof in which the process of manufacture or manipulation of dangerous pesticides hereinafter referred to the said manufacturing process is carried on.
2. *Definitions*—For the purposes of this Schedule—
   (a) "*dangerous pesticides*" means any product proposed or used for controlling, destroying or repelling any post or for preventing growth or mitigating effects of such growth any of its formulations which is considered toxic under and is covered by the Insecticides Act, 1968 and the rules made there under and any product, as may be notified from time to time by the State Government;
   (b) "*manipulation*" includes mixing, blending, formulating, filling, emptying, packing or otherwise handling;
   (c) "*efficient exhaust draught*" means localised mechanical ventilation for removal of smoke, gas, vapour, dust, fume, or mist so as to prevent them from escaping into 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;
   (d) "*first employment*" shall mean first employment in any manufacturing process to which this Schedule applies and shall also include re-employment in the said manufacturing process following any cessation of employment for a continuous period exceeding three calendar months; and
   (e) "*suspension*" means suspension from employment in any process wherein a dangerous pesticides is manipulated, by written certificate in health register in Form 25 signed by the Certifying Surgeon who shall be competent to suspend all persons employed in such process.
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 placed*—Cautionary notices and placards in the form specified in Appendix to this Schedule and printed in the language of the majority of the workers shall be displayed in all work places in which said manufacturing process is carried on so that they can be easily and conveniently read by the workers. Arrangements shall be made by the occupier and the manager of the factory to periodically instruct the workers regarding the health hazards arising in the said manufacturing process and methods of protections. 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 is stored.
6. *Food, drinks, and smoking prohibited*—(1) No food, drink, tobacco, pan or supari shall be brought into or consumed by any worker in any workroom in which the said manufacturing process is carried on.

   (2) Smoking shall be prohibited in any workroom in which the said manufacturing process is carried on.
7. *Protective clothing and protective equipment*—(1) Protective clothing consisting of long pants and shirts or overalls with long sleeves and head covering shall be provided for all workers employed in the said manufacturing process.

   (2) (a) Protective equipment 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 oils.

   (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.
8. *Floors and workbenches*—(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.
9. *Spillage and waste*—(1) If a dangerous pesticide during its manipulation spills on the work-bench floor or on the protective clothing worn by a worker, immediate action shall be taken for thorough decontamination of such areas or articles.

   (2) Clothes, 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 a 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.

10. *Empty containers used for dangerous pesticides*—Containers used for dangerous pesticides shall be thoroughly cleaned of their contents used and treated with an inactivating agent before being discarded or destroyed.
11. *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.
12. *Ventilation*—(1) In every work room or areas 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 pesticide 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; and
    (d) Changing or filling a dangerous pesticide into a container, tank hopper or machine or small sized containers.

    (3) In the event of a failure of the exhaust draught provided on the above operation, the said operations shall be stopped forthwith.
13. *Time allowed for washing*—(1) Before each meal and before the end of the day's work at least ten minutes in addition to the regular rest interval shall be allowed for washing to each worker engaged in the manipulation of dangerous pesticide.

    (2) Every worker engaged in the manipulation of dangerous pesticides shall have a thorough wash before consuming any food and also at the end of the day's work.
14. *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 factory where the said manufacturing process is carried on, adequate washing and bathing places having a constant supply of water under cover at the rate of one such place for every 5 persons employed.

    (2) The washing places shall have standpipes placed 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.
15. *Cloakroom*—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 cloakroom for clothing put off during working hours with adequate arrangements for drying clothing, if wet; and
    (b) Separate and suitable arrangement for the storage of protective clothing provided under paragraph 7.
16. *Mess-room*—(1) There shall be provided and maintained for the use of all workers employed in the factory in which the said manufacturing process is carried on and remaining on the premises during the rest intervals, as suitable mess-room which shall be furnished with—

    (a) Sufficient tables and benches with back rest, and

(b) Adequate means for warming food.

(2) The mess-room shall be placed under the charge of a responsible person and shall be kept clean.

17. *Manipulation not to be undertaken*—Manufacture or manipulation of pesticides shall not be undertaken in any factory unless a certificate regarding its dangerous nature or otherwise is obtained from the Chief Inspector.
18. *Medical examination*—(1) 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.

    (2) Every worker employed in the said manufacturing process shall be re-examined by the Certifying Surgeon at least once in 6 calendar months.

    (3) 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 arrangement for the Certifying Surgeon.

    (4) Health register in Form 6 containing names of all workers employed in the said manufacturing process shall be examined.

    (5) No workers after suspension shall be employed without written sanction from the Certifying Surgeon, entered in or attached to the health register.
19. *Medical facilities*—(1) 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.

    (2) The occupier shall make necessary arrangements to ensure quick availability of qualified medical practitioner in emergency.

    (3) The occupier shall provide medicines and antidotes and other equipment required for treatment of excessive absorption of dangerous pesticides.

    (4) 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 the Inspector.

    (5) 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.

    (6) Every worker in any factory where the said manufacturing process is carried on shall undergo the prescribed examinations, tests and treatments.
20. *Exemption* –If in respect of any factory the Chief Inspector is satisfied that owing to the exceptional circumstances or the frequency of the said manufacturing process or any other reason which he shall record in writing all or for any of the provisions of this schedule are not necessary for protection of the workers employed in the factory, he may give a certificate in writing exempt such factory, from all or any of the provisions on such condition as he may specify therein. Such certificate may at any time be revoked by the Chief Inspector after recording his reasons there for.

CAUTIONARY NOTICE
INSECTICIDES AND PESTICIDES

1. Chemicals handled in this plant are poisonous substances.
2. Smoking, eating food or drinking, chewing, tobacco in this area is prohibited. No food stuff or drink shall be brought in this area.
3. 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 food stuffs.
8. Spillage of the chemicals on any part of the body or on the floor or work-bench shall be immediately washed away with water.
9. 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 hand, use scoops provided with handles.
12. In case of sickness like nausea, vomiting, 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 protest their own health.

SCHEDULE XXI
MANUFACTURE, HANDLING AND USAGE OF BENZENE AND SUBSTANCES CONTAINING BENZENE

1. *Application*—Thus Schedule shall apply in respect of factories or parts thereof in which benzene or substances containing benzene arte manufactured handed or used.
2. *Definitions*—For the purposes of this Schedule—
   (a) "*Substance containing benzene*" means substances wherein benzene content exceeds one 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; and
   (d) "*Efficient exhaust draught*" means localised ventilation effected by mechanical means for removal of gases, vapours and dusts or fumes so as to prevent them for escaping into the air of any workroom. No draught shall be deemed to be efficient if it fails to remove smoke generated at the point where such gases, vapour, fumes or dusts originate.
3. *Prohibition and substitution*—(1) Benzene or substances containing benzene shall not be used as a solvent or dilute 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 were carried out in an enclosed system.
   (2) Where suitable substitutes are available, they shall be used instead of benzene or substances containing benzene. This provision, however, shall not apply to the following processes:
   (a) Production of benzene;
   (b) Process where benzene is used for chemical synthesis; and
   (c) Motor spirits (used as fuel).
   (3) The Chief Inspector may, subject to confirmation by the State Government permit exemption from the percentage laid down in sub-paragraph 2(a) also from the provisions of sub-paragraph (2) of this paragraph temporarily under conditions and within limits of time to be determined after consultation with the employees and workers concerned.
4. *Protection against inhalation*—(1) The process involving the use of benzene or substances containing benzene shall, as far as practicable, be carried out in an enclosed system.

(2) 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 milligrams per cubic meter.

(3) 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 result of such analysis shall be recorded in register specially maintained for this purpose. If the concentrations of benzene vapours in air as measured by air analysis exceed 25 parts per million by volume or 80 milligrams per cubic meter, the Manager shall forthwith report the concentration to the Chief Inspector stating the reason for such increase.

(4) Workers who for social reasons are likely to the exposed to concentration of benzene in the air of the workroom exceeding the maximum referred to in sub-paragraph (2) shall be provided with respirators or face masks. The duration of such exposure shall be limited as far as possible.

5. *Measures against skin contact*—(1) Workers who are likely to come in contract with liquid benzene or liquid substance containing benzene shall be provided with suitable gloves, aprons, boots and where necessary vapour tight chemical goggles, made of material not affected by benzene of its vapours.

   (2) The protective wear referred to in sub-paragraph (1) shall be maintained in good condition and inspected regularly.

6. *Prohibition relating to employment of women and young person*—No women 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 on benzene content, warning about toxicity and warning about in flammability of the chemical.

8. *Improper use of benzene*—(1) The use of benzene or substances containing benzene by workers for cleaning their hands on their work clothing shall be prohibited.

   (2) Workers shall be instructed on the possible dangers arising from such misuse.

9. *Prohibitions of consuming food, etc., in workrooms*—No worker shall allowed to store or consume food or drink in the workroom in which benzene or substances containing benzene are manufactured, handled or used. Smoking and chewing tobacco or pan shall be prohibited in such workrooms.

10. *Instructions as regards risks*—Every worker on his first employment shall be fully instructed on the properties of benzene or substances containing benzene which he has to handle and of the dangers involved. Workers shall also be instructed on the measures to be taken do deal with in an emergency.

11. *Cautionary notices*—Cautionary notice in the form specified in Appendix and printed in the language easily read and understood by the majority of the workers shall be displayed at prominent places in the workrooms where benzene or substances containing benzene are manufactured, handled or used.

12. *Washing facilities, cloakroom and mess-room*—In factories in which benzene or substances containing benzene are manufactured, handled or used, the occupier shall provide and maintain in a 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 a clean towel provided individually to each worker if so ordered by the Inspector;

(b) A cloakroom with lockers for each worker, having two compartments—one for street-clothing and one for work-clothing; and

(c) A mess-room furnished with tables and benches with means for warming food; provided that where a canteen or other proper arrangements exist for the workers to take their meals, the requirements of mess-room shall be dispensed with.

13. *Medical Examination*—(1) Every worker who is to be employed in processes involving use of benzene or substances containing benzene, shall undergo—

(a) A thorough pre-employment medical examination including a blood test for fitness for employment by a Certifying Surgeon; and

(b) Periodical medical examination including blood test and other biological test at intervals of every 6 months by the factory medical officer with the assistance of a laboratory.

(2) Certificates of pre-employment medical examination and periodical examination including tests, shall be entered in a health register in Form No. 6, which shall be produced on demand by an Inspector.

(3) (a) If the factory medical officer on examination at any time is of the opinion that any worker has developed signs or symptoms of benzene exposure, he shall makes a record of his findings in the said register and inform the manager in writing.

(b) On receipt of the information from the factory medical officer, the manager of the factory shall send the workers so found exposed to the Certifying Surgeon who shall, after satisfying himself with the findings of the factory medical officer and conducting necessary examinations, issue order of temporary shifting of the workers or suspension of the workers in the process.

(4) 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
CAUTIONARY NOTICE
Benzene and substances containing benzene

1. *Hazards*:

(a) Benzene and substances containing benzene are harmful;

(b) Prolonged or repeated breathing of benzene vapour may result in acute or chronic poisoning;

(c) Benzene can also be absorbed through skin which may cause skin and other diseases.

2. *Preventive measures*:

(a) Avoid breathing of benzene vapours;

(b) Avoid prolonged or repeated contact of benzene with the skin;

(c) Remove benzene soaked or wet clothing promptly;

(d) If at any time you are exposed to high concentration of benzene vapours and exhibit signs and symptoms such as dizziness, difficulty in breathing, excessive excitation and losing of consciousness immediately inform your factory manager;

(e) Keep all the containers of benzene closed;

(f) Handle, use and process benzene and substances containing benzene carefully in order to prevent their spillage on floor;

(g) Maintain good housekeeping.

3. *Protective equipment*—

(a) Use respiratory protective equipment in places where benzene vapours are present in high concentration;
(b) In emergency, use self generating oxygen mask or oxygen or air cylinder masks;
(c) Wear hand gloves, aprons, goggles and gum boots to avoid contact of benzene with your skin and body parts.

4. *First-aid measures in case of acute benzene poisoning*:
   (a) Remove the clothing immediately if it is wetted with benzene;
   (b) If liquid benzene enters eyes, flash thoroughly for at least 15 minutes with clean running water and immediately secure medical attention;
   (c) In case of unusual exposure to benzene vapour, call a physician immediately. Until he arrives, do the following—
      i) If the exposed person is conscious—
         (a) Move him to fresh air in open;
         (b) Lay down without a pillow and keep him quiet and warm;
      ii) 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.

SCHEDULE XXII
MANUFACTURING PROCESS OR OPERATIONS IN 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 considered refined and stored. This Schedule is in addition to and not in derogation of any of the provisions of the Act and rules made there under.
2. *Construction, installation and operation*—(1) The buildings in which electric furnaces are installed and carbon disulphide after generation is condensed and refined be segregated from other parts of the factory and shall be of open type to ensure optimum ventilation and the plant layout shall be such that only a minimum number of workers are exposed to the risk of any fire or explosion at any one time.

   (2) 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 to and shall be so designed that carbon disulphide liquid and gas are in closed system during their normal working.

   (3) The electric furnace supports shall be firmly grouted about 60 centimeters in concrete or by other effective means.

   (4) 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.

(5) The instructions regarding observance of correct furnace temperature, sulphur dose, admissible current or power consumption and periodical checking of charcoal level shall be strictly complied with.

3. *Electrodes*—(1) Where upper ring electrodes made of steel are used in the electric furnace, they shall be of streamless 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.

   (2) The arrangement for cooling water referred to in sub-paragraph (1) shall be connected with automatic alarm system which will be actuated in the event of interruption of cooling water in the electrodes and give visible and audible alarm signals in the control room and simultaneous stop power supply for the furnace operation and to stop the further supply of water. The alarm system and the actuating device shall be checked every day.

4. *Maintenance of charcoal level*—When any electric furnace is in operation, it shall be ensured that the electrodes are kept covered with charcoal bed.

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 condenser and piping.

6. *Rupture disc and safety seal*—(1) At least two rupture discs of adequate size which shall below off at a pressure twice the maximum operating pressure shall be provided on each furnace and shall be mounted directly on the top of the furnace or each through an independent pipe as close as possible to the furnace.

   (2) A safety water seal shall be provided and tapped from a point between the charcoal separator and the sulphur separator.

7. *Pyrometer and manometers*—(1) Each electric furnace shall be fitted with adequate number of pyrometers to give an indication of the temperature as correctly as reasonably practicable at various points in the furnace. The dials for reading temperature shall be located in the control room.

   (2) Manometers or any other suitable devices shall be provided for indicating pressure--

   a) In the off-take pipe before and after the sulphur separator; and
   b) In primary and secondary condenser.

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 furnace*—(1) Every electric furnace shall be inspected internally by a competent person—

   (a) Before being placed in service after installation;
   (b) Before being placed in service after reconstruction or repairs; and
   (c) Periodically every time the furnace is opened for cleaning or de-ashing or for replacing electrodes.

   (2) When an electric furnace is down for cleaning or de-ashing-

   a) The brick lining shall be checked for continuity and any part found defective removed.
   b) After removal of any part of the lining referred to in (a) the condition of the shell shall be closely inspected; and
   c) 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—

    (a) Manometer reading at the points specified in sub-paragraph 7(2);

(b) Gas temperature indicated by pyrometers and all other vital points near the sulphur separator and primary and secondary condensers;

(c) Water temperature and flow of water through the siphon in the electrodes; and

(d) 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 fittings which shall afford adequate protection from fire and explosion.

12. *Prohibition relating to smoking*—No person shall smoke or carry matches, fine 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 the language understood by a majority of the workers shall be posted in the plant prohibiting smoking and carrying or 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 as quickly as possible in case of an emergency. At least two independent staircase of adequate width shall be provided in every building housing the furnaces at reasonable intervals at opposite ends. These shall always be kept clear of all obstructions and so designed as to afford easy passage.

14. *Warning in case of fire*—There shall be adequate arrangements for giving warnings in case of fire or explosion which shall operate on electricity and in case of failure of electricity, by some mechanical means.

15. *Fire-fighting equipment*—(1) Adequate number of suitable fire extinguishers or other fire extinguishers equipment shall be kept in constant readings for dealing with risks involved and depending on the amount and nature of materials stored.

(2) Clear instructions as to how the extinguishers or other equipment should be used printed in the language which the majority of the workers employed understand, shall be affixed to each extinguisher or other equipment and the personnel trained in their use.

16. *Bulk sulphur*—(1) Open or semi enclosed spaces for storage of bulk sulphur shall be sited with due regard to the dangers which may arise from sparks given off by nearly 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 bending of bulk sulphur.

(2) All enclosures for bulk sulphur shall be of non-combustible construction, adequately ventilated and so designed as to provide a minimum of ledges on which dust may lodge.

(3) The bulk sulphur in the enclosures shall be handled in such a manner as to minimise the formation of dust clouds and no flame, smoking and matches or other sources of ignition shall be employed during handling and non-sparking tools shall be used whenever sulphur is shovelled or otherwise removed by hand.

(4) 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*—(1) 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.

(2) Worker in-charge of operation and maintenance of electric furnace and plants shall be properly qualified and adequately trained.

19. *Washing facilities*—(1) The occupier shall provide and maintain in a clean state and in good repair, for the use of all persons employed wash place cover with at least one tap or stand pipe, having a constant supply to clean water for every five such persons, the taps of stand pipes being spaced not less than 120 centimeters apart with a sufficient supply of soap and clean towels; provided that towels shall be supplied individually to each worker if so ordered by the Inspector.

    (2) All the workers employed in the sulphur storage, handling and melting operations shall be provided with a nail brush.

20. *Personal protective equipment*—(1) Suitable goggles and protective clothing consisting of overalls without pockets, gloves and footwear shall be provided for the use of operatives—

    (a) When operating valves or cocks controlling fluids etc.;
    (b) Drawing off of molten sulphur pot; and
    (c) Handling charcoal or sulphur.

    (2) Suitable respiratory protective equipment shall be provided and stored in the appropriate place for use during abnormal conditions or in an emergency.

    Arrangements shall be made for proper and efficient cleaning of all such protective equipment.

21. *Cloakrooms*—There shall be provided and maintained for the use of all persons employed in the processes a suitable cloakroom for clothing put off during working hours and suitable place separate from the cloakroom for the storage or overalls or working clothes. The accommodation so provided shall be placed in the charge of a responsible person and shall be kept clean.

22. *Unauthorised persons*—Only maintenance and repair personnel, persons directly connected with the plant operation and those accompanied by authorised persons shall be admitted into the plant.

SCHEDULE XXIII
MANUFACTURE OR MANIPULATION OF CARCINOGENIC DYE INTERMEDIATES

1. *Applications*—This Schedule shall apply in respect of all factories or any part thereof where processes in which the substances mentioned in paragraph 3 and 4 are formed, manufactured, handled, or used and the processes incidental thereto in the course of which these substances are formed, are carried on. The process indicated in this paragraph shall be referred to hereinafter as "the said processes", and such a reference shall mean any or all the processes described in this paragraph.

2. *Definitions*—For the purposes 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; and

(d) "*prohibited substances*" means chemical substances mentioned in paragraph 3 of this Schedule.

3. *Prohibited substances*—For the purposes of this Schedule, the following chemical substance shall be classified as "prohibited substance" 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 salt;
   (b) Benzidine and its salts;
   (c) 4-amino dephenyl and its salts;
   (d) 4 nitro diphenyl and its salts; and
   (e) Substance containing of these compounds.
4. *Controlled substances*—For the purposes of this Schedule, the following chemical substances shall be classified as "controlled substances:
   (a) Alpha-napthylamine or alpha-naphthylamine containing not more than onr per cent of beta-napthylamine either as by-product of chemical reaction or otherwise, and its salts;
   (b) Ortho-tolidine and its salts;
   (c) Dianisidine and its salts;
   (d) Dichlorobenzidine and its salts;
   (e) 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 processes, handled, or used except as exempted by the Chief Inspector as stipulated in paragraph 23.
6. *Requirements for processing or handling controlled substances*—(1) Where 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, or absorption of the said controlled substance by the workers while engaged in the processing that substance, and its storage or transport within the plant, or in cleaning or maintenance of the concerned equipment, plant, machinery and storage areas.

   (2) As far as possible all operations shall be carried out in a totally enclosed system. Wherever such enclosure is not possible, efficient exhaust draught shall be applied at the point where the controlled substances are likely to escape into the atmosphere during the process.

   (3) The controlled substances shall be received in the factory in tightly closed containers and shall be kept so except when these substances are in process or in use. The controlled substances shall leave the factory only in tightly closed containers of appropriate type. Al the containers shall be plainly labelled to indicate the containers.
7. *Personal protective equipment*—(1) The following items of personal protective equipment shall be provided and issued to every worker employed in the said processes:
   (a) Long trousers and shirts or overalls with full sleeves and head coverings. The shirts or overalls shall cover the neck completely; and
   (b) Rubber gum-boots.

   (2) The following items of personal protective equipment shall be provided in sufficient numbers for use by workers employed in the said process when there is danger of injury during performance of normal duties or in the event of emergency:
   a) Rubber hand gloves;
   b) Rubber aprons; and
   c) Airline respirators or other suitable respiratory protective equipment.

(3) 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 workroom*—The floor of every workroom 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 repairs, (c) with a suitable slope for easy draining and provided with gutters, and (d) thoroughly washed daily with the drain water being let 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, 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 precautions to be taken. Workers shall also be instructed on the measures to be taken to deal with an emergency.
13. *Cautionary placards*—Cautionary placard 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. *Obligations of the workers*—It shall be the duty of the person employed in the processes to submit themselves for the medical examination including exfoliative cytology of urine by the Certifying Surgeon or the qualified medical practitioners as provided for under these rules.
15. *Washing and bathing facilities*—(1) The following washing and bathing facilities shall be provided and maintained in a clean state and in good repair for the use of all workers employed in the said process—
    (a) 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;
    (b) Fifty per cent of the stand pipes provided under Clause (a) shall be located in bathrooms where both hot and cold water shall be made available during the working hours of the factory and for one hour thereafter;
    (c) The washing and bathing facilities shall be in close proximity of the area housing and the said processes;
    (d) A clean towel shall be provided individually to each worker; and
    (e) In addition to taps mentioned under Clause (a), one stand pipe in which warm water is made available, shall be provided on each floor.

    (2) Arrangement shall be made to wash factory uniforms and other work clothes every day.
16. *Food, drinks, etc., prohibited in workroom*—No worker shall consume food, drink, pan, supari ot tobacco or shall smoke in any workroom in which the said processes are carried on and no worker shall remain in any such work room during intervals for meals or rest.

17. *Cloakroom*—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 work clothes, (b) a place separate from the locker room and the mess-room, 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.
18. *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.
19. *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.
20. *Restriction on age of persons employed*—No water 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.
21. *Medical examination*—(1) Every worker employed in the said processes shall be examined by a Certifying Surgeon within 14 days of his first employment. Such examination shall includes tests which the Certifying Surgeon may consider appropriate and shall include exfoliate cytology of the urine. No worker 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.

    (2) Every worker employed in the said processes shall be re-examined by the Certifying Surgeon, at least once in every six calendar months. Such examination shall include tests which the Certifying Surgeon may consider appropriate but shall include exfoliate cytology of the urine.

    (3) A person medically examined under sub-paragraph (1) shall be granted by the Certifying Surgeon a certificate of fitness in Form 28. Record of each re-examination carried out under sub-paragraph (2) shall be entered in the certificate. The certificate shall be kept in the custody of the manager of the factory.

    (4) The record of each examination carried out as referred to in sub-paragraphs (1) and (2) including the nature and the results of the tests shall be entered by the Certifying Surgeon in a health register in Form 29.

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

    (6) 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 any other work on the ground that continuance therein would 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 those documents should also include the period for which he considers that said person is unfit for work in the said processes or in any work as the case may be.

    (7) No person who has been found unfit to work as said in sub-paragraph (6) shall be re-employed or permitted to work unless the Certifying Surgeon, after further examinations, again certifies him to fit for employment.
22. *Medical facilities*—(1) 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 of Factories.

(2) The occupier shall provide to him all the necessary facilities for the purpose referred to in sub-paragraph (1).

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

23. *Examinations*—Prohibited substances—(1) The Chief Inspector may by a certificate in writing (which he may at his discretion revoke at any time) subject to such conditions, if any, as may be specified therein, exempt any process in the course of which any of the prohibited substances is formed processes, manufactured, handled, or used, from the provision 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.

    (2) 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 substances other than benzidine hydrochloride is removed there from 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 with not less than one part of water to two parts of benzidine hydrochloride at all times.

24. *Exemptions*—General—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 provision of this Schedule is not necessary for the protection of the workers in the factory, the Chief Inspector may, by a certificate in writing (which he may in his discretion revoke at any time), exempt such factory from all or any of such provisions subject to such conditions, if any, as he may specify therein.

APPENDIX
CAUTIONARY PLACARD/NOTICE
Carcinogenic dye intermediates

1. Dye intermediates which are nitro amino derivatives or aromatic hydrocarbon 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 a long handled scoop, never with have hands.
6. Alcoholic drink 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.

117. **Notification of accidents and dangerous occurrences**—(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 annexed hereto takes place in a factory the manager of the factory shall forthwith send a notice thereof by telephone, special messenger or telegram to the Inspector and the Chief Inspector.

(2) When any accident or any dangerous occurrence specified in the Schedule annexed hereto 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, 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-Rr. (1) and (2) shall be confirmed by the manager of the factory to the authorities mentioned in those sub-rules within 12 hours of the accident or the dangerous occurrence by sending a written in Form 30 in the case of an accident or dangerous occurrence causing death or bodily injury to any person and in Form 31 in the case of dangerous occurrence which has not resulted in and bodily injury to any person.

(4) When any accident or any dangerous occurrence specified in the Schedule takes place in a factory and its causes such bodily injury to any person as prevent the person injured from working for a period of 48 hours or more immediately following the accident of the dangerous occurrence, as the case may be, the manager of the factory shall send a report thereof to the Inspector in Form 18 within 24 hours after the expiry of 48 hours from the times of the accident or the dangerous occurrence:

Provided that if in the case of an accident or dangerous occurrence, death occurs of any person injured by such accident or dangerous occurrence after the notices and reports referred to in the foregoing sub-rules have been sent, the manager of the factory shall forthwith send a notice thereof by telephone, special messenger or telegram to the authorities and persons mentioned in sub-rules (1) and (2) and also have this information confirmed in writing within 12 hours of the death:

Provided further that, if the period of disability from working for 48 hours or more referred to in sub-rule (4) does not occur immediately following the accident, or the dangerous occurrence, but later, or occurs in more than one spell the report referred to shall be sent to the Inspector in the prescribed Form 31 within 24 hours immediately following the hour when the actual total period of disability from working resulting from the accident or the dangerous occurrence becomes 48 hours.

SCHEDULE

The following classes of dangerous occurrences, whether or not they are attended by personal injury or disablement:

1. Bursting of a plant used for containing or supplying steam under pressure greater than atmospheric pressure.
2. Collapse or failure of a 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.
3. 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.

4. Explosion of a receiver or container used for the storage at a pressure greater than atmospheric pressure of any gas or gases (including air) or any liquid or solid resulting from the compression of gas.
5. Collapse or subsidence of any floor, gallery, roof, bridge, tunnel, chimney, wall, building or any other structure.

118. **Notice of poisoning or disease**—A notice in Form No. 32 should be sent forthwith both to the Chief Inspector and to the Certifying Surgeon, by the manager of a factory in which there occurs as case of lead, phosphorus, mercury, manganese, arsenic, carbon disulphide or benzene poisoning; or of poisoning by nitrous fumes, or by halogens or halogen derivatives of the hydrocarbons of the aliphatic series; or of chrome ulceration, anthrax, cilicosis, toxic anaemia, toxic jaundice, primary opitheliomatous cancer of the skin or of pathological manifestations due to radium or other radio-active substances or X-rays.

COMMENTS

This rule has been prescribed under Section 89 of the Factories Act.

CHAPTER X
SUPPLEMENTAL

119. **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 State Government or to such authority as the State Government may appoint in this behalf and shall be in the form of a memorandum setting forth concisely the grounds of objection to the order and bearing court-fee stamps in accordance with Article 11 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 of appeal, the appellate authority shall, 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 declared under sub-rule (3) to be 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 in the hearing of the appeal.

(3) The following shall be the body for the purpose of sub-rule (2), viz,--

The Meghalaya Industrial Association.

(4) *Remuneration of assessors*—An assessor appointed in accordance with the provisions of sub-rule (2) and (3) shall receive for the hearing of the appeal, a fee to fixed by the appellate authority, subject to a maximum of fifty rupees per diem. He shall also receive the actual travelling expense. The fees and travelling expense shall be paid to the assessor by State 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 assessors shall be paid in whole in part by the appellant.

COMMENTS

This rule has been framed under Section 107(1) of the Factories Act.

120. **Display of notice**—The abstract of the Act and of the rules required to be displayed in every factory shall be in Form No. 33.

COMMENTS

This rule has been framed under Section 108 of the Factories Act.

121. **Returns**—The Manager of every factory shall furnish to the Inspector or other officer appointed by the State Government in this behalf the following returns in the form and within the due dates specified below:

(a) Annual return in Form 34, in duplicate, on or before the 31st January of each year; and

(b) Half-yearly return in Form 35, in duplicate, on or before the 15th July of each year.

122. **Service of notice**—The despatch by post under registered cover of any notice or order shall be deemed sufficient service on the occupier, owner or manager of a factory of such notice or order.

123. **Information required by the Inspector**—The occupier, owner 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 has been complied with or whether any order of an Inspector has been duly carried out. Any demand by an Inspector of any such information, if made during the course of an inspection, shall be complied forthwith if the information is available in the factory, or if made in writing, shall be complied with, within seven days of the receipt thereof.

124. **Muster-roll**—The manager of every factory shall maintain a muster-roll of all workers employed in the factory in Form No. 36 showing (a) the name of each worker, (b) the nature of his work, and (c) the daily attendance of the worker:

Provided that, if the daily attendance is noted in the Register of Adult Worker in Form No. 17, or the particulars required under this rule as noted in any other register a separate muster-roll required under this rule need not be maintained.

125. **Register of accidents and dangerous occurrences**—The Manager of every factory shall maintain a Register of all accidents and dangerous occurrences which occur in the factory in Form No. 37.

126. **Maintenance of Inspection Book**—The Manager of every factory shall maintain a bound inspection book and shall produce it when so required by the Inspector of Certifying Surgeon.

127. **Information regarding closure of factories**—The occupier or Manager of every factory shall report to the Inspector any intended closure of the factory or any section or department thereof immediately it is decided to do so, intimating the reason for the closure, the number of workers on the register on the date of report, the number of workers likely to be affected by the closure and the probable period of the closure. Intimation should also be sent to the Inspector as soon as the factory or the section or department of the factory, as the case may be, starts working again.

128. (a) The Meghalaya Factory Rules (Assam Factory Rules, 1950) as adapted by the Meghalaya are hereby repealed.

(b) Notwithstanding such repeal any decision given order issued or action taken or whatsoever done under the Rules repealed shall be valid and shall be deemed always to have been given, issued, taken or done under the corresponding provisions of these Rules.

FORM No. 1

[Prescribed under Rule 4 (1-A)]

Application for permission to construct, extend or take into use any building as a factory

1. Applicant's name, calling and address.....
2. Full name and postal address of factory.....
3. Situation of the factory—

(a) Province.....
(b) District.....
(c) Town or village.....
(d) Nearest Police Station.....
(e) Nearest Railway Station or Steamer ghat.....
4. Particulars of plant to be installed.....

Signature of applicant
Date.....

Note—This application shall be accompanied by the following documents:

(a) A flow chart of the manufacturing process supplemented by a brief description of the process in its various stages;
(b) Plans, in duplicate, drawn to scale, showing—
  i) The site of the factory and immediate surrounding including adjacent buildings and other structures, roads, drains, etc; and
  ii) The plant, elevation and necessary cross-section 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 plant and machinery, aisles and passageways; and
(c) Such other particulars as the Chief Inspector of Factories may require.

FORM No. 2
[Prescribed under Rules 5, 8(2) and (14)]
Application for registration and grant or renewal of licence for the year..... and notice of occupation specified in Sections 6 and 7
(To be submitted in triplicate)

1. (a) Full name of the factory.....
   (b) Factory licence No., if already registered before.....
2. (a) Full postal address and situation of the factory.....
   (b) Full address to which communication relating to the factory should be sent.....
3. Nature of manufacturing process/processes—
   a) Carried on in the factory during the last 12 months (in the case of the factories already in existence).....
   b) To be carried on the factory during the next 12 months (in the case of all the factories).....
4. Names and values of principal products manufactured during the last 12 months (in the case of factories already in existence).....

Name	Value
1.	.....
2.	.....
3.	.....

5. (a) Maximum number of workers proposed to be employed on any one day during the year.....
   (b) Maximum number of workers employed on any one day during the last 12 months (in the case of factories already in existence).....
   (c) Number of workers to be ordinarily employed in the factory.....
6. (a) Nature and total amount of power (K.W.) (i) installed or (ii) proposed to be installed.....
   (b) Maximum amount of power (K.W.) proposed to be used.....

7. Full name and residential address of the person who shall be the manager of the factory for the purpose of the Act.....
8. Full name and residential address of the occupier, that is—
   a) The proprietor of the factory in case of private firm or proprietary concern.....
   b) The directors in case of a public limited liability Company or Firm.....
   c) (i) the managing agent in case a managing agent is employed.....
      (ii) the directors of the above managing agent.....
   d) Shareholders in case of a private company where no managing agent is employed or.....
   e) The Chief Administrative Head in case of a Government or local fund factory.....
9. Full name and address of the owner of the premises or building (including the precints thereof) referred to in Section 93.....
10. In the case of a factory constructed or extended after date of the commencement of the rules—
   (a) Reference No. and date of approval of the plans for site whether for old or new building and for construction or extension of a factory by the State Government/Chief Inspector.....
   (b) Reference No. and date of approval of the arrangements, if any, made for the disposal or trade waste and effluents and the name of the authority granting such approval.....
11. (a) Amount of fee paid Rs.....(Rupees.....)
   (b) in case of payment in treasury--
      i) Name of Treasury;
      ii) Date of payment; and
      iii) Challan No. (challan to be enclosed).
   (c) In case of transmission by crossed cheque--
      i) Name of nationalised bank;
      ii) Crossed cheque number; and
      iii) Date of cheque.....(crossed cheque drawn in favour of the Chief Inspector of Factories to be enclosed).
   (d) In case of transmission by cross postal order--
   i) Name of post office;
   ii) Crossed postal order number; and
      iv) Date of postal order (crosses postal order drawn in favour of the Chief Inspector of Factories to be enclosed).

Date..... Signature of occupier

Date..... Signature of Manager

Notes—1. This form should be completed in ink in block letter or types.

2. If power is not used at the time of filling up this form, bur is introduced letter, the fact should be communicated to the Chief Inspector of Factories immediately.

3. If any of the persons named against Item 8 is minor, the fact should be clearly stated.

4. In the case of a factory where under the provision to sub-sections (1) and (2) of Section 100, a person has been nominated as the occupier, information required in Item 8 should be supplied only in respect of that person.

5. In the case of a Factory where a managing agent or agents have been appointed as occupier under the Indian Companies Act, 1956 (1 of 1956) information required in Item 8 should be supplied only in respect of that person or persons.

FORM No. 3

[Prescribed under Rule 6 (1)]

Licence to work a Factory

Registration No..... Fee Rs.....

Serial No.....

Licence is hereby granted to .....valid only for the premises described below for use as a factory employing not more than ..... persons on any one day during the year and using motive power not exceeding ..... K.W., subject to the provisions of the Factories Act, 1948, and the rules made there under.

This licence shall remain in force till the 31st day of December, 20.....

Date..... Signature of Chief Inspector of Factories

Description of the licensed premises

This licensed premises shown on Plan No.....dated.....are situated in..... and consist of.....

Renewals

Date of renewal	Date of expiry	Signature of licensing authority

FORM No. 4

[Prescribed under Rule 15]

Notice of change of Manager

1. (a) Name of factory.....
   (b) Current licence number of factory.....
2. Postal address of factory.....
3. Name of outgoing manager.....
4. (a) Name of new manager.....
   (b) Residential address.....
   (c) Telephone number.....
5. Date of appointment of new manager.....

Signature of new Manager

Signature of occupier

FORM No. 5

[Prescribed under Rule 18 (2)]

Certificate of Fitness

1.	Serial No. Date	....	....	Serial No. ..... Date.....
2.	Name of person examined	....	....	I hereby certify that I have personally examined (name).....son/daughter of.....residing
3.	Father's name	....	....	at..... who is desirous being employed in a
4.	Sex	....	....	factory, and that his/her age as nearly as can be of
5.	Residence	....	....	ascertained from my examination,
6.	Date of birth, if available and/or certified age	....	....	is.....years, and that he/she is fit for employment in factory as an adult/child.
7.	Physical fitness	....	....	
8.	Descriptive marks	....	....	His/Her descriptive marks are.....
9.	Reason for— (1)refusal of certificate	....	....	
	(2)certificate being revoked	....	....	
	Signature or left hand thumb impression of the person examined			Signature of left hand thumb impression of the person examined
	Initial of Certifying Surgeon			Signature of Certifying Surgeon

Note—In Case of physical disability the exact details of the cause of physical disability should be clearly stated.

FORM No. 6

[Prescribed under Rule 18 (5): Paragraph 22 (2) of Schedule III; Paragraph 1 (e) and 11 of Schedule IV; Paragraph 10 (2) of Schedule X; Paragraph 11 (9) of Schedule XIV; Paragraph 14 (3) of Schedule XVI; Paragraph 18 of Schedule XX; and Paragraph 13 (2) of Schedule XXI to Rule 116]

Health Register

Name of Certifying Surgeon:

(a)	Shri.....	From.....	To.....
(b)	Shri.....	From.....	To.....
(c)	Shri.....	From.....	To.....
(d)	Shri.....	From.....	To.....

Serial No.	Works No.	Name of worker	Sex	Age (last birth day)	Date of employment on present work	Date of leaving or transfer to other works	Reason for leaving, transfer or discharge	Nature of job or occupation	Raw material or by product handed
1	2	3	4	5	6	7	8	9	10

Dates of Medical Examination by Certifying Surgeon Result of Medical Examination	If suspended from work, state period of suspension with detailed reasons	Recertified fit to resume duly on.....(with signature of Certifying Surgeon	If certificate of unfitness or suspension issued to worker	Signature with date of Certifying Surgeon
11	12	13	14	15

Notes—(1) Detailed summary of reasons for transfer or discharge should be stated in Column 8.

(2) The result of medical examination should be expressed as fit/unfit/suspended in Column 11.

FORM No. 7

[Prescribed under Rules 19, 52 and 84 (8) (b)]

Record of lime washing, painting, etc.

Parts of Factory, e.g., Name of room	Parts limewashed, painted, varnished or oiled, e.g., walls, ceilings, wood works, etc	Treatment, i.e. whether limewashed, painted, varnished or oiled	Date on which lime-washing, painting, varnishing or oiling was carried out			Remarks
			Date	Month	Year	
1	2	3	4	5	6	7

Signature of Manager

Date.....

FORM No. 8

[Prescribed under Rule 27]

Humidity Register

Department.....

Distinctive mark or No.....

Hygrometer

Position in Department.....

Readings of Hygrometer

Date Month	Year	Between 7 and 9 a.m.		Between 11 a.m. and 2 p.m. (but not in the rest interval)		Between 4 p.m. and 5.30 p.m.		If no humidity, insert none	Remarks
		Dry bulb	Wet bulb	Dry bulb	Wet bulb	Dry bulb	Wet bulb		
1	2	3	4	5	6	7	8	9	10
1st									
2nd									
3rd									
4th									
5th									
6th									
7th									
8th									
9th									
10th									
11th									
12th									
13th									
14th									
15th									
16th									
17th									
18th									
19th									
20th									
21st									
22nd									
23rd									
24th									
25th									
26th									
27th									
28th									
29th									
30th									
31st									

Certified that the above entries are correct

Signature and designation of the person taking the readings

FORM No. 9

[Prescribed under Rule 59]

Register of workers employed for work on or near machinery in motion

1. Name of workers.....
2. Serial No. as in the register of workers under Section 62.....
3. Father's name.....
4. Date of birth and age.....
5. Nature of work.....
6. Qualification, if any, or period of service on similar work.....
7. Date when tight fitting clothing was provided.....
8. Remarks.....

I certify that the above-mentioned worker whose signature or left-hand thumb-impression is given below is a properly trained male adult workers who is competent to mount on ship belts, lubricate or do other adjusting operations on the machinery installed in many factory while they are in motion.

Date.....

Signature of Occupier

Signature of left-hand thumb
impression of worker.

FORM No. 10

[Prescribed under Rule 1 (1)]

Report of examination of hoists and lifts

Occupier (or owner) of premises.....

Address.....

1. (a) Type of hoist or lift an identification No. or description.....
   (b) Date of construction or reconstruction (if ascertainable).....
2. Are all parts of the hoist or lift of good mechanical construction, sound material and adequate strength (so far as ascertainable)?.....
3. Are the following parts of the hoist or lift properly maintained and in good working order? If not, state what defects have been found—
   (a) Enclosure or lift way.....
   (b) Landing gates and cage gates.....
   (c) Interlocks and the landing gates and cage gates.....
   (d) Other gate fastenings.....
   (e) Cage and platform and fittings guides, buffers, interior of the hoistway of liftway.....
   (f) Overrunning devices.....
   (g) Suspension ropes or chain and their attachments.....
   (h) Safety are i.e., arrangements for preventing fall of platform or cage brakes.....
   (i) Brakes.....
   (j) Worm or spur gearing.....
   (k) Other electrical equipment.....
   (l) Other parts.....
4. What parts (if any) were inaccessible?.....
5. Repairs, renewal or alterations (if any) required and the period within which they should be executed.....
6. Maximum safe working load subject to repairs, renewals or alteration (if any) specified in Item 5.....

7. Other particulars.....

I/We certify that on (date).....I/we thoroughly examined this hoist of lift and that the above is a correct report of the result.

Signature
Qualification
Address

Date.....

If employed by a company or association, name and address of the company or association.

FORM No. 11

[Prescribed under Rule 63 (9) (b)]

Report of examination or test of pressure vessel or plant

1. Name of occupier (or Factory).....
2. Situation and address of factory.....
3. Name, description and distinctive number of pressure vessel or plant.....
4. Name and address of manufacturer and reference to their test certificate or certificate of competent person.....
5. Nature of process in which pressure vessel or plant is used.....
6. Particulars of pressure vessel or plant
   (a) Date of construction.....
   (b) Thickness of walls.....
   (c) Date on which the pressure vessel or plant was first taken into use.....
   (d) Maximum permissible working pressure recommended by the manufacturer.....
   (e) Design pressure, if known.....
   (f) Brief history of pressure vessel or plant, indicating whether the examiner has seen the last previous report.....
7. Date of last hydraulic test (if any) and pressure applied.....
8. Is be pressure vessel or plant in open, or otherwise exposed to weather or to damp?.....
9. What parts (if any) were inaccessible?.....
10. What examination and test were made? (specify pressure if hydraulic test was carried out).....
11. Condition of pressure vessel or plant (state any defects materially affecting the maximum permissible working pressure or the safe working of the pressure vessel or plant)
    External.....
    Internal.....
12. Are the required fittings and appliances provide in accordance with the rules for?.....
13. (a) Are all fittings and appliances properly maintained in good condition?.....
    (b) Have the pressure settings been checked and corrected?.....
14. (a) Repairs (in any) required.....
    (b) Period within which the repairs should be executed.....
    (c) any other condition which the person making the examination thinks it necessary for securing safe working.....
15. Maximum permissible working pressure, calculated from dimensions and from the thickness and other date ascertained by the present examination, due allowance being made for conditions of workings if unusual, or exceptionally severe (state minimum thickness of walls measured during the examination).....
16. Where repairs affecting the maximum permissible working pressure are required, state the working pressure—

(a) Before the expiration of the period specified in item 14.....
(b) After the expiration of such period if the required repairs have not been completed.....
(c) After the completion of the required repairs.....
17. Other observations.....

I certify that on (date).....the pressure vessel or plant described above was thoroughly cleaned and (so far as its construction permits) made accessible for thorough examination and for such test as were necessary for thorough examination and that on the said, date, 1 thoroughly examined this pressure vessel or plant, including its fittings, and that the above is a true report of any examination.

If employed by a Company or Association, give name and address of the Company or Association

Signature.....
Qualification.....
Address.....
Date.....

FORM No. 12

[Prescribed under Rule 64 (8) (b)]

Register of examination of gasholders

Distinguishing number or letter of gasholder	Maker's name	Date of manufacture	Particulars of manufacture		
			Number of lift	Maximum capacity in cubic meters	Pressure thrown by gasholder when full of gas
1	2	3	4	5	6

Particulars of examination carried out under Rule 63 (4) and 95			Particulars of repairs			Remarks
Method of examination used	Date of examination	Name and designation of the person making this examination	Nature of repairs	Date of repairs and painting	By whom repairs are carried out	
7	8	9	10	11	12	13

FORM No. 13

[Prescribed under Rule 64 (8) (c)]

Report of examination of water-sealed gasholder

1. Name of occupier (or factory).....
2. Situation and address of factory.....
3. Name, description, distinguishing number or letter and type of gas holder.....

4. Name and address of the manufacture.....
5. (a) Number of lifts.....
   (b) Maximum capacity in cubic meters.....
   (c) Pressure thrown by holder when full of gas.....
6. Particulars of gas to be stored in the holder.....
7. Particulars as to the condition of—
   (a) Crown.....
   (b) Side sheeting, including grips and cups.....
   (c) Guiding mechanism (soller carriage, rollers, pins, guide rails or ropes).....
   (d) Tanks.....and
   (e) Other structure, if any (columns, framing and being).....
8. Particulars as to the position of the lifts at the time of examination.....
9. Particulars as to whether the tank and lift were found sufficiently levelled for safe working and if not, as to the steps taken to remedy the defect.....
10. Date of examination and by whom it was carried out.....
11. Condition of vessel—
   (a) External.....
   (b) Internal.....
12. (a) Are all fittings and appliances properly maintained and in good condition?
   (b) Repairs, if any, required and period within which they should be executed.....
   (c) Any other condition which the persons making the examination thinks it necessary for securing safe working.....
13. Other observation.....

If certify that on (date).....the gasholder described above was thoroughly examined and such of the test as were necessary made on the same day and that the above is true report of my examination.

Signature.....

Qualification.....

Address.....

Date.....

If employed by a company or association, name and address of the company or association.

FORM No. 14

[Prescribed under Rule 98 (4) (a)]

Register of Compensatory Holidays

Serial No.	No. in the register of workers	Name	Group or relay No.	No. & date of ex-empting order	Year	Weekly rest days lost due to the exempting order in			
						January to March	April to June	July to September	October to December
1	2	3	4	5	6	7	8	9	10

Date of compensatory holiday given in				Lost rest days carried to the next year	Remarks
January to March	April to June	July to September	October to December		
11	12	13	14	15	16

FORM No. 15

[Prescribed under Rule 99]

Overtime muster roll for exempted worker—Month ending.....20.....

No. in the register of adult workers	Name of ex-empted worker	Department	Date on which overtime has been worked	Extent of overtime on each occasion	Total overtime worked of production in case of piece workers	Normal hours

Normal rate of pay for piece work or rate o pay per hour	Overtime rate of pay	Normal earnings	Overtime earnings	Total earnings	Date on which overtime payments made	Remarks

FORM No. 16

[Prescribed under Rule 100]

Notice of periods of work for adult workers

Name of factory.....Plane.....District.....

Period of work	Men											
Groups	Total number of men employed											
Relays	A			B			C			D		
	1	2	3	1	2	3	1	2	3	1	2	3
On working days From..... To..... From..... To..... From..... To..... On partial working days From..... To..... From..... To.....												

Period of work	Women												Description of group		Remarks
Groups	Total number of women employed												Group letter	Nature of work	
Relay	E			F			G			H					
	1	2	3	1	2	3	1	2	3	1	2	3			
On working days From..... To..... From..... To..... From..... To..... On partial working days From..... To..... From..... To.....															

Date on which this notice is first exhibited

Signature of Manager
Date.....

FORM No. 17

[Prescribed under Rule 101]

Register of Adult Workers

Serial No.	Name	Residential address	Father's name	Nature of work	Letter of group as in Form 11	No. of relay, if working in shifts	No and date of certificate if an adolescent		Remarks
							No of certificate and date	Token No. giving reference to the certificate	
1	2	3	4	5	6	7	8	9	10

FORM No. 18

[Prescribed under Rule 106]

Notice of periods of work for child workers

Name of factory.....Place.....District.....

Period of work	Children			Description of Group		Remarks
Group	Total number of children employed			Group letter	Nature of works	
Relays	A 1 2	B 1 2	C 1 2			
From To				A B C		

Date on which this notice in first exhibited

Signature of Manager
Date.....

FORM No. 19

[Prescribed under Rule 107]

Register of Child Workers

Serial No.	Name	Residential address	Father's name	Date of first employment	No. of certificate and its date	Token No. giving reference to certificate	Letter of Groups as in Form No. 18	No. of relay, if working in shifts	Remarks
1	2	3	4	5	6	7	8	9	10

FORM No. 20

[Prescribed under Rule 108]

Register of Leave with Wages

Part I-Adults

Part II-Children

Factory: Name of worker:

Department. Father's name:

Serial No.	Serial No. in the register of adult/child workers	Date of entry into service	Interruptions				
			Sickness and accident	Authorised leave	Lockout or legal strike	Involuntary unemployment	Others
1	2	3	4	5	6	7	8

Leave due with effect from.....	Whether leave not desired during the next 12 months	Date from which the worker is allowed leave	Wages for leave paid in	Discharged worker		Remarks
				Date of discharge	Date and amount of payment made in lieu of leave due	
9	10	11	12	13	14	15

Note—Separate page shall be allotted to each worker.

FORM No. 21

[Prescribed under Rule 109 (1)]

Leave Book

Part I-Adults

Part II-Children

Factory: Name of worker:

Department. Father's name:

Serial No.	Serial No. in the register of adult/child workers	Date of entry into service	Interruptions				
			Sickness and accident	Authorised leave	Lockout or legal strike	Involuntary unemployment	Others
1	2	3	4	5	6	7	8

Leave due with effect from.....	Whether leave not desired during the next 12 months	Date from which the worker is allowed leave	Wages for leave paid in	Discharged worker		Remarks
				Date of discharge	Date and amount of payment made in lieu of leave due	
9	10	11	12	13	14	15

Note—This leave book shall be made out separately for each worker on thick bound sheets.

FORM No. 22

[Prescribed under Rule 114]

Nomination for payment of pay due for period of holidays in the event of death of worker

I herby require that in the event of my death before resuming work, the balance of my pay dye for the period of holidays shall be paid to.....who is my.....and resides at.....

Witnesses:

Attested:

Signature:

Name.....

Designation.....

Address.....

Signature.....

Name.....

Designation.....

Address.....

Particulars of worker such as serial No. in the register of adult/child worker, section or department, etc.

Signature or left hand
Thumb-impression of worker

Date.....

FORM No. 23

[Prescribed under paragraph 8 (1) of Schedule II to Rule 116]

Certificate of fitness

Serial No.....

Date.....

I hereby certify that I have personally examined Shri.....son of Shri.....residing at.....who is desirous of being employed as.....in the.....and that his age, as nearly as can be ascertained from my examination is.....year, and that he is, in my opinion, fit for employment in.....

His descriptive marks are:

Signature of left hand thumb-
impression of the person examined

Signature of Certifying Surgeon

I certify that I examined the person mentioned above on	I extend this certificate until	Signature of Certifying Surgeon	None of symptoms

FORM No. 24

[Prescribed under paragraph 9 (2) of Schedule II to Rule 116]

Health Register

Serial No.	**Department of works**	**Name of worker**	**Age at last birth day**	**Date of employment on present works**	**Date of leaving or transfer (which reasons for discharge or transfer)**	**Nature of job or occupation**	**Raw material or by product handled**	**Date of weekly examination with results (fit/unfit)**	**Nature of symptoms**	**Signature of registered medical practitioner**
1	2	3	4	5	6	7	8	9	10	11

FORM No. 25

[Prescribed under paragraph 7 (2) of Schedule V to Rule 116]

Report of examination and test of dust extrication or suspension system

1. Description of system
2. Hood—
   (a) Serial No. of hood
   (b) Contamination captured

Design value Actual value

(c) Capture velocities (at points to be specified)
(d) Volume exhausted at hood
(e) Hood static pressure

3. Total pressure drop at—
   (a) Joints
   (b) Other points of system (to be specified)
4. Transport velocity in duct (at points along ducts to be specified)
5. Air cleaning device—
   (a) Type used
   (b) Velocity at inlet
   (c) Static pressure at inlet
   (d) Velocity at outlet
   (e) Static pressure at outlet
6. Fan—
   (a) Type used
   (b) Volume handled
   (c) Static pressure
   (d) Pressure drop at outlet of fan
7. Fan motor—
   (a) Type
   (b) Speed and power in kilowatts
8. Particulars of defects, if any, disclosed during test in any of the above components

I certify that on (date).....the above dust extraction system was thoroughly cleaned and (so far as its construction permits) made accessible for thorough examination. I further certify that on the said date, I thoroughly examined the above dust extraction system including its components and fittings and that the above is a true report of my examination.

Signature.....
Qualification.....
Address.....

Date.....

If employed by a company or association, name and address of the company or association.

FORM No. 26

[Prescribed under Schedule VI to Rule 94]

Special certificate of fitness

Serial No.....
Date.....

I hereby certify that I have personally examined.....son of.....residings at.....who is desirous of being employed as.....in the.....and that his age, as nearly as can be ascertained from my examination is.....year, and that he is, in my opinion, fit for employment at work involving the use of.....

His descriptive marks are:

Signature of left hand thumb-
impression of person examined

Signature of Certifying Surgeon
Date.....

I certify that I examined the person mentioned above on	I extend this certificate until	Signature of Certifying Surgeon	Note of symptoms of lead poisoning (if any)

FORM No. 27

[Prescribed under paragraph 11 (1) and (7) of Schedule XIV to Rule 116]

Certificate of fitness for dangerous operations

1. Serial No.
2. Name of person examined
3. Father's name
4. Sex
5. Address
6. Name of factory in which employed/ in which wishes to be employed
7. Process of department in which employed/wishes to be employed
8. Whether certificate granted
9. Whether declared unfit and certificate refused
10. Reference No. of previous certificate granted or refused

Signature of left hand thumb impression of person examined

Signature of Certifying Surgeon

1. Serial No.

I certify that I have personally examined (name).....son of (father's name).....residing at (address).....who is desirous of being employed as.....in (name of factory).....in (department and process).....and that as nearly as can be ascertained from my examination, is fit/unfit for employment at the above noted factory.

2. He is fit to be employed and may be employed on some other non-hazardous operation such as.....
3. He may be produced for further examination after a period of.....
4. He is advised following further examination.....
5. He is advised treatment.....
6. The serial No. of the previous certificate is.....

Signature or left hand thumb impression of person examined

Signature of Certifying Surgeon

Note—1. The counterfoil should be retained by the Certifying Surgeon and maintained in a bound book or in a file.

2. The paragraph which does not apply may be cancelled.

FORM No. 28

[Prescribed under paragraph 21 (3) of Schedule XXXI to Rule 116]

Certificate of fitness

Serial No.

In certify that I have personally examined (name).....son of (father's name).....residing at (address).....who is desirous of being employed as (designation).....in (process, department and factory).....and that his age, as nearly as can be ascertained from my examination is.....year, and that he is, in my opinion, fit/unfit for employment in the above mentioned factory as mentioned above.

2. He may be produced for further examination after a period of.....

3. The serial No. of the previous certificate is.....

Signature of left hand thumb-impression of person examined

Signature of Certifying Surgeon

Date.....

I certify that I examined the person mentioned above on	I extend this certificate until (if certificate is not extended, the period for which the worker is considered unfit for work is to mentioned.	Signs and symptoms observed during examination	Signature of the Certifying Surgeon

FORM No. 29

[Prescribed under paragraph 21 (4) of Schedule II to Rule 116]

Health Register

Serial No.	Departments/works	Name of worker	Sex	Age (at last birth day)	Date of employment on present work	Date of leaving or transfer to other work with reasons for discharge or transfer	Nature of job or occupation	Raw materials, products or by product likely to be exposed to
1	2	3	4	5	6	7	8	9

Date of medical examination and the result thereof			Signs and symptoms observed during examination	Nature of test and result thereof	If declared unfit for work, state period of suspension with reasons in detail	Whether certificate of unfitness issued to the worker	Re-certified fit to resume duly on	Signature of the Certifying Surgeon date.
Date	Result	Fit or unfit						
10	11	12	13	14	15	16	17	18

FORM No. 30

Report of accident or dangerous occurrence resulting in death or bodily injury

E.S.I.C. Employer's Code No:

E.S.I.C. Insurance No. of the injured person

1. Name of occupier (or factory) employer.....
2. Address of works/premises where the accident or dangerous occurrence took place.....
3. Nature of industry.....
4. Branch or department and exact place where the accident or dangerous occurrence took place.....
5. Name and address of the injured person.....
6. (a) Sex.....
   (b) Age (at the last birth day).....
   (c) Occupation of the injured person.....
7. Local E.S.I.C. office to which the injured person is attached.....
8. Date, shift and hour of accident or dangerous occurrence.....
9. (a) Hour at which the injured person stated work on the day of accident or dangerous occurrence.....
   (b) Whether wages in full or part are payable to him for the day of the accident or dangerous occurrence.....
10. (a) Cause of nature of accident or dangerous occurrence.....
    (b) If caused by machinery--
        i. Give the name of machine and the part of causing the accident or dangerous occurrence.....
        ii. State whether it was moved by mechanical power at the time of accident or dangerous occurrence.....

(c) State exactly what the injured person was doing at the time of accident of dangerous occurrence.....

(d) In your opinion, was the injured person at the time of accident or dangerous occurrence—

i. Acting in contravention of provisions of any law applicable to him; or
ii. Acting in contravention of any orders given by or on behalf of his employer; or
iii. Acting without instructions from his employer;

(e) In case reply to (d) (i), (ii) or (iii) is in the affirmative, state whether the act was done for the purpose of and in connection with the employer's trade or business.....

11. In case the accident or dangerous occurrence took place which travelling in the employer's transport, state whether—
    (a) The injured person was travelling a passenger to or from his place of work;
    (b) The injured person was travelling with the express or implied permission of his employer;
    (c) The transport being operated by or on behalf of the employer or some other person by whom it is provided in pursuance of arrangements made with the employer; and
    (d) The vehicle is being/ not being operated in the ordinary course of public transport service.
12. In case the accident or dangerous occurrence took while meeting emergency state—
    (a) Its nature; and
    (b) Whether the injured person at the time of accident or dangerous occurrence was employed for the purpose of his employer's trade or business in or about the premises at which the accident or dangerous occurrence took place.
13. Describe briefly how the accident or dangerous occurrence took place.....
14. Name and addresses of witnesses.....
15. (a) Nature and extent of injury (e.g., fatal, loss of finger, fracture of leg, scaled, scratch followed by sepsis, etc.).....
    (b) Location of injury (e.g., right leg, left hand, left eye etc.).....
16. (a) If the accident or dangerous occurrence not fatal, state whether the injured person was disabled for more than 48 hours.....
    (b) Date and hour of return to work.....
17. (a) Physician, dispensary or hospital from whom or in which the injured person received or is receiving treatment.....
    (b) Name of dispensary/panel doctor elected by the injured person.....
18. (a) Has the injured person died.....
    (b) If so, date of death.....

I certify that to the best of my knowledge and belief the above particulars are correct in every respect.

Signature of Manager/Employer

Name, designation and address of Manager/Employer

Date of despatch of report

(This space is to be completed by the Inspector of Factories)

District:

Date of receipt

Number of the accident or dangerous occurrence

Other particulars (e.g., fatal, leg injury, arm injury, etc,) Causation.

Date of investigation

Results of investigation

FORM 31

[Prescribed under Rule 117 (3)]

Report of dangerous occurrence which does not result in death or bodily injury

1. Name and address of factory.....
2. Name of occupier.....
3. Name of Manager.....
4. Nature of industry.....
5. Branch or department and exact places where the dangerous occurrence took place.....
6. Date and hour of dangerous occurrence.....
7. Nature of dangerous occurrence (state exactly what happened).....

I certify that to the best of any knowledge and belief the above particulars are correct in every respect.

Signature of manager
Name, designation and
address of Manager
Date of despatch of report

(To be completed by the Inspector of Factories)

District

Date of receipt

Number of the dangerous occurrence

Date of the dangerous occurrence

Causation.

Date of investigation

Result of investigation

FORM 32

[Prescribed under Rule 118]

Notice of poisoning or disease

[See Instruction on reverse]*

1. Name of factory.....
2. Address of factory.....
3. Address of office of occupier.....
4. Residential address.....
5. Nature of Industry.....
6. (a) Name of patient.....
   (b) Address of patient.....
   (c) Address of patient.....

7. Precise occupation of patient.....
8. Nature of Poisoning or Disease from which patient is suffering.....
9. Has the case been reported to the Certifying Surgeon?

Date.....

Signature of Manager.....

To be filled in by

the Chief Inspector

Number of case.....

Remarks.....

---

*Notice of poisoning or disease.

Extract from the Factories Act, 1948 (S. 88).

Where any worker in a factory contracts any disease specified in the schedule, the manager of the factory shall send a notice thereof to such authorities, and in such form and within such time, as may be prescribed.

SCHEDULE

List of notifiable diseases

1. Lead poisoning, including poisoning by any preparation of lead or their sequelae.
2. Lead tetra-ethyl poisoning
3. Phosphorus poisoning or it sequelae.
4. Mercury poisoning or it sequelae.
5. Manganese poisoning or its sequelae.
6. Arsenic poisoning or its sequelae.
7. Poisoning by nitrous fumes.
8. Carbon bisulphide poisoning.
9. Benzene poisoning, including poisoning by any of its homologues, their nitro, or amino derivatives or its sequelae.
10. Chrome ulceration or its sequelae.
11. Anthrax.
12. Silicosis.
13. Poisoning by halogens or halogen derivatives of the hydrocarbons of the aliphatic series.
14. Pathological manifestation due to—
    (a) Radium or other radio-active substances; and
    (b) X-rays.
15. Primary epitheliomatious cancer of skin.
16. Toxic anaemia.
17. Toxic jaundice due to poisonous substances.
18. Oil cane or dermatitis due to mineral oils and compounds containing minerals oil base.

19. Byssinosis.
20. Asbestosis
21. Occupational or contact dermatitis caused by direct contact with chemicals and paints. These are of two types, that is, primary irritants and allergic sensitizers.
22. Noise induced hearing loss (exposure to high noise levels).

Extract from the Meghalaya Factories Rules, 1980 (Rule 118)

A notice in Form 32 should be sent forthwith both to the Chief Inspector and to Certifying Surgeon, by the manager of factory in which there occurs a case of lead, phosphorus, mercury, manganese, arsenic, carbon bisulphide or benzene poisoning; or of poisoning by nitrous fumes or by halogens or halogen derivatives of the hydrocarbons of aliphatic series; or of chrome ulceration, anthrax, silicosis, toxic anaemia, toxic jaundice, primary epitheliomatous, cancer of skin, or if pathological manifestations due to radium or other radio-active substances or X-rays.

FORM No.33

[Prescribed under Rule 120]

Abstract of the Factories Act, 1948 and the Meghalaya Factories Rules, 1980

(To be affixed in conspicuous and convenient place at or near the main entrance to the factory)

Interpretation—1. "Factory" means any premises including the precincts thereof—

i. Whereon ten or more workers at work in, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on, or

ii. Whereon twenty or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on,

but does not include a mine subject to the operation of the Indian Mines Act, 1923 (IV of 1923), or a mobile unit belonging to the armed forces of the Union, a railway running shed or a hotel, restaurant or eating place.

Explanation—For computing the number of workers for the purpose of this clause al the workers in different relays in a day shall be taken into account.

2. "*Worker*" means a person employed directly or through any agency (including a contractor) with or without the knowledge of the principal employer, whether for renumeration or not, in any manufacturing process, or in cleaning any part of the machinery or premises used for a manufacturing process, or in any other kind of work incidental to or connected with, the manufacturing process, or the subject of the manufacturing processes.

3. "*Manufacturing process*" means any process for—

i. Making, altering, repairing, ornamenting, finishing, packing, oiling, washing, cleaning breaking up, demolishing, or otherwise treating or adopting any article or substances with a view to its use, sale, transport, delivery or disposal; or
ii. Pumping oil, water or sewage, or any other substance; or
iii. Generating, transforming or transmitting power; or
iv. Composing types of printing, printing by letter press, lithography, photogravure or other similar process or book-binding; or
v. Constructing, reconstructing, repairing, refitting, furnishing or breaking up ships or vessels; or
vi. Preserving or storing any article in cold storage.

WORKING HOURS, HOLIDAYS, INTERVALS FOR REST ETC.

4. *Hours of work for adults [Section 51 and 54]*—No adult worker shall be required, or allowed to work in a factory for more than 48 hours in a week and for more than 9 hours in any day.

5. *Relaxation of hours of work (Adults) [Section 64]*—Ordinary limits of working hours of adults may relaxed in certain special cases, e.g., workers engaged on urgent repairs; in work in the nature of preparatory or complementary work which must necessarily be carried on outside the limits laid down for the general working of the factory, in work which is necessarily so intermittent that the intervals during which they do not work while on duty ordinarily amount t more than the intervals for rest; in work which for technical reasons must be carried on continuously throughout the day in making or supplying articles of prime necessity which must be made or supplied every day, in a manufacturing process which cannot be carried on except during fixed seasons, or at times dependent on the irregular action of natural forces, in engine rooms or boiler houses or in attending to power plant or transmission machinery; in the printing of newspapers, which are held up on account of the break-down of machinery; in the loading or unloading of railway wagons of lorries or trucks; and in any work which is notified by the State Government in the official Gazette as a work of national importance.

Except in the case of urgent repairs, the relaxation shall not exceed the following limits of work inclusive of overtime:

i) The total number of hours of work on any day shall not exceed ten;
ii) The spread over inclusive of intervals for rest shall not exceed 12 hours in any one day.
iii) The total number of hours of work in a week, including overtime, shall not exceed sixty;
iv) The total number of hours of overtime work shall not exceed 50 for any one quarter.

6. *Payment for overtime [Section 59]*—Where a worker is in factory for more than 9 hours in any or for more than 48 hours in any week he shall in respect of overtime work, be entitled to wages at the rate of twice his ordinary rate of wages.

7. *Exemption of supervisory staff [Section 64, Chapter VI, other than the provisions of Cl. (b) of sub-S (1) of S. 66 and of that sub-section of the Act]*—Working hours of adult does not apply to persons holding positions of supervision or management or employed in a confidential position in a factory:

Provided that where the ordinary rate of wages of such persons does not exceed rupees seven hundred and fifty per month, they are entitled to extra wages in respect of overtime work under S. 59.

8. *Weekly Holiday (Adult) [Section 52]*—No adult worker shall be required or allowed to work in a factory on the first day of the week, unless—

(a) He has, or will have, a holidays for a whole day on one of the three days immediately before or after the said day, and
(b) The manager of the factory has, before the said or the substituted day under Cl. (a) whichever is earlier—
    i) Delivered a notice at the office of the Inspector of his intention to require the worker to work on the said day and of the day which is to be substituted, and
    ii) Displayed a notice to the effect in the factory:

Provided that no substitution shall be made which will result in any worker working for more than ten days consecutively without a holiday for a whole day.

9. *Compensatory holidays [Section 53]*—Where a worker in a factory, as a result of exemption from the ordinary provision relating to weekly holiday is deprived of any of the weekly holidays, he shall be allowed, within the month in which the holidays were due to him or within the two months immediately following the month, compensatory holidays of equal number to be holidays so lost.

10. *Intervals for rest (Adults) [Section 55 and 56]*—The periods of work of adult workers in a factory each day shall be so fixed that no period shall exceed 5 hours and that no worker shall work for more than 5 hours before he has had an intervals for rest of at least half an hour and that inclusive of his intervals for rest they shall not spread over more than 10 ½ hours in any day or, with permission of the Chief Inspector in writing, 12 hours.

11. *Prohibition of double employment [Section 60, 71 and 99]*—No child or except in certain circumstances, an adult worker shall be required or allowed to work in any factory on any day on which he has already been working in any other factory.

If a child works in a factory on any day on which he has already been working in another factory, the parent or graduation of the child or the person having custody of or control over him or obtaining any direct benefit from his wages shall be punishable with fine, which may extend to Rule 50 unless it appears to the court that child so worked without the consent or connivance of such parent, guardian or person.

12. *Prohibition of employment of children under S. 14 [Section 67]*—No child who has not completed his fourteenth year shall be required or allowed to work in any factory.

13. *Hours of work for children [Section 71]*—No child shall be employed or permitted to work in any factory for more than 4 ½ hours in any day during the period of at least twelve consecutive hours which shall include the interval 10 p.m. and 6 a.m. The periods to work of all children employed in a factory shall be limited to two shifts which shall not overlap or spread over more than 5 hours each and each child shall be employed in only one the relays.

The provisions relating to weekly holidays shall also apply to child workers and no exemption from this provision may be granted in respect of any child.

14. *Prohibition of employment of women [Section 66]*—No woman shall be required or allowed to work any factory except between the hours of 6 a.m. and 7 p.m. The State Government may vary these limits or exempt this restriction in case of women working in fish curing or fish canning factories.

LEAVE WITH WAGES

15. *Leave with wages [Section 79 and 83 and Rules]*—Every worker who has worked for a period of 240 days or more in a factory during a calendar year shall be allowed during the subsequent calendar year leave with wages for a number of days calculated at the rate of—

i. If an adult, one day for every twenty days of work performed by him during the previous calendar year:
ii. If a child, one day for every 15 days of work performed by him during the previous calendar year

Explanation 1—For the purpose of this sub-section—

(a) Any days of lay off by agreement or contract or as permissible under the standing orders;
(b) In the case of female worker, maternity leave for any number of days not exceeding twelve weeks; and
(c) The leave earned in the year prior to that in which the leave is enjoyed;

shall be deemed to be days on which the worker has worked in a factory for the purpose of computation of the period of 240 days or more, but he shall not earn leave for these days.

Explanation 2—The leave admissible under the sub-section shall be exclusive of all holidays whether occurring during or at either end of the period of leave.

For the leave allowed to him, a worker shall be paid at a rate equal to the daily average of his total full time earnings, for the days on which he actually worked during the months immediately preceding the leave exclusive of any overtime earnings, and bonus, but inclusive of dearness allowance and the cash equivalent of any advantage accruing through the concessional sale to the worker of foodgrains and others articles.

A worker whose service commence otherwise than on the first day of January shall be entitled to leave with wages at the rate indicate above, if he has worked for two-thirds of the total number of days in the remainder of the calendar year.

If a worker is discharged or dismissed from service or quits his employment or is superannuated or dies while in service during the course of the calendar year, he or his heir nominees, as the case may be, shall be entitled to wages in lieu of the quantum of leave to which he was entitled immediately before the discharge, dismissal, quitting of employment, super-annuation or death, calculated at the rates specified above, even if he had not worked for the entire period specified above. Such payment shall be made—

i) Whether the worker is discharged or dismissed or quit employment, before the expiry of the second working day from the day of such discharge, dismissal or quitting; and

ii) Where the worker is superannuated or dies which is in service, before the expiry of two months from the date of such superannuation or death.

If the employment of a worker who is entitled to leave with wages is terminated by the occupier before he has taken the entire leave (to which he is entitled) or if having applied and having not been granted such have, the worker quits his employment before he has taken the leave, the occupier of the factory shall pay him the amount payable in respect of the leave not taken, and such payment shall be made before the expiry of the second working day after the day on which his employment is terminated and a worker who quits his employment, on or before the next pay day.

The Manager shall maintain a Leave with Wages Register in the prescribed Form No. 20 and shall provide each worker with a book called the 'Leave Book' in the prescribed Form No. 21. The Leave Book shall be the property of the worker and the Manager or his agent shall not demand it except to make entries of the dates of holidays or interruption in service and shall not keep it for more than a week at a time. If a worker loses his Leave Book, the Manager shall provide him with another copy on payment of two annas and shall complete it from his record.

HEALTH

16. *Cleanliness [Section 11]*—Except in cases specially exempted all inside walls and partitions, all ceilings or tops of rooms and all wall-sides and tops of passage and stair cases in a factory shall be kept white-washed or colour-washed. The white-washing or colour-washing shall be carried out at least once in every period of fourteen months. The floors of every workroom shall be cleaned at least once in every week by washing or using disinfectant, where necessary or by some other effective method.

17. *Disposal of wastes and effluents [Section 12]*—Effective arrangements shall be made in every factory for the treatment of wastes and effluents due to the manufacturing process carried on therein so as to render them innocuous and for their disposal.

18. *Ventilation and temperature [Section 13]*—Effective and suitable provision shall be made in every factory for securing and maintaining in every workroom adequate ventilation by the circulation of fresh air and such a temperature as will secure to workers therein reasonable conditions of comfort and prevent injury to health.

19. *Overcrowding [Section 16]*—Unless exemption has been granted, there shall be in every workroom of a factory in existence on the date of commencement of this Act at least 350 cubic feet and for a factory built after the commencement of this Act at least 500 cubic feet of space for every worker employed and for this purpose no account shall be taken of any space which is more than 14 feet above the level of the floor of the room.

20. *Lighting [Section 17]*—In every part of a factory where workers are working or passing, there shall be provided and maintained sufficient and suitable lighting, natural or artificial or both.

21. *Drinking water [Section 18 and Rules]*—In every factory effective arrangements shall be made to provide and maintain at suitable points, conveniently situate for all workers employed therein, a sufficient supply of wholesome drinking water.

In every factory wherein more than 250 workers are ordinarily employed the drinking water shall, during the hot weather, be cooled by ice or other effective methods. The cooled drinking water shall be supplied in every canteen, lunch-room and rest-room also conveniently accessible points throughout the factory.

22. *Latrines and urinals [Section 19 and Rules]*—In every factory sufficient latrine and urinal accommodation of the prescribed type (separate enclosed accommodation for male and female workers) shall be provided conveniently situated and accessible to worker at all times while they are at the factory. Every latrine shall be under cover and so partitioned off as to secure privacy and shall have a proper door and fastenings. Sweepers shall be employed whose primary duty it would be to keep clean latrines, urinals and washing places.

23. *Spittoons [Section 20]*—In every factory there shall be provided a sufficient number of spittoons of the type prescribe in convenient places and they shall be maintained in a clean and hygienic condition. No person shall spit within the premises of a factory except in the spittoons provided for the purpose. Whoever spits in contradiction of this provision shall be punishable with fine not exceeding five rupees.

SAFETY

24. *Fencing of machinery [Section 21]*—In every factory dangerous parts of machines e.g., every moving part of a prime mover and every flywheel connected to a prime mover, etc., shall be securely fenced by the safeguards of substantial construction which shall be construction maintained and kept in position while the parts of machinery they are fencing are in motion or in use.

25. *Work on or near machinery in motion [Section 22]*—No woman or young person or child shall be allowed in any factory to clean, lubricate or adjust any part of a prime mover or any transmission machinery while the prime mover or any transmission machinery is in motion, or to clean, lubricate or adjust any part of machine if the cleaning, lubrication or adjustment thereof would expose the women or young person to risk of injury from any moving part either of that machine or of any adjacent machinery.

26. *Employment of young persons on dangerous machine [Section 23]*—No young person shall work at any machine declared to be dangerous unless he has been fully instructed as to the dangerous arising in connection with the machine and the precautions to be observed and has received sufficient training in work at the machine or is under adequate supervision by person who has a thorough knowledge and experience of the machine.

27. *Casing of new machinery [Section 26]*—In all machinery driven by power installed in any factory after the commencement of this Act every set screw, bolt or key on any revolving shaft, spindle, wheel or pinion shall be so sunk, encased or otherwise effectively guarded as to prevent danger; and spur, worm and other toothed or friction gearing which does not require frequent adjustment while in motion shall be completely encased, unless it is so situated as to be as safe as it would be if it were completely encased.

Whoever sells or lets on hire or as agent of a seller or hirer, causes or procures to be solid or let on hire, for use in a factory any machinery driven by power which does not comply with these provisions or any rules made under this section, shall be punishable with imprisonment for a term which may extend to three months or with fine which may extend to five hundred rupees or with both.

28. *Prohibition of employment of women and children near cotton openers [Section 27]*—No woman or child shall be employed in any part of a factory for pressing cotton in which a cotton opener is at work.

29. *Excessive weight [Section 34 and Rules]*—No woman or young person shall, unaided by another person, lift, carry or move by hand or on head, any material, article, tool or appliance exceeding the maximum limit in weight set and in the following schedule:

SCHEDULE

Person		Maximum weight of material article, tool or appliance
(a) Adult female	.....	30 Kilograms
(b) Adolescent male	.....	30 Kilograms
(c) Adolescent female	.....	20 Kilograms
(d) Male child	.....	16 Kilograms
(e) Female child	.....	14 Kilograms

30. *Protection of eyes [Section 35 and Rules]*—Effective screens or suitable goggles shall be provided for the protection of person employed in or in the immediate vicinity of processes which involve risk of injury to the eyes from particles of fragments or thrown off in the course of the process or which involve risk of injury to the eyes by reason of exposure to excessive light, infra-red or ultra-violet radiations.

31. *Precaution in case of fire [Section 38 and Rules]*—Every factory shall be provided with adequate means of escape in case of fire for the persons employed therein. The doors affording exist from any room shall, unless they are of the sliding type, be constructed to open outwards. Every window, door or other exit affording a means of escape in case of fire, other than means of exit in ordinary use, shall be distinctively marked.

Effective and clearly audible means of giving warning in case of fire to every person employed in the factory shall be provided. Effective measures shall be taken to ensure that wherein more than twenty workers are ordinarily employed in any place above the ground floor, or wherein explosive or highly inflammable material are used or stored, all the workers are familiar with the means of escape in case of fire and have been adequately trained in the routine to be followed in such case.

WELFARE

32. *Washing facilities [Section 42 and Rules]*—In every factory adequate and suitable facilities for washing shall be provided and maintained for the use of workers therein. Such facilities shall include soap and nail brushes or other suitable means of cleaning and the facilities shall be conveniently accessible and shall be kept in a clean and orderly condition.

If female workers are employed separate 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.

33. *Facilities for storing and drying clothing [Section 43 and Rules]*—In the case of certain dangerous operations, e.g. lead processes, liming and tanning raw hides and skins, etc., suitable places for keeping clothing not worn during working hours and for drying of wet clothing shall be provided and maintained.

34. *Facilities for sitting [Section 44]*—In every factory suitable arrangements for sitting shall be provided and maintained for at workers obliged to work in a standing position in order that they may take advantage of any opportunities for rest which may occur in the course of their work.

35. *First aid and ambulance room [Section 45]*—There shall, in every factory, be provided and maintained so as to be readily accessible during all working hours, first=-aid boxes or cupboards equipped with the prescribed contents. Each box and cupboards shall be kept in the charge of separate responsible persons who holds a certificate in first-aid treatment recognised by State Government who shall always be available during the working hours of the factory.

In every factory wherein more than 500 workers are ordinarily employed there shall be provided and maintained an ambulance room of the prescribed size and containing the prescribed equipment and in charge of such medical and nursing staff as may be prescribed and those facilities shall always be readily available during the working hours of the factory.

36. *Canteens [Section 46 and Rules]*—In specified factories wherein more than 250 workers ordinarily employed, a canteen or canteens shall be provided and maintained by the occupier for use of worker. Food, drink and other items served in the canteen shall be sold on a non-profit basis and the prices charged shall be subject to the approval of a Canteen Managing Committee which shall be appointed by the Manager and shall consist of an equal number of persons nominate 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 there be more than 5 or less than 2 workers on the Committee. The Committee shall be consulted time to time on the quality and quantity of foodstuffs to be served in the canteen, the arrangements of the menus, etc. where the canteen is managed by cooperative society it is not necessary to appoint a Canteen Managing Committee and the prices to be charged may include a margin of profit up to a maximum of 5% of its working capital.

37. *Shelters, rest room and lunch room [Section 47]*—In every factory wherein more than 150 workers are ordinarily employed, adequate and suitable shelters and rest rooms and suitable lunch room, with provision for drinking water, where workers can eat meals brought by them, shall be provided and maintained for the use of the workers.

38. *Creches [Section 48 and Rules]*—In every factory wherein more than 50 women workers are ordinarily employed there shall be provided and maintained a suitable room or rooms for the use of children under the age of six years of such women. The crèche shall be adequately furnished and equipped and in particular there shall be one suitable cot or a cradle with the necessary bedding for each child, at least one chair or equivalent seating accommodation for the use mother while she is feeding or attending to her child and a sufficient supply of suitable toys for older children.

There shall be in or adjoining the crèche a suitable wash-room for the washing of the children and their clothing. An adequate supply of clean clothes, soap and clean towels shall be made available for each child while it is in the crèche. At least half a pint of clean pure milk shall be available for each child on every day it is accommodated in the crèche and the mother of such a child be allowed in the course of her daily work suitable intervals to feed the child. For children above two years of age, there shall be provided, in addition, an adequate supply of wholesome refreshment. A suitably fenced and shady open air playground shall also be provided for the older children.

39. *Welfare Officer [Section 49]*—In every factory wherein 500 or more workers are ordinarily employed, the occupier shall employ in the factory such number of welfare Officers as my be prescribed.

SPECIAL PROVISIONS

40. *Dangerous operations [Section 87 and Rules]*—Employment of women, adolescents and children is prohibited or restricted in certain operations, declared to be dangerous, e.g. electroplating, manufacture and repair of electric accumulators, glass manufacture, grinding or glazing of metals; manufacture and treatment of lead and certain compounds of lead, sand blasting etc.

41. *Notice of accidents [Section 88 and Rules]*—When an accident occurs 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 annexed hereto takes places in a factory, the manager of the factory shall forthwith send a notice thereof by telephone, special messenger or telegram to the inspector and the Chief Inspector. When any accident or any dangerous occurrence specified in the schedule annexed hereto, 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, takes place in a b, forthwith notice shall be sent also to the District Magistrate or Sub-divisional Officer, to the officer-in-charge of the nearest police station; and to the relative of the injured or deceased person.

SCHEDULE

1. Bursting of a plant used for containing or supplying steam under pressure greater than atmospheric pressure.
2. Collapse or failure of crane, derrick, which, hoist or other appliance used in raising or lowering person or goods, or any part thereof or the overturning of a crane.
3. Explosion, bursting out, leakage or escape of any matter, metal, or hot liquor or gas fire 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 where a cotton opener is in use.
4. Explosion of a receiver or container used for the storage at a pressure greater than atmospheric pressure of any gas or gases (including air) or any liquid or solid resulting from the compression of gas;
5. Collapse or subsidence of any floor, gallery, roof, bridge, tunes, chimney, wall building or any other structure.

42. *Notice of certain diseases [Section 89 and Rules]*—Where any worker in a factory contracts any of the following diseases the Manager of the factory shall send notice thereof forthwith both to the Chief Inspector and Certifying Surgeon:

Lead, phosphorus, mercury, manganese, arsenic, carbon bisulphide, or benzene poisoning or poisoning by nitrous fumes or by halogens or halogen derivatives of the hydro carbons of the alipathic series, or of chrome ulceration anthrax, silicosis, toxic anaemia, toxic jaundice, primary epitheliomatious cancer of the skin or pathological manifestation due to radium or other radio-active substances or X-rays.

43. *No charge for facilities and conveniences [Section 114]*—No fee or charge shall be realised from any worker in respect of any arrangements or facilities to be provided or any equipment or appliances to be supplied by the occupier under the provision of the Act.

44. *Powers of Inspectors [Section 9 and 821]*—Inspectors have power to inspect factories any time and may require the production of registers, certificate, etc., prescribed under the Act and the Rules.

Any Inspector may institute proceedings on behalf of nay worker to recover any sum required to be paid by an employer under the provisions relating to leave with wages, which the employer has not paid.

45. *Obligation of workers [Section 97 and 111]*—No worker in a factory—

i. Shall wilfully interfere with or misuse any appliance, convenience or other than provided in a factory for the purpose of securing the health, safety or welfare of workers therein;
ii. Shall wilfully without any reasonable cause do anything likely to endanger himself or others, and
iii. Shall wilfully neglect to make use of any appliance or other thing provided in the factory for the purpose of securing the health or safety of the workers therein.

If any worker employed in a factory contravenes any of these provisions or any rule or order made there under, he shall be punishable with imprisonment for a term which may extend to three months, or with fine which may extend to Rule 100, or with both.

If any worker employed in a factory contravenes any of these provisions of the Act or any rules or orders made there under imposing any duty or liability on workers he shall be punishable with fine which may extend to Rs. 20.

46. *Certificate of fitness [Section 68, 70 and 98]*—No child who has completed his fourteenth year or an adolescent shall be required or allowed to work in any factory unless a certificate of fitness granted with reference to him is in the custody of the Manager of the factory and such child or adolescent carries, while he is at work a token giving a reference to such certificate. Any fee payable for such a certificate shall be paid by the occupier and shall not be recoverable from the young person, his parent or guardian.

An adolescent who have been granted a certificate of fitness to work in a factory as an adult and who while at work in a factory carries a token giving reference to the certificate shall be deemed to an adult for all the purpose of the provisions of the Act relating to the working hour of adults and the employment of young persons. An adolescent who has not been granted a certificate of fitness to work in a factory as an adult shall, notwithstanding, his age, be deemed to be a child for all the purpose of the Act.

Whoever knowingly use or attempts to use, as a certificate of fitness granted to himself, a certificate granted to another adolescent to work in a factory as an adult, or who having procured such a certificate knowingly allows it to be used, or an attempt to use it to be made, by another person, shall be punishable with imprisonment for a tern which may extend to one month or with fine which may extend to Rs. 50 or with both.

47. *Registers notices and returns [Section 61, 62, 63, 72, 73, 74 and 110 and Rules]*—A register of adult workers in the prescribed Form No. 17 and a register of child worker in the prescribed Form No. 19 shall be maintained by the Manager of every factory.

A notice of period of work for adults and a notice of periods of work for children in the prescribed Forms No. 16 and 18 shall be correctly maintained and displayed in every factory. No adult worker or child shall be required or allowed to work in any factory otherwise than in accordance with their respective notices of period of work displayed in the factory.

The owners, occupiers or Managers of factories shall submit the prescribed periodical returns to the Inspector regularly.

FORM No. 34

[Prescribed under Rule 121 (a)]

Annual Return

For the year ending 31st December, 19.....

1. Registration No of Factory.....
2. Name of Factory.....
3. Name of occupier.....
4. Name of the manager.....
5. District.....
6. Full postal address of Factory.....
7. Nature of industry.....

Number of workers and particulars of employment

8. Average number of workers employed daily (*see* Explanatory Note).....
   (a) Adults—
      i. Men
      ii. Women
   (b) Adolescent—
      i. Male
      ii. Female
   (c) Children—
      i. Male
      ii. Female

9. Normal hours worked per week (*see* Explanatory Note)
    (a) Men
    (b) Women
    (c) Children
10. Number of days worked in the year.....
11. Total number of man-hours worked including overtime—
12. (a) Does the factory carry out any process or operation declared as dangerous under S. 87? (*see* rule.....of Factories Rule, 19.....)

    (b) If so, state average daily number of worker employed in such dangerous operation i.e.,--

    i. Manufacture of aerated water and processes incidental thereto (Schedule I);
    ii. Electrolytic plating or oxidation of mental articles by use of an electrolyte containing chromic acid or other chromium compound (Schedule II);
    iii. Manufacture and repair of electric accumulators (Schedule III).
    iv. Glass manufacture (Schedule IV);
    v. Grinding or glazing of metals (Schedule V);
    vi. Manufacture and treatment of lead and certain compounds of lead (Schedule VI)
    vii. Generating petrol gas from petrol (Schedule VII);
    viii. Cleaning or smoothing, roughening, etc., of articles by a jet of sand, metal shot of grit, or other abrasive propelled by a blast of compressed air or steam (Schedule VIII);
    ix. Liming and tanning of raw hides and skins and processes incidental thereto (Schedule IX);
    x. Certain lead processes carried on in printing presses and type foundries (Schedule X);
    xi. Manufacture of pottery (Schedule XI);
    xii. All manufacture and processes incidental thereto carried on in chemical works (Schedule XII);
    xiii. Manufacture of articles from refractory material (Schedule XIII);
    xiv. Handling and processing of asbestos, manufacturing of any articles of asbestos and any other process of manufacture or otherwise in which asbestos is used in any form (Schedule XIV);
    xv. Handling or manipulation of corrosive substances (Schedule XV);
    xvi. Processing of cashewnut (Schedule XVI);
    xvii. Compression of oxygen and hydrogen produce by the electrolysis of water (Schedule XVII);
    xviii. Processes of extracting oils and fats from vegetables and animal sources in solvent extraction plants (Schedule XVIII);
    xix. Manufacture or manipulation of manganese and its compounds (Schedule XIX);
    xx. Manufacture or manipulation of dangerous pesticides (Schedule XX);
    xxi. Manufacture, handling and usage of benzene and substances containing benzene(Schedule XXI);

xxii. Manufacturing process or operations in carbon disulphide plants ((Schedule XXII); and

xxiii. Manufacture or manipulation of carcinogenic dye intermediate (Schedule XXIII);

13. Total number of workers employed during the year—
    (a) Men
    (b) Women
    (c) Children
14. Number of workers who have entitled to annual leave with wages during the year—
    (a) Men
    (b) Women
    (c) Children
15. Number of workers who were granted leave during the year—
    (a) Men
    (b) Women
    (c) Children
16. (a) Number of workers who were discharge or dismissed from the service or whose services were terminated during the year.....
    (b) Number of such workers as were paid wages in lieu of leave.....

Canteen

17. Number of canteens providing—
    (a) Cooked food and refreshments.....
    (b) Cooked food only.....
    (c) Refreshments and tea only.....
    (d) Tea only.....
18. Is the canteen run and managed departmentally or through a contractor?
19. Please state if a common canteen is being shared with some other factory.

Rest rooms or shelters and lunch rooms

20. (a) Number of rest rooms or shelters provided.....
    (b) Number of lunch rooms provided.....

Crèches

21. Number of crèches provided.....
22. Approximate average daily attendance of children at the crèches.....
23. (a) Total number of accidents (see Explanatory Note)—
    i. Fatal.....
    ii. Non-fatal.....

    (b) Accidents in which workers returned to work during the year to which this returns relates--
    i. Accidents (persons injured) occurring during the year in which injured workers returned to work during the same year—
    (aa) Number of accidents.....

(bb) Man-days lost due to accidents.....

ii. Accidents (persons injured) occurring in the previous year in which injured workers returned to work during the year to which this return relates—

(aa) Number of accidents.....

(bb) Man-days lost due to accidents.....

(c) Accidents in which workers did not return to work during the year to which this return relates--

i) Number of accidents.....

ii) Man-days lost due to accidents.....

Suggestion scheme

24. (a) Is a suggestion scheme in operation in factory?

(b) If so, the number of suggestions--

i) Receive during the year.....

ii) Accepted during the year.....

(c) Amount awarded in cash prizes during the year--

i) Total amount awarded:

ii) Value of the maximum cash prize awarded:

iii) Value of the minimum cash prize awarded:

Certified that the information furnished above is, to the best of my knowledge and belief, correct.

Signature of the Manager

Date.....

Explanatory Notes:

1. The average daily number should be calculated by dividing the aggregate number of attendance on working days by the number of working days in the year.

   In reckoning attendance, attendance by temporary as well as permanent employees should be counted, and all employees should be include, whether they are employed directly or under contractors. Attendance on separate shift (e.g. night and day shifts) should be counted separately. Days on which the manufacturing processes were not carried on should not be treated as working days. Partial attendance for less than half a shift on a working day should be ignored, while attendance for half a shift or more on such day should be treated as full attendance.
2. For seasonal factories, the average number of workers employed during the working season and the off-season should be given separately. Similarly the number of days worked and average number of man-hours worked per week during the working and off-season should be given separately.
3. Normal hours worked per week means the actual hours worked excluding intervals.

4. Every person killed or injured should be treated as one separate accident. If in one occurrence six persons were injured or killed it should be counted as six accidents.
5. In item 23 (a), the number accidents which took place during the year should be given. Only those accidents which prevented workmen from working for 48 hours or more, and which were fatal, should be included.

FORM No. 35

Half-yearly Return

For the half-year ending 30th June, 10...../31st December, 19.....

1. Registration No. of factory.....
2. Name of Factory.....
3. Name of Occupier.....
4. Name of Manager.....
5. District.....
6. Postal Address of factory.....
7. Nature of Industry.....
8. Average number of workers employed daily (See Explanatory Note)—

Adult:	i)	Men
	ii)	Women
Adolescents:	i)	Male
	ii)	Female
Children:	i)	Male
	ii)	Female

9. Number of days worked during the half-year ending 30th June, 19...../31st December, 19.....

Signature of Manager

Date.....

*The average daily number should be calculated by dividing the aggregate number of attendances on working days by the number of working days during the half year. In reckoning attendances, attendances by temporary as well as permanent employee should be counted, and all employee should be included, whether they are employed directly or under contractors. Attendances on separate shift (e.g. night and day shifts) should be counted separately. Days on which the factory was closed, for whatever cause, and days on which the manufacturing processes were not carried on should not be treated as working days.

FORM No.36

[Prescribed under Rule 124]

Muster Roll

Name of Factory..... Place..... District.....

For the period ending

Sl. No.	Name of the worker	Father's Name	Nature of work	Daily attendance for month of.....	Remarks
				Date 1 2 3 4 5 6 7 8 9	

FORM No. 37

[Prescribed under Rule 125]

Register of Accidents and Dangerous occurrences

Name of injured person (if any)	Date of accident or dangerous occurrence	Date of report (in Form No. 30) to Inspector	Nature of accident or dangerous occurrence	Date of return of injured person to work	Number of days the injured person was absent from work
1	2	3	4	5	6