CHAPTER - VIII

WORKING CONDITIONS IN BHEL
CHAPTER-VIII

1. **WORKING CONDITIONS IN BHEL**

Working condition has been a major issue in the organizational operation. Specially it occupies serious concern in the factories where manufacturing process is carried out. Overall productivity depends on the working condition. Worker’s efficiency and quality of work also depend on the working conditions of the surroundings. In India where the establishment and operation of factories has been traditional, lacking professional management, is a context to deal with. Most of the factories are unaware of working hazards and causes sever loss to it’s own. It has been so poor that Government was compelled to take necessary action in this regard to check unhygienic working atmosphere damaging the quality of labor force. The central government has promulgated several beets and legislation in this mater viz. Factories Act, 1948 and Industrial Employment Standing Order Act 1948, etc.

These acts regulate working conditions by providing various provisions on safety, health and hygiene working conditions. Volition of these provision is punishable. It is statutory that all industrial establishments are required to follow these directions and to keep and maintain healthy working conditions within their factory and office premises.

Chapter III of the Factories Act 1948, section 11 to 20 deals with the provisions essential the health of the workers in the conditions under which work is carried on in factories. These provisions are as follows:

1.1 **CLEANLINESS** (Sec. 11). Factory to be kept clean and free from effluvia and dirt.

(1) Every factory shall be kept clean and free from effluvia arising from any drain, privy, or other nuisance. Accumulation of dirt and refuse shall be removed daily by some effective method. The floor of every workroom shall be cleaned at least once in every week by washing, using disinfectants, where necessary, or by some effective method.

(2) Effective means of drainage. Where a floor is liable to become wet in the course of any manufacturing process to such an extent as is capable of being drained, effective means of drainage shall be provided.

(3) Use of disinfectants, etc., painting and varnishing. Use of disinfectants, detergents, painting, repainting and varnishing, whitewashing or colour washing shall be resorted to.

(a) All inside walls and partitions, all ceilings or tops of rooms and walls, sides and tops of passages and staircases where they are painted otherwise than with washable water-paint or varnished, shall be repainted or revarnished at least once in every period of 5 years.
(b) Where they are painted with washable water-paint, they shall be repainted with at least one coat of such paint at least once in every period of 3 years and washed at least once in every period of 6 months.

(c) Where they are painted and varnished and have smooth impervious surface, they shall be cleaned at least once in every period of 14 months.

(d) In any other cases, they shall be kept white washed or colour washed at least once in every period of 14 months.

(e) Further all doors and window frames and other wooden or metallic framework and shutters shall be kept painted or varnished and the painting or varnishing shall be carried out at least once in every period of 5 years.

(f) The date on which these processes are carried out shall be entered in the prescribed register.

(4) Exemption. If, in view of the nature of the operations carried on in a factory or class or description of factories, it is not possible for the occupier to comply with the above provisions, the State Government may by order exempt such factory or class or description of factories or part of a factory from any of these provisions and specify alternative methods for keeping the factory in a clean state.

1.2 **DISPOSAL OF WASTES AND EFFLUENTS** (Sec.12)

(1) Treatment of wastes and effluents and their disposals. 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.

(2) Rules by the State Government prescribing arrangements. The State Government may make rules prescribing the arrangements to be made in this regard. It may also require that such arrangements shall be approved by such authority as may be prescribed.

1.3 **VENTILATION AND TEMPERATURE** (Sec.13).

(1) Maintenance of adequate ventilation and temperature. Effective and suitable provision shall be made in every factory for securing and maintaining in every workroom-

(a) adequate ventilation by the circulation of fresh air, and

(b) such a temperature as will secure to workers there in reasonable conditions of comfort and prevent injury to health.

(2) Process producing high temperature to be separated. The walls and roofs shall be of such materials and so designed that the temperature shall not be exceeded but kept as law as practicable. The process which produces high temperatures shall be separated from the workroom, by insulating the hot parts of by other effective means.
(3) Standard of adequate ventilation and temperature to be prescribed and provision of measuring instruments. The State Government may prescribe a standard of adequate ventilation and reasonable temperature for any factory. It may further direct that proper measuring instruments shall be provided and such records as may be prescribed shall be maintained.

(4) Prescription of measures by the State Government to reduce temperature. Where excessively high temperatures can be reduced by such methods as white washing, spraying, or insulating and screening outside walls or roofs or windows, or by raising the level of the roof or by insulating the roof, the State Government may prescribe such of these or other methods as shall be adopted in the factory.

(5) Service of notice by the Chief Inspector on the occupier to adopt measures for reduction of temperatures. If it appears to the Chief Inspector that excessively high temperatures in any factory can be reduced by the adoption of suitable measures, he may serve on the occupier an order in writing specifying the measures which should be adopted and requiring them to be carried out before a specified date.

1.4 DUST AND FUMES (Sec. 14)

1. Measures for prevention of inhalation or accumulation of dust and fumes. Where dust or fumes or impurity of such a nature as is likely to be injurious or offensive to the workers is given off as a result of the manufacturing process being carried on in a factory, effective measure shall be taken in the factory for prevention of inhalation or accumulation of dust and fumes in workrooms. If for such a purpose any exhaust appliance is necessary, it shall be applied as near as possible to the point of origin of the dust, fumes or other impurity and such point shall be enclosed so far as possible.

2. Exhaust for internal combustion engine. A stationary internal combustion engine shall not be operated unless the exhaust is conducted into the open air. Other internal combustion engines shall not be operated in any room unless effective measures have been taken to prevent accumulation of fumes therefrom which are injurious.

1.5 ARTIFICIAL HUMIDIFICATION (Sec. 15)

1. Prescription of standards of humidification – ventilation and cooling of air. In respect of all factories in which the humidity of the air is artificially increased, the State Government may make rules prescribing standards of humidification. It may also make rules regulating the methods used for artificially increasing the humidity of the air. It may further make rules prescribing methods to be adopted for securing adequate ventilation and cooling of the air in the workrooms.

2. Water used for artificial humidification to be clean. In any factory in which the humidity of the air is artificially increased, the water used for the purpose shall be taken from a public supply or other source of drinking water, or shall be effectively purified before it is so used.
3. Measures by Inspector if water used for humidification not purified. An Inspector may require, by an order in writing, the manager of a factory in which the water used for increasing humidity is not effectively purified to carry out the measures set out in his order before the date specified by him.

1.6 **OVERCROWDING** (Sec.16)

1. Overcrowding injurious to health of workers to be avoided. There shall not be overcrowding in any room of the factory so as to be injurious to the health of the workers employed therein.

2. 9.9/14.2 cubic meters of space per worker. There shall be at least 9.9 cubic meters (for the factories in existence at the time of the commencement of the Act) and 14.2 cubic meters space for every worker. In calculating the space of 9.9 or 14.2 cubic meters, no account shall be taken of any space which is more than 4.2 meters above the level of the floor of the room.

3. Notice of maximum of workers to be employed in a workroom. If the Chief Inspector by order in writing so requires, there shall be posted in each workroom of the factory a notice specifying the maximum number of workers who may be employed in the workroom.

4. Exemption by Chief Inspector. The Chief Inspector may, by order in writing, exempt any workroom from the provisions of sec.16, if he is satisfied that compliance with the provisions of Sec. 16 is unnecessary in the interest of the health of the workers employed therein.

1.7 **LIGHTING** (Sec. 17)

1. Sufficient and suitable lighting in every part of factory. 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.

2. Glazed windows and skylights to be kept clean. All glazed windows and skylights used for the lighting of the workrooms shall be kept clean on both the inner and outer surfaces and free from obstruction.

3. Measures for prevention of glaze and formation of shadows, Effective provision shall also be made for the prevention of

(a) glare, either, either directly from a source of light or by reflection from a smooth or polished surface; and
(b) the formation of shadows to such an extent as to cause eye strain or the risk of accident to any worker.

4. Prescription of standards of sufficient and suitable lighting. The State Government may prescribe standards of sufficient and suitable lighting for factories or for any class or description of factories or for any manufacturing process.
1.8 **DRINKING WATER** (Sec. 18)

1. Suitable Points for wholesome drinking water. In every factory effective arrangement shall be made to provide and maintain at suitable points conveniently situated for all workers employed there in a sufficient supply of wholesome drinking water.

2. Drinking points to be legibly marked and to be away from urinal, latrine, etc. All points for supply for drinking water shall be legibly marked ‘drinking water’ in a language understood by a majority of the workers employed in the factory. Such points shall be situated beyond 6 meters of any washing place, urinal, latrine, spittoon, open drain carrying soilage or effluent or any other source of contamination unless shorter distance is approved in writing by Chief Inspector.

3. Cooling of drinking water where more than 250 workers employed. In every factory wherein more than 250 workers are ordinarily employed, provision shall be made for cooling drinking water during hot weather by effective means and for distribution thereof.

4. Rules by the State Government. The State Government may make rules for securing compliance with the provisions of Sec. 18 and for the examination by prescribed authorities of the supply and distribution of drinking water in factories.

1.9 **LATRINES AND URINALS** (Sec.19)

1. Separate latrines and urinals for male and female workers conveniently situated and adequately lighted and ventilated. In every factory, separate enclosed accommodation of latrines and urinals of prescribed types for male and female workers shall be provided for. Such accommodation shall be conveniently situated and accessible for workers at all times. It shall be adequately lighted and ventilated and maintained in a clean and sanitary condition. Sweepers shall also be employed for keeping clean latrines, urinals and washing places.

2. Latrine and urinal accommodation to be of prescribed sanitary types—floors and walls be glazed and their cleaning. In factories wherein more than 250 workers are ordinarily employed.

   a. all latrine and urinal accommodation shall be of prescribed sanitary types;

   b. the floors and internal walls, up to a height of 90 centimeters, of the latrines and urinals and the sanitary blocks shall be laid in glazed tiles or otherwise finished to provide a smooth polished impervious surface;

   c. the sanitary pan of latrines and urinals shall be thoroughly washed and cleaned at least once in every 7 days with suitable detergents or disinfectants, or with both.

3. Number of latrines and urinals to be prescribed by the State Government. The State Government may prescribe the number of latrines and urinals to be
provided in any factory in proportion to the number of male and female workers ordinarily employed there in. It may provide for such further matters in respect of sanitation in factories, including the obligation of workers in this regard, as it considers necessary in the interest of the health workers employed there in.

1.10 SPITTOONS (Sec. 20)

(1) Sufficient number of spittoons. In every factory, there shall be provided a sufficient number of spittoons in convenient places and they shall be maintained in a clean and hygienic condition.

(2) Display of notice of provision of spittoons. No person spit within the premises of a factory except in the spittoons provided for the purpose. A notice containing the provision of spittoons in the factory shall be prominently displayed at suitable places in the premises. The penalty for spitting anywhere except in the spittoons shall also be prominently displayed.

(3) Penalty. Whoever spits in contravention of Sec. 20 shall be punishable with not exceeding Rs. 5.

(4) Prescription of rules by the State Government. The State Government may make rules prescribing the type and the number of spittoons to be provided and their location in any factory. It may also provide for matters relating to their maintenance in a clean and hygienic condition.

1.11 LIFTING MACHINES, CHAINS ROPES AND LIFTING TACKLES (Sec. 29)

(1) Cranes and lifting machines etc. to be of good construction and to be of good construction and to be examined once in every 12 months. In every factory, cranes and other lifting machines (and every chain, rope and lifting tackle for the purpose of raising or lowering persons, goods or materials) shall be of good construction, sound material adequate strength, free from defects and properly maintained. These shall be thoroughly examined by a competent person at least once every in 12 months. A register containing the prescribed particulars of every such examination shall be kept. ‘Lifting machines’ means a crane, crab, winch toggle, pulley block, gin wheel,

1.12 REVOLVING MACHINERY (Sec. 30)

(1) Notice of maximum safe working speed of grindstone or abrasive wheel, etc. to be kept near machine. IN every factory in which the process of grinding is carried on, there shall be permanently kept near each machine a notice indicating

(a) the maximum safe working peripheral speed of every grindstone or abrasive wheel,

(b) the speed of the shaft or spindle upon which the wheel is mounted, and

(c) the diameter of the pulley upon such shaft working peripheral speed.
1.13 **PRESSURE PLANT** (Sec. 31)

(1) Safe working pressure not to be exceeded. If in any factory any plant or any machinery or part thereof is operated at a pressure above atmospheric pressure, effective measure shall be taken to ensure that the safe working pressure is not exceeded.

(2) Rules-making power of state government providing for examination and exemption.
   (a) The state government may make rules providing for the examination and testing of any plant or machinery and providing for additional safety measures.
   (b) The state government may also, by rules, exempt any part of machinery from the provision of Sec. 31.

1.14 **FLOORS, STAIRS MEANS OF ACCESS** (Sec.32). In every factory-

   (a) all floors, steps, stairs, passages and gangways shall be of sound construction and properly maintained. Further they shall be kept free from obstructions and substances likely to cause persons to slip and handrails shall be provided where necessary,
   (b) There shall, so far as is reasonably practicable, be provided and maintained safe means of access to every at which any person is at any time required to work;
   (c) When any person has to work at a height from where he is likely to fall, provision shall be made, so far as is reasonably practicable, by fencing or otherwise, to ensure the safety of the person so working. This restriction is not applicable if the place provides secure foothold and, where necessary, secure handhold. No breach of statutory duty results if an injury is occasioned by accumulation of rain water in a little depression in the concrete of the passage (Davies v.De Havill & aircraft CO. Ltd, (1950)2 All E,R582).

1.15 **PITS, SUMPS OPENINGS IN FLOORS, ETC.** (Sec.33).

(1) Pits, sumps, etc. to be securely covered or fenced. In every factory, pits, sumps, fixed vessels, tanks, openings in the ground or in the floor shall be securely covered or securely fenced.

(2) Exemption. The state government may, by order in writing, exempt any factory in respect of any vessel, sump, tank, pit or opening from compliance with the above provision.
   ‘Securely fencing a pit’ means covering or fencing or fencing it in such a way that it ceases to be source of danger to those who have occasion to go near there (state of mysore v.narayana Raghvendra, (1967) 2 L.L.J 6160.

The failure to securely fermenting vats is a contravention of Sec.33 and is an offence under Sec.92. it is a continuing offense and every day the contravention is continued while the factory is worked, a fresh offense is committed for which the owner and occupier would be liable (State V.Umeshankar, (19))
1.16 **EXCESSIVE WEIGHTS** (Sec.34)

(1) Prohibition on lifting or carrying of excessive weights. No person shall be employed in any factory to lift, carry or move any load so heavy as to be likely to cause him injury.

(2) Maximum weight to be lifted or carried to be prescribed. The state government may make rules prescribing the maximum weights which may be lifted, carried or moved by adult women, adolescents and children employed in factories or in any class or description of factories or in carrying on any specified process.

1.17 **PROTECTION OF EYES** (Sec.35)

In every factory, screen or suitable goggles shall be provided for the protection of persons employed on, or in immediate vicinity of, mechanical or other processes which involve any danger or injury to the workers' eyesight. The risk of injury to the eyes may be from particles or fragments thrown off in course of the process or by reason of exposure to excessive light. It is not enough if the goggle were hung in the office room. The workers must be informed of their whereabouts and it is in such a case only that it can be said that the requirements of Sec. 35 are complied with (Finch v. Telegraph construction & maintenance co. Ltd, (1955 (ALL E.R. 52) 'Suitable' is not equivalent to perfect; it means well- adapted for the process under consideration and the goggles must fit the worker. The words 'to protect to eyes' describe the end which is sought to be achieved by the provision of goggles (Daniel v.Ford Motor Co.Ltd, (1955) all E.R. 218).

1.18 **PRECAUTIONS AGAINST DANGEROUS FUMES** (Sec. 36)

(1) Prohibition on entry into any chamber, tank, vat, pit, pipe etc. where any gas, fume etc. is present. No person shall be required or allowed to enter any chamber, tank, vat, pit pipe flue or other confined space in any factory in which any gas, fume, vapor or dust is likely to be present to such an extent as to involve risk to persons being overcome thereby, unless it is provided with a manhole of adequate size or other effective means of egress.

1.19 **PRECAUTIONS REGARDING THE USE OF PORTABLE ELECTRIC LIGHT** (Sec.36-A)

No portable electric light or any other electric appliance of voltage exceeding 24 volts shall be permitted for use inside any chamber, tank, vat, pit flue or other confined space in factor, unless adequate safety devices are provided. If any inflammable gas, fume or dust is likely to be present in such chamber, tank, vat, pit, flue or other confined space, no lamp or light other than that of flame-proof construction shall be permitted to be used in the factory.

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1.20 **PRECAUTIONS AGAINST EXPLOSIVE OR INFLAMMABLE DUST, GAS, ETC.** (Sec.37)

(1) Practicable measures to prevent explosion on annotation of gas, fume etc. When in any factory any manufacturing process produces dust, gas fume or vapor which is likely to explode on ignition, all practicable measure shall be taken to prevent any such explosion by -

(a) Effective enclosures of the plant or machinery used in the process.

(b) Removal or prevention of the accumulation of such dust, gas, fume or vapor, and

(c) Exclusion or effective enclosure of all possible sources of ignition.

1.21 **PRECAUTION IN CASE OF FIRE** (Sec. 38)

(1) Practicable measures to prevent outbreak of fire and it's spread. In every factory, all practicable measures shall be taken to prevent outbreak of fire & its spread, both internally & externally & to provide the maintain -

(a) Safe means of escape for all persons in the event of the fire, and

(b) The necessary equipment and facilities for extinguishing fire.

(2) Familiarity of workers with means of escape. Effective measures shall be taken to ensure that in every factory 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 cases.

1.22 **POWER TO REQUIRE SPECIFICATIONS OF DEFECTIVE PARTS OR TESTS OF STABILITY**; (Sec.39).

If it appears to the Inspector that any building or part of a building, machinery or plant in a factory may be dangerous to human life or safety, he may ask the occupier or the manager to both of the factory –

(a) To furnish drawings, specifications and other particular as may be necessary to determine whether such building, ways machinery or plant can be used with safety; or

(b) To carry out the tests in the specified manner and inform the inspector of the results thereof.

1.23 **SAFETY OF BUILDING AND MACHINERY** (Sec 40)

(1) Service of order by inspector on occupier to take specified measures in case of dangerous building or machinery or plants. If any building or any part of the building or machinery or plant in a factory is in such a condition that its dangerous to human life or safety, the inspector may serve on the occupier or the manager or both of the factory an order in writing specifying the measures which in his opinion shall be adopted and requiring them to be carried out before a specified date.
(2) Prohibition of use where danger is imminent. where it appears to the
inspector that the use of any such building, he may prohibit its use it has been
properly repaired or altered.

Maintenance of building (Sec. 40-A)

Where it appears tooth inspector that any building or any part of a building in
a factory is in such a state of disrepair as is likely to lead to lead to conditions
detrimental to the health and welfare of the worker, he may serve on the occupier or
manager or both of the factory order in writing specifying the measures which should
be taken. He may further require such measures to be carried out before such date as
is specified in the order.

1.24 SAFETY OFFICERS (SEC.40-B). IN EVERY FACTORY

(i) where in 1,000 or more workers are ordinarily employed, or
(ii) where in, in the opinion of the state Government, any manufacture
involves any risk of bodily injury, poising or disease, or any other hazard to health, to
the persons employed in the factory, the occupier shall, if so required by the state
number of safety offices as may be specified in that notification. the duties,
qualifications and as conditions of service of safety officers shall be such as may be
prescribed by the state government.

1.25 POWER TO MAKE RULES TO SUPPLEMENT THE ABOVE
PROVISIONS (Sec.41)

The state government may make rules requiring the provision in the
any factory of such further devices and measures for securing the safety of persons
employed there in as it may deem necessary.

1.26 CANTEENS (Sec.46).

Canteen in factory employing more than 250 workers the state
government may make rules. the state government may make rules requiring that in
any specified factory where in more that 250 workers are ordinarily employed, a
canteen shall be provided and maintained by the occupier for the used of the workers.

In Indian explosives Ltd. v. state of U.P., (1981) Lab. i.c., the
Allahabad high court held that maintenance of a canteen in a factory is incidental to
the operation of the factory, and therefore those employed in the canteen would fall
within the definition of employees because in the canteen is also run for their benefit.
The supreme court has clarified the position further in Kanpur suraksha karamchri
union v.union of India, A.I.R. (1988) S.C. 1965. In this case, it observed that a
canteen is an integral part of an establishment and the its workmen are employment of
the occupier. it has, however, made exceptions in case where a canteen run by a
contractor, or a cooperation society or some other body.
1.27 SHELTERS, REST ROOMS AND LUNCH ROOMS (sec.47)

(1) Provision for shelters, rest room lunch rooms in factories employing more than 150 workers are ordinarily employed, there shall be a provision for shelters, rest rooms and a suitable lunch rooms a where vision for shelters, workers can eat meals brought by them with provision for drinking water. However, any canteen maintained in accordance with the provisions of Sec. 46 hall be regarded as part of this requirement. Where a lunchroom exists, no worker shall eat any food in the workroom.

(2) Shelters, etc. to be sufficiently lighted, ventilated and cooled. The shelters or rest rooms or lunch rooms shall be sufficiently lighted and ventilated and shall be maintained in a cool and clean condition.

(3) Prescription of standards and exemption by the Stated Government. The State Government may (a) prescribe the standards in respect of construction, accommodation, furniture and other equipment of shelters, rest rooms and lunch rooms; (b) notification in the official Gazette, exempt any factory from the requirement of 47.

1.28 CRÊCHES (Sec.48)

(1) Provision of crèches in factories employing more than 30 women workers. In every factory wherein more than 30 women workers are ordinarily employed, there shall be provided and maintained a suitable room for use of children under the age of 6 years of such women.

(2) Crèches be adequately lighted an ventilated and to be under the charge of trained women. Room for use of children shall provide adequate accommodation, shall be adequately lighted and ventilated. Further they shall be maintained in a clean and sanitary condition and shall be under the charge of women trained in the care of children and infants.

(3) Prescription of rules by the State Government. The State Government may make rules prescribing the location and the standards in respect of construction, accommodation, furniture and other equipment of rooms for use of children. It may also make rules for the provision of additional facilities for the care of children belonging to women workers, including suitable provision of facilities

(a) for washing and changing their clothing,
(b) of free milk or refreshment or both for the children
(c) for the mothers of children to feed them at the necessary.

1.29 WELFARE OFFICERS, (sec.49)

(1) Employment of welfare officers in factories employing 500 or more workers. In every factory wherein 500 or more are ordinarily employed, the occupier shall employ in the factory such number of welfare officers as may be prescribed.

(2) Duties qualifications and condition of service to the prescribed by the state government may prescribed the duties qualification and conditions of service of welfare officers.
Even if a factory (say, a sugar factory) employees over 500 workers only for a few months in the year and not continuously the occupier shall employ the prescribed number of welfare offices.

1.30 **POWER TO MAKE RULES** (sec.50)

The state government may make rules-

(a) exempting, subject to compliance with such alternative arrangements for the welfare of workers as may be prescribed, any factory or class or descriptions of sec.42 to 49;

(b) requiring in any factory or class or description of factories that representatives of the workers employed in the factory shall be associated with the management of the welfare arrangement of the workers.

Factory Act 1948 provides exclusive provisions on SAFETY which are included in chapter IV sec -21 to 41 respectively. chapter and the occupier of every factory or establishments covered under factories Act is bound to follow them.

2. **THESE SAFETY PROVISIONS ARE AS FOLLOWS :-**

**Fencing Of Machinery** (Sec-21) This section provides;

1. Dangerous part of every machinery to be securely fenced. In every factory, every dangerous part of every machinery shall be securely fenced by safeguards of subsequently construction which shall be constantly mentioned and kept in fit position while the parts of machinery, their components should be adequately fenced while in motion or working.

The following machineries and their parts are covered under sec.21 viz.

(a) Every moving part of a prime mover and flywheel connected to a prime mover, whether the prime mover or flywheel is in the engine house or not;

(b) The head race and tailrace of every water-wheel and water-turbine;

(c) Any part of the stock-bar which projects beyond the headstock of a lathe;

(d) Every part of an electric generator, a motor or rotatory converter.

(e) Every part of transmission machinery; and

(f) Every dangerous part of any other machinery.

For the purpose of determining whether any part of a machinery or complete machinery itself is in safe position and fenced properly account shall not be taken of any occasion when examination is made of any part or machinery while it is on exhibitory motion or when lubrication is carried out.
3. PRESCRIPTION OF FURTHER PRECAUTIONS BY STATE GOVERNMENT.

The State Government may prescribe such further precaution as it may consider necessary in respect of any particular machinery of part thereof. An offense is called committed in this regard if it is not the when the machine is made to work intact the statute does not require a persons to perform an impossibility and it for some reason the suddenly breaks down and the machine remains undimmed for some time the manager would not be liable to answer. but, if some one else had removed the safe guard without the knowledge, but if someone convince of the manager has he can not provide a defence. however where the manager has led no evidence to show that he can’t has led no jobs to carrying his duty to see that the guard was kept in position when the machine was working he must be held liable. The object to prove here is where he completely; fails to discharge the duty and if yes, he is liable to be punished under sec-92 of this act as having failed to carry out the rules provided under section 21 of this act.

I. Absolute Obligation (Sec-21)

It provide that it is absolute obligation, on the occupier without any qualification whatsoever to fence the dangerous machinery from its working but against any not only against any only against any risk resulting from its working but against any dangers parson or unforeseen, foreseeable, and whether in the course of working or of accidental breaking of machinery or its parts. In operation, the duty is not confined to shutting off the machinery danger but includes shutting off the machinery so that it can not fly and strike the workman, any how.

Meaning Of Dangerous Part :

The Act interprets the term dangerous as – any machinery or part thereof from which in the ordinary course of working danger may reasonably be anticipated it working without normal protection.

II. Work On Near Machinery In Motion (Sec.22)

(1) Examination of machinery in motion by a trained adult worker.

It does means that when in factory it becomes necessary to examine any part of machinery while the machinery is in motion. Such examination shall be made only by a special trained adult male worker with adequate personal physical protection. The name of such person shall be entered in the prescribed register and is issued a certificate appointment for the same work.

He can handle the machinery if –

(a) The belt is not more than 15 centimeters in width.
(b) The fully is normally for the purpose of drive and not merely if fly-wheel or balance wheel.
(c) The belt joint is either laced or flush with the belt.
(d) The belt including the joint and the pulls rim are in good repair condition.
(e) There is a reasonable clearance between the pulls and any fixed plant or structure.
(f) Ladder in use for carrying out any examination or operational aforesaid is securely fixed or lashed or is firmly held by a second person.
(g) Every set screw, bolt and day on any revolving shaw, spindle, wheel or pinion and all spur worm and other toothed or friction gearing in motion with which such worker would otherwise be liable to come into contact shall be securely fenced to prevent physical contact.

4. **Restrictions On Women And Young Person Employment**

This provision also states that no women or young person shall be allowed to clean, lubricate or adjust any part of a machinery in motion it seems to expose any injury to them.

I. **Restriction On Cleaning Etc. Of Specified Moving Parts**

Similarly State Govt. by notification in the official Gazette prohibit in a factory- cleaning lubrication or adjusting of machinery or its part rest in motion.

II. **Employment Of Young Person On Dangerous Machines. (Sec-23)**

This provision states that –Restriction on young person to work on dangerous machines –No young person shall be required or allowed to work or any machine to which this section applies.

(a) He has been fully instructed about the dangers arising out of operation of machinery and its respective precautions.

(b) He is given sufficient training to work on the machine or is under supervision by a person who has a though knowledge and experience of the machine.

(c) Machines dangerous for young persons to specified by the state Govt. It means that the State Govt. shoot specify machines which in its opinion are of such a dangerous character that one can work them unless compiles foregoing requirements.

III. **Striking Gear And Devices For Cutting Off Power** (Sec-24)

These provision is related with –

(1) Suitable striking gear to be provided maintained and used. In every factory suitable striking gear or other efficient mechanical appliance shall be provided and maintained and used to more driving belt to and from fast and loose pulleys which from part of transmission machinery Driving belts when not in use shall not allowed to rest or ride upon shilling in motion.
(2) Suitable devices for cutting off power in emergencies from running machinery. There should be proper arrangement for cutting off power in case of emergency and all switches or instruments should be maintained in every workroom.

(3) Locking device to prevent accidental starting of transmission machinery. All machineries or its exhibited parts in motion should be controlled by on–off switch bottoms properly working to prevent accidental starting of the transmission machinery.

Similarly there should be additional safeguards against transmission machinery as provided under Sec-24 of the Act.

IV. **Self Acting Machines** (Sec-25):

These Section states that –

1. Traversing part not allowed to run within a distance of 45 centimeters from any fixed structure. It provides that no traversing part of a self acting machine in any factory and no material carried thereon shall be allowed to run on its onward or inward traverse within a distance of 45 centimeters from any fixed structure which is not part of the machine. This provision shall apply if the space over which the traversing part of the sell acting machine runs is a space over which any person is a space over which any person is liable to pass whether in the course of his employment or otherwise.

(2) Exemption in case of machines installed before the commencement of the Act.

This is an exemption that the chief Inspector may permit the continued use of a machine installed before the commencement of the factories Act which does not comply with the above requirement.

V. **Casing Of A New Machinery** (Sec-26)

a. **Casing to prevent danger:**
All machinery driving by power, in machinery and parts set crew, bolt or key on any revolving shift spindle, wheel or pinion shall be so sunk, encased or otherwise effectively guarded as to prevent danger. Similarly all spar, worm and other toothed or friction gearing not required frequent adjustments while in motion shall be completely encased unless it is safety situated.

b. **Penalty:**
If any one shall or let on hire either directly or as an agent, any machine which does not comply with the provisions of sec-26 he shall be punishable with imprisonment upto 3 months or with fine up to Rs.500 or with both.

c. **Rule making power of the State Government:**
The State Govt. may make rules specifying further safeguards to be provided in respect of any other dangerous part of any particular machine.
5. **PROHIBITION OF EMPLOYMENT OF WOMEN AND CHILDREN NEAR COTTON OPENERS** (Sec-27)

No Women or child as it is provided under the Act shall be employed in any part of a factory for processing cotton in which cotton opener is at work.

If the feed-ended of a cotton opener is in a room separated from the delivery end by a partition extending to the roof or to a specified height women and children may be employed on the side of the partition where the feed end is situated.

6. **HOSTS AND LIFTS** : (Sec-28)

1. Hoists and lifts to be of good mechanical construction and to be properly maintained and examined once in every months. A register containing the prescribed particulars of every such examination shall be kept. The cage of every hoist or lift used for carrying persons shall be fitted with agate on each side from which access is afforded to a landing.

2. Exemption by chief Inspector in case of hoists or lifts in stalled before commencement of the Act. The chief inspector may exempt a factory where a hoist and lifts were installed before the commencement of the Act. from the above provisions upon such conditions for ensuring safety.

7. **ADDITIONAL REQUIREMENTS**:

The following additional requirements shall apply to hoists and lifts used for carrying persons and installed or constructed in a factory after the commencement of the Act.

(a) Where the cage is supported by rope or chain, there shall be at least & ropes or chains separately connected with the cage and the balance weight. Each rope or chain with its attachments shall be capable or carrying the provided and maintained.

(b) Efficient devices capable of supporting the cage together with its maximum load in the event of breakage of the ropes, chains or attachments, shall be provided and maintained.

(c) An efficient automatic device shall be provided and maintained to prevent the cage from ever running.

For the purposes Sec- 23, no lifting machine or appliance shall be deemed to be a hoist or lift unless it has a platform or cage, the direction or movements of which is restricted by guide or guides.
The information with regard to policy of heat, light & ventilation etc. applicable on various categories of respondents was gathered to know the level of care being taken by the management of BHEL with regard to health and safety of its employees. This information was considered to be important from one more point that the power plants of the BHEL are governed by the provisions of the Factories Act, whereas the rest of the staff is governed by the rules of the BHEL.

The information gathered has been incorporated in Table 8.1 and an analysis of the data reveals that the (100%) Boards Members & ‘senior level engineers’ and (77%) ‘middle level engineers’ are not working at the places where the provisions of the Factories Act. Similarly (70%) of the gazetted ‘Accounts Law and Personnel’ employees are also not posted at the Power stations.

The situation is different in case of Non-gazetted cadre as (56.6%) of the ‘Non-gazetted Technical staff’ and (61.3%) of the ‘Non-Technical staff’ and (52%) of the leaders of the Union are being at the place, where Factories Act is applicable.

In light of the place of posting of different kinds of respondents, the policy with regards to heat, light and ventilation etc. is also changed.

All the Boards members (100%) and ‘Senior Level Engineers’ opined that the policy is to provide better and comfortable work place, (14%) of the ‘Middle level Engineers’ had also expressed the same view. Whereas (63%) of ‘Middle Level Engineers’ expressed it to be to provide adequate facilities only and the rest of the (23%) of the ‘Middle Level Engineer’ expressed it to provide only what has been given under the Factories Act 1948.

**Regarding all other staff the policy had been either to provide adequate facilities or to comply with the provisions of the factories act 1948.**

In ‘Non-Gazetted Technical’ cadre this ratio has been (43.3%) and (56.7%) and ‘Non-Technical’ (38.6%) and (61.4%) and ‘Non-wage Board’ cadre it is (75%) and (25%). For leaders of the Union it is (48%) and (52%).

As such it can be concluded that (78.7%) of the Gazetted cadre and (43.2%) of the ‘Non-gazetted’ cadre is by the Board’s rules and the remaining (21.3%) of Gazetted cadre and (56.8%) of the ‘Non-gazetted’ cadre were working at the place where the provisions of the Factory Act are applicable.
## WORKING CONDITION IN BHEL

### TABLE NO. 8.1

**TABLE SHOWING POLICY OF WORKING CONDITIONS (HEAT, LIGHT, ETC.) FOR DIFFERENT CATEGORIES OF EMPLOYEES**

<table>
<thead>
<tr>
<th>Category of Employee</th>
<th>A Board Members</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>Factors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>To provide better and comfortable workplace</td>
<td>8</td>
<td>40</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To provide adequate facilities</td>
<td>252</td>
<td>28</td>
<td>260</td>
<td>116</td>
<td>8</td>
</tr>
<tr>
<td>Factories</td>
<td>92</td>
<td>12</td>
<td>340</td>
<td>184</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>40</td>
<td>400</td>
<td>40</td>
<td>600</td>
</tr>
</tbody>
</table>
9. **ACTUAL POSITION (WITH REGARD TO HEAT, LIGHT AND VENTILATION ETC.) AS OBSERVED BY THE RESPONDENTS:-**

The information with regard to actual position of heat, light etc. being provided to the BHEL’s employees was gathered to find out the difference in the policy and the actual implementation, if any.

The data gathering has been incorporated in Table 8.2 and an analysis of the data reveals that the position of working conditions (in special; reference to heat, light & ventilation etc.) at different units of BHEL for power generation distribution and maintenance have been quite favorable. The most of the Upper level executives as (100%) senior personnel stated working conditions at BHEL are better then that of other state government departments.

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However on ‘Non-Gazetted’ cadre, among wage board members (42%) ‘Technical staff’ stated working conditions as Adequate. Similar opinion was observed from (48%) ‘Non-Technical’ staff. On the other hand (12%) office bearers of BHEL trades union’s members also opined about working conditions as Adequate.

Thus it can be concluded that no one among managerial or workers category staff of BHEL had bad opinion about working conditions & facilities, being provided by BHEL. They were found to be satisfied with all heat, light, ventilation, seating and other amenities being provided to them.

**Actual position of the working conditions :-**

Starting from the premises that there can be a variation between the provisions as provided under the various Acts or the policy of working conditions the actual position of providing them.

Information was gathered to know the actual position has been categorized as Excellent, Adequate, satisfactory or poor and presented in Table 8.2.

An analysis of data given in Table 5.2 reveals that majority of all types of staff (57.2%) were of opinion that the working conditions has been excellent followed by (28.2%) who opined it to be satisfactory and (20.7%) defined it to be adequate.

Only (6.2%) of the total respondents that too include only (11.3%) of the ‘Non-gazetted Technical’ staff were not satisfied with the working conditions. (4%) of the ‘Non-Technical staff’ and (10%) of the ‘Union Traders’ also supported view that the working conditions, where they actual work as poor. On the whole the working conditions by majority of the staff has been described to the good and as such it can be concluded to be better.
### Chapter No. VIII

#### WORKING CONDITION IN BHEL

**TABLE NO. 8.2**

**TABLE SHOWING THE POSITION OF HEAT, LIGHT, VENTILATIONS, NOISE ETC. FOR DIFFERENT CATEGORIES OF EMPLOYEES**

<table>
<thead>
<tr>
<th>Category of Employee</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>POSITION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>8</td>
<td>40</td>
<td>360</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Adequate</td>
<td>10</td>
<td>8</td>
<td>600</td>
<td>300</td>
<td>12</td>
</tr>
<tr>
<td>Poor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Poor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>40</td>
<td>400</td>
<td>40</td>
<td>600</td>
</tr>
</tbody>
</table>
10. **POLICY OF SAFETY AS UNDERSTOOD BY THE RESPONDENTS**

The information with regard to policy of BHEL regarding safety of its various category of employees was gathered to know the level of attention over safety concept on different category of employees. Since some of the BHEL employees are posted at power plants and are governed by the provisions of the Factories Act, where as the other employees are either engaged in field duty or office work only.

The data gathered has been incorporated in Table 8.3 and an analysis of the data reveals that all the Board members (100%) and the Senior level engineers are working in offices and the policy of the Board is to provide all safety to them basically with regards to prevention from and accident.

The position among the “Middle level Engineers” is different as (36%) of them opined that all the necessary safety precautions are being taken, (43%) opined it to be adequate and (12%) of them opined that only those safety measures as prescribed under the Factories are being provided to them. Among “Account, law and personnel” staff they were of the view that the safety provisions are either good or adequate.

The situation in “Non-Gazetted cadre” and the union leader is different as (43.5%) of this category described the safety policy to be adequate and the remaining (56.5%) staff members it to provided only that much as the same has been provided under the Factories Act 1948.

As such it can be concluded that for Senior Executives of the BHEL though they are not governed by the Factories Act 1948, the safety position is more better than those of workers at operational level. This is obvious also because only the operative level workers including “Technical Non-Gazetted” staff and engineers also are involved in the generation of the power and its transmission, distribution and response of the electric lines.
**Chapter No. VIII**

**WORKING CONDITION IN BHEL**

**TABLE NO. 8.3**

**TABLE SHOWING POLICY OF SAFETY FOR DIFFERENT CATEGORIES OF EMPLOYEES**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Policy</td>
<td>8</td>
<td>40</td>
<td>144</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>220</td>
</tr>
<tr>
<td></td>
<td>172</td>
<td>12</td>
<td>260</td>
<td>120</td>
<td>8</td>
<td>96</td>
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<td>104</td>
<td></td>
<td></td>
<td></td>
<td>712</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>40</td>
<td>400</td>
<td>40</td>
<td>600</td>
<td>300</td>
<td>12</td>
<td>200</td>
<td>1600</td>
</tr>
</tbody>
</table>
11. **SAFETY MEASURES BEING ADOPTED IN BHEL**

The information about the safety measures actually being practiced in BHEL for different category of employee was gathered to find out whether any difference in the policy and actual practice exists or not. The information was also gathered to know the various safety measures being adopted for various types of employees.

The data gathered has been incorporated in Table 8.4 and an analysis of the data reveals that all the Board members (100%) and Chief Engineers had been provided with safety from fire only, which is obvious also as employees of these category (policy maker) were working in offices only and were not exposed to any other risk.

Among “Middle level Engineers” (56%) employees had been provided with only safety from fire and (22%) of the employees were protected from machinery and its operations and (22%) from electric shocks. All the employees (100%) of “Account, Law and Personnel etc.” were protected from fire only.

The situation in “Non-gazetted” is different from the gazetted cadre, as many of the employees of “Non-gazetted cadre are exposed to different kinds of risk. (73.8%) of the total ” Non-gazetted employees were protected from fire accidents, (31.2%) were protected from the machinery and its movement and (45%) of the employees of “Non-gazetted cadre” were provided safety measures to be protected from electric shocks.

From the above analysis it can be concluded that those employees who are working at the offices only were provided safety measures of protection from fire hazards and those engaged in the generation or involved in repairs and maintenance were protected from electric shocks and accidents hazards of machinery and its movements.
TABLE NO. 8.4

TABLE SHOWING SAFETY MEASURES ACTUALLY BEING PROVIDED TO DIFFERENT CATEGORIES OF EMPLOYEES

<table>
<thead>
<tr>
<th>Category of Employee</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>SAFETY MEASURES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety from fire</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>40</td>
<td>224</td>
<td>40</td>
<td>492</td>
<td>144</td>
</tr>
<tr>
<td>Safety from machines, its movement and enclosures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>88</td>
<td></td>
<td></td>
<td></td>
<td>272</td>
<td></td>
</tr>
<tr>
<td>Safety from electric shocks</td>
<td></td>
<td></td>
<td></td>
<td>392</td>
<td></td>
</tr>
<tr>
<td>Safety measures as prescribed by the state govt.</td>
<td></td>
<td></td>
<td></td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>40</td>
<td>400</td>
<td>40</td>
<td>1316</td>
</tr>
</tbody>
</table>
12. **OPINION OF THE RESPONDENTS ABOUT SAFETY MEASURES**

The information about the opinion of the respondents towards safety measures was collected to know the level of satisfaction of the employees of the BHEL with the provisions of safety, being provided by the BHEL.

The data gathered had been incorporated in Table 8.5 and an analysis of the data reveals that the level of satisfaction with the safety measures is different in the “Gazetted” (A&B) and “Non-gazetted” (C&D) cadre of employees.

As (63.9%) of the total (Boards members, and other Gazetted employees) defined it to be good and were quite satisfied, (31.1%) described it to be so-so and only (4.9%) of this category was not satisfied with the safety measures.

Among “Non-Gazetted” and Union leaders only (43.5%) were fully satisfied with the safety measures, (44.2%) were just satisfied with the safety provisions and remaining (12.3%) showed dissatisfied with the safety provisions.

As such it can be concluded that most of the employee (49.8%) were either happy with the safety provisions and (40.2%) were of opinion that these are so-so and only (10%) of the total employees were not satisfied with the safety provisions and as such it appears that the level of satisfaction of the employees of the BHEL with safety provisions was satisfactory.

13. **REASONS OF SHOWING DISSATISFACTION WITH SAFETY PROVISIONS**

The information from those employees who had showed dissatisfaction was gathered to know the reasons of having this opinion. The information was collected to further suggest some remedical measures for the same.

The data collected had been incorporated in Table no 8.6. An analysis of the data reveals that (50%) of the total dissatisfied employees had given the reasons that the proper safety devices/equipment were not provided to them. (75%) of the employees of were of opinion that the management, senior executives and the employees also were not paying proper attention and importance to the concept of safety and some time they neglect the safety rules also and its importance is also not very proper and the remaining (42.5%) of the employees were of the view that the safety equipment/kit provided to them, was not is a satisfactory conditions and no proper attention is being given for its replacement also.

As such it can be concluded that the dissatisfaction had been mainly because of the reasons that either the proper safety devices were not provided to them or the conditions of these devices was not satisfactory.
### Table No. 8.5: Working Condition in BHEL

**Table showing the Opinion of the Different Categories of Employees Towards Safety Measures**

<table>
<thead>
<tr>
<th>Category of Employee</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Board Members</td>
<td>SE/EE/AE Chemists &amp; Others</td>
<td>Accounts Law &amp; Personnel</td>
<td>Wage Board Tech.</td>
<td>New wage Board</td>
</tr>
<tr>
<td><strong>Factors</strong></td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td><strong>OPINION</strong></td>
<td>8</td>
<td>40</td>
<td>248</td>
<td>16</td>
<td>244</td>
</tr>
<tr>
<td>Good</td>
<td>140</td>
<td>12</td>
<td>268</td>
<td>148</td>
<td>12</td>
</tr>
<tr>
<td>So-so</td>
<td>12</td>
<td>12</td>
<td>88</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8</td>
<td>40</td>
<td>400</td>
<td>40</td>
<td>600</td>
</tr>
</tbody>
</table>
### Chapter No. VIII

**WORKING CONDITION IN BHEL**

**TABLE NO. 8.6**

TABLE SHOWING THE REASONS OF SHOWING DIS/SATISFACTION WITH SAFETY MEASURE BY DIFFERENT CATEGORIES OF EMPLOYEES

<table>
<thead>
<tr>
<th>Category of Employee</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>REASONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-availability of safety devices</td>
<td></td>
<td></td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>No proper attention is given</td>
<td></td>
<td></td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Safety devices are very poor</td>
<td></td>
<td></td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>12</td>
<td>88</td>
<td></td>
</tr>
</tbody>
</table>
14. SUGGESTION FOR FURTHER IMPROVEMENT IN THE SAFETY OF EMPLOYEES

The information about the suggestion to improve the safety provision further was gathered to suggest some action to be taken by the BHEL in this direction. The data gathered has been incorporated in Table 8.7 and an analysis of the data reveals that the Boards members and the “Senior level engineers” did not give any suggestion (as they were fully satisfied with the safety measures). (48%) of the “Middle level engineers” also did not give any suggestion but (10%) of them suggested for providing good quality safety devices and in appropriate quality. (30%) respondents of this category suggested that periodical training on safety should be provided and (32%) suggested to create an awareness of the concepts.

Among “Account, Law and Personnel” cadre the personnel staff suggested that periodical training, proper follow up and to create safety awareness to among all should be complemented.

Among “Non-Gazetted Technical” cadre (23.3%) suggested to improve the quality and quantity of safety devices (24%) suggested for periodical training (30.6%) suggested for proper following up and (10%) to created the safety awareness. Whereas among “Non-Technical” staff (69.3%) of the respondents did give any suggestion and (30.6%) suggested that safety awareness should be developed.