

Draft



सत्यमेव जयते



# National Occupational Safety and Health (OSH) Profile

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# **1. Laws & Regulations on Occupational Safety and Health**

## **1.1 Constitutional Framework**

Under the Constitution of India, labour is a subject in the concurrent list where both the Central and the State Governments are competent to enact legislation subject to certain matters reserved for the Central Government. The Constitution of India provides detailed provisions for the rights of the citizens and also lays down the principles in the governance of the country called as “Directive Principles of State Policy”. These Directive Principles provide for securing the safety and health and strength of employees, men and women, that the tender age of children are not abused, that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength (Article 39), just and humane conditions of work and maternity relief are provided (Article 42), that the Government shall take steps, by suitable legislation or in any other way, to secure the participation of employee in the management of enterprises, establishments or other organizations engaged in any industry (Article 43A), for ensuring that no child below the age of 14 is employed to work in any factory or mine or engaged in any other hazardous employment (Article 24).

Occupational Safety and Health is one of the subjects allotted to Ministry of Labour & Employment under the Government of India Allocation of Business Rules. The Industrial Safety and Health branch of the Ministry discharges the overall functions relating to policy decisions and laying down guidelines for countrywide adoption of legislation.

## **1.2 National Policy on Safety, Health and Environment at Workplace (NPSHEW)**

On the basis of Directive Principles as well as international instruments the Government of India, Ministry of Labour & Employment, had declared the National Policy on Safety, Health and Environment at Workplace (NPSHEW) on 20th February, 2009 and the policy document has been posted in the website of the Ministry of Labour and Employment and DGFASLI at [www.labour.nic.in](http://www.labour.nic.in) and [www.dgfasli.nic.in](http://www.dgfasli.nic.in) respectively.

The purpose of this National Policy is to establish a preventive safety and health culture in the country through elimination of the incidents of work related injuries, diseases, fatalities, disasters and to enhance the well being of employees in all the sectors of economic activity in the country.

The salient features of the Policy are as below:-

- It recognizes safe and healthy working environment as a fundamental human right.
- It aims at enhancing the well-being of the employees and the society at large by eliminating work related injuries, diseases, etc.
- It enumerates the goals to be achieved and brings into focus the objective of continuous reduction in the incidence of work related injurious and diseases.

### **1.3 Major OSH Laws & Regulations**

On the basis of these Directive Principles and international instruments, the Government of India declares its policy, priorities, strategies and purposes through the exercise of its power. The Government of India has enacted the statutes relating to Occupational Safety and Health (OSH) at workplaces. At present, comprehensive safety and health statutes for regulating Occupational Safety and Health at workplaces mainly exist in respect of the four sectors namely, manufacturing, mining, ports, and construction.

There are four main legislations that cover Occupational Safety and Health at workplace. (i) The Factories Act, 1948 , covering factories wherein the enforcement of safety at workplace is by the Chief Inspector of Factories in the respective states, (ii) The Mines Act, 1952 and Mines Rules, 1955 for mining industry where the enforcement is by the Directorate General of Mines Safety (DGMS) under Ministry of Labour & Employment , Government of India, (iii) The Dock Workers (Safety, Health and Welfare) Act, 1986 followed by notification of the Dock Workers (Safety, Health and Welfare) Regulations, 1990 dealing with the major ports of India and the enforcement is by the Directorate General of Factory Advice Service & Labour Institutes (DGFASLI), under Ministry of Labour & Employment , Government of India, and (iv) The Building & Other Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996 , covering construction workers at construction sites wherein the enforcement is by the Directorate General Labour Welfare in the central sphere and by the Labour Commissioners/Factory Inspectorates in the States/UTs.

#### **1.3.1 The Factories Act, 1948**

The First Factories Act in India was passed in 1881. Though this legislation was initiated to promote the interest of the producers in Lancashire and Manchester in United Kingdom, it has since then steadily developed into a welfare measure of wide contents and coverage through innumerable amendments and re-enactments. As observed by the Supreme Court of India in the case of Nagpur Electric Light and Power Company the scope of the factory legislation has been now very much enlarged in



order to secure health, safety, welfare, proper working hours, leaves, working conditions and benefits for the workers employed in factories.

Under the present Act factory means any premises in which 10 or more workers are working and a manufacturing process is carried on with the aid of power; any premises in which 20 or more workers are working and a manufacturing process is carried on without the aid of power. Recently this definition has undergone change in some of the states of India where under the Act, factory means any premises in which 20 or more workers are working and a manufacturing process is carried on with the aid of power; any premises in which 40 or more workers are working and a manufacturing process is carried on without the aid of power. Chapter II of the Act deals with The Inspection Staff, Chapter III of the Act deals with Health and Chapter IV deals with Safety.

Chapter IV A (Provisions Relating to Hazardous Processes) was added to the present Act in 1988 {after the Bhopal Gas Tragedy on the night of 2-3 December 1984 at the Union Carbide India Limited pesticide plant in Bhopal, Madhya Pradesh wherein over 500,000 people were exposed to methyl isocyanate (MIC) gas and other chemicals.} with:

- Section 41 A – Dealing with Constitution of Site Appraisal Committees
- Section 41 B – Dealing with Compulsory disclosure by occupier
- Section 41 C – Dealing with Specific responsibility of the occupier in relation to hazardous processes
- Section 41 D – Dealing with Power of Central Government to appoint Inquiry Committees
- Section 41 E – Dealing with Emergency Standards
- Section 41 F – Dealing with Permissible limits of exposure of chemicals and toxic substances
- Section 41 G – Dealing with Workers participation in safety management
- Section 41 H – Dealing with Right of workers to warn against imminent danger.

Chapter VII of the Act deals with employment of young persons and prohibits the employment of any person below the age of 14 years.

Chapter IX of the Act has Special Provisions with Section 85– Dealing with Power to apply the Act to certain premises wherein the State Government by notification declare that all or any of the provisions of the Act will apply to any place where a manufacturing process is carried out with or without the aid of power

- Section 87– Dealing with Dangerous operations, wherein the State Government is of opinion that any manufacturing process or operations carried out in a factory is dangerous then it can restrict employment of women, provide for periodical medical examination , prohibit / restrict / control use of any specified material / process
- Section 88– Dealing with notice of certain accidents;

- Section 88 A- Dealing with notice of certain dangerous occurrences
- Section 89- Dealing with notice of certain diseases
- Section 90- Dealing with Power to direct enquiry into cases of accidents and certain disease
- Section 91- Dealing with Power to take samples
- Section 91A- Dealing with safety and occupational health surveys.

### **1.3.2 Dock Workers (Safety, Health & Welfare) Act, 1986 & The Dock Workers (Safety, Health & Welfare) Regulations, 1990**

Considering the hazardous nature of dock work, the ILO as early as in 1929 adopted an international convention to protect dock workers against accidents. This convention was revised in 1932. The history of safety legislation of dock workers in India dates back to 1934 where the Indian Dock Labourers Act, 1934 was enacted to give effect to this ILO Convention viz., "Protection Against Accidents (Dockers) Convention (Revised), 1932 (No.32)". The main objective of the Act was to make the working places and working procedures safe. Due to the Second World War, the Indian Dock Labourers Regulation, 1948 framed under the Act could be brought into force in the year 1948 only. The Act and the Regulations were limited in scope as they covered only safety aspects and that too for workers employed on board and alongside the ships and thus a large number of workers engaged in other areas of the ports such as transit sheds, warehouses, yards etc., were not covered. As the necessity arose to include health and welfare provisions, the Dock Workers (Safety, Health and Welfare)) Scheme, 1961 was framed under the Dock Workers (Regulation of Employment) Act, 1948 to cover the rest of the workers working elsewhere in the port premises.

In order to ratify the ILO Conventions 152 and also to implement the recommendation of the National Commission on Labour, a unified Act, viz., the Dock Workers (Safety, Health and Welfare) Act, 1986 was enacted and the detailed Dock Workers (Safety, Health and Welfare) Regulations were framed in 1990. The enforcement of the Act and the Regulations is carried out by the Inspectorates Dock Safety functioning in all the major ports under the administrative control of the Director General, DGFASLI, Ministry of Labour, Government of India. The Director General, DGFASLI as Chief Inspector of Dock Safety is also responsible for enforcement of the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 framed under the Environment (Protection) Act 1996 in the Major Ports.

The Dock Workers (Safety, Health and Welfare) Regulations, 1990 was framed under the Section 20 of the Dock Workers (Safety, Health and Welfare) Act, 1986. Regulations 9 to 94 in Part III of the Dock Workers(Safety, Health and Welfare)Regulations, 1990 are covering safety aspects in the working places, warehouses and storage places, decks and Hatch ways etc., Lifting Appliances and Gear, Transport Equipment and Operations, Handling of Cargo, Handling of Dangerous Goods, Freight Container Terminals, Miscellaneous. Regulations 95 to 99 in Part IV of

the Dock Workers (Safety, Health and Welfare) Regulations, 1990 are covering health aspects like cleanliness, drinking water, latrines and urinals, spittoons, ventilation and temperature in dock area including reefer holds on ships. Regulations 100 to 109 in Part V of the Dock Workers (Safety, Health and Welfare) Regulations, 1990 are covering welfare facilities like washing facilities, First-Aid boxes, ambulance room, ambulance carriage, stretchers, shelters or rest rooms and lunch rooms, canteens, medical examination of dock workers, notices, welfare officers.

### **1.3.3 The Mines Act, 1952 and other laws pertaining to Mines**

In earlier years when mining activities were modest in scale, safety problems too were simple. With the progress in exploitation of minerals, safety of persons employed became a matter of concern. In 1895, the Government of India initiated steps to frame legislative measures for safety of workmen. In 1897 first major disaster in mining hit the Kolar Goldfields killing 52 persons, to be soon followed by the Khost Coal Mine disaster in Baluchistan (now in Pakistan) killing 47 persons. The disaster hastened the process of formulation of safety laws and the first Mines Act was enacted in 1901. With further experience, this Act was superseded by the Indian Mines Act, 1923, which was again replaced by the present Mines Act, 1952 with amendments in 1959. On 27 Dec 1975 the Chasnala mining disaster occurred in a coal mine in Chasnala near Dhanbad in the Indian state of Bihar now called Jharkhand, when an explosion in the mine followed by flooding of water killed 372 miners. The roof of coal caved in resulting in 7 million imperial gallons (32,000 m<sup>3</sup>) of water per minute flooding into the mine. The miners were trapped under a mountain of debris and drowned when the water surged into the mine. The Indian Iron and Steel Company (IISCO), which owned the mine, said it conformed to international standards. A Hindi film KaalaPathar depicting the tragedy was also produced. Major changes were incorporated in this Act in 1983. The Mines Act, 1952 applies to mines of all minerals within the country except the State of Sikkim, including the offshore mines within the limits of territorial water. For administering the provisions of the Indian Mines Act, 1901, the Government of India set up a "Bureau of Mines Inspection" on the 7th January 1902 with headquarters at Calcutta. The name of the organisation was changed to Department of Mines in 1904 and its headquarters shifted to Dhanbad in 1908. On 1.1.1960, the organization was renamed as "Office of the Chief Inspector of Mines". Since 1.5.1967, the office has been re-designated as Directorate-General of Mines Safety (DGMS in short).

The Mines Act, 1952 deals with the matters relating to safety, health and welfare of persons employed in mines including oil mines. The Act specifies the provisions for regulating employment of persons, leave with wages, duties and responsibilities of owner, agent and manager, drinking water, First-Aid and rest shelters, medical examinations and occupational health surveys, notice of accidents and occupational diseases in addition to framing of rules, regulations and byelaws on specific subjects including the penalty provisions for violations of this Act.

The following Laws dealing with OSH are applicable to Mines:

Mines Act, 1952

Coal Mines Regulations, 1957

Metalliferous Mines Regulations, 1961

Oil Mines Regulations, 1984

Mines Rules, 1955

Mines Vocational Training Rules, 1966

Mines Rescue Rules, 1985

Mines Creche Rules, 1966

Electricity Act, 2003

Factories Act, 1948: Chapter III & IV

Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989 – under Environmental Protection Act, 1986

Land Acquisition (Mines) Act, 1885

The Coal Mines (Conservation & Development) Act, 1974

#### **1.3.4 The Building & Other Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996**

The Building and Other Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996 aims at regulating the employment and conditions of services of building and other construction workers and providing for their safety, health and welfare measures.

The BOCW Act, 1996 in Chapter VII under Safety & Health Measures in Section 38 deals with Safety Committee and safety officers in every establishment wherein five hundred or more building workers are ordinarily employed; Section 39 deals with Notice of certain accidents, where in any establishment an accident occurs which causes death or which causes any bodily injury by reason of which the person injured is prevented from working for a period of forty-eight hours or more immediately following the accident, or which is of such a nature as may be prescribed, the employer shall give notice thereof to such authority, in such form and within such time as may be prescribed;

Section 40 deals with Power of appropriate Government to make rules for the safety and health of building and other construction workers on following matters.

- safe means of access to, and safety of any working place, including the provision of suitable and sufficient scaffolding at various stages when work cannot be safely done from the ground or from any part of a building or from a ladder or such other means of support;
- precautions to be taken in connection with the demolition of the whole or any substantial part of a building or other structure under the supervision of a competent person and the avoidance of danger from collapse of any building or

other structure while removing any part of the framed building or other structure by shoring or otherwise;

- handling or use of explosive under the control of competent persons so that there is no exposure to the risk of injury from explosion or from flying material;
- erection, installation, use and maintenance of transporting equipment, such as locomotives, trucks, wagons and other vehicles and trailers and appointment of competent persons to drive or operate such equipment;
- erection, installation, use and maintenance of hoists, lifting appliances and lifting gear including periodical testing and examination and heat treatment, where necessary, precautions to be taken while raising or lowering loads, restrictions on carriage of persons and appointment of competent persons on hoists or other lifting appliances;
- adequate and suitable lighting of every workplace and approach thereto, of every place where raising or lowering operations with the use of hoists, lifting appliances or lifting gears are in progress and of all openings dangerous to building workers employed;
- precautions to be taken to prevent inhalation of dust, fumes, gases or vapours during any grinding, cleaning, spraying or manipulation of any material and steps to be taken to secure and maintain adequate ventilation of every working place or confined space;
- measures to be taken during stacking or unshackling, stowing or unstowing of materials or goods or handling in connection therewith;
- safeguarding of machinery including the fencing of every fly-wheel and every moving part of a prime mover and every part of transmission or other machinery, unless it is in such a position or of such construction as to be safe to every worker working on any of the operations and as if it were securely fenced;
- safe handling and use of plant, including tools and equipment operated by compressed air;
  - precautions to be taken in case of fire;
  - limits of weight to be lifted or moved by workers;
- safe transport of workers to or from any workplace by water and provision of means for rescue from drowning;
- steps to be taken to prevent danger to workers from live electric wires or apparatus including electrical machinery and tools and from overhead wires;
- keeping of safety nets, safety sheets and safety belts where the special nature or the circumstances of work render them necessary for the safety of the workers;
- standards to be complied with regard to scaffolding, ladders and stairs, lifting appliances, ropes, chains and accessories, earth moving equipments and floating operational equipments;

- precautions to be taken with regard to pile driving, concrete work, work with hot asphalt, tar or other similar things, insulation work, demolition operations, excavation, underground construction and handling materials;
- safety policy, that is to say, a policy relating to steps to be taken to ensure the safety and health of the building workers, the administrative arrangements there for and the matters connected therewith, to be framed by the employers and contractors for the operations to be carried on in a building or other construction work;
- information to be furnished to the Bureau of Indian Standards established under the Bureau of Indian Standards Act, 1986 (63 of 1986), regarding the use of any article or process covered under that Act in a building or other construction work;
- provision and maintenance of medical facilities for building workers;
- any other matter concerning the safety and health of workers working in any of the operations being carried on in a building or other construction work.

#### **1.4 Other related legislations on Safety, Health and Environment**

Apart from the four main legislations mentioned above, there are legislations relating to certain substances, machinery, environment which also addresses certain issue of safety and health. These statutes are applicable to all sectors including the unorganized sectors:

##### **1.4.1 The Indian Boilers Act, 1923 (amended 2007)**

An Act to consolidate and amend the law relating to steam boilers, The Indian Boilers Regulations, 1950 (amended 2010) and The Boilers Rules of respective States.

##### **1.4.2 The Dangerous Machines (Regulation) Act, 1983**

An Act to provide for the regulation of trade and commerce in production, supply, distribution and use of the product of any industry producing dangerous machines with a view to securing the welfare of labour, operating any such machine and for payment of compensation for death or bodily injury suffered by any labourer while operating any such a machine and for matters connected there with or incidental there to. The act is supplemented by the Dangerous Machines (Regulation) Rules, 1984 (amended 2007).

##### **1.4.3 The Motor Transport Workers Act, 1961 (amended 1986)**

An Act to provide for the welfare of motor transport workers and to regulate the conditions of their work. The act is supplemented by the Motor Transport Workers Rules, 1964.

#### **1.4.4 The Plantation Labour Act, 1951 (amended 2010) and Rules there under**

This act provides for the welfare of labours and to regulate the conditions of work in plantations.

#### **1.4.5 The Beedi Cigar Workers (Conditions of Employment) Act, 1966 (amended 1993)**

This act provides for the welfare of the workers in beedi and cigar establishments and to regulate the conditions of their work and for matters connected there with. The respective State Governments have notified the State Rules under the Act.

#### **1.4.6 The Shops and Commercial Establishments Acts**

The Act enacted by respective State Governments covers items of cleanliness, ventilation, lighting, precaution against fire and provision of first-aid box.

#### **1.4.7 The Explosives Act, 1884 (amended 1983)**

This act provides for regulating the manufacture, possession, use, sale, transport, import and export of Explosives. Also there are The Explosives Rules, 2008 (amended 2011), The Static and Mobile Pressure Vessels (unfired) Rules, 1981 & 2016, The Gas Cylinders Rules, 1981 & 2016 and The Ammonium Nitrate Rules, 2012.

#### **1.4.8 The Petroleum Act, 1934**

An Act to consolidate and amend the law relating to the import, transport, storage, production, refining and blending of petroleum. Also there are The Petroleum Rules, 2002 (amended 2011) and The Calcium Carbide Rules, 1987.

#### **1.4.9 The Inflammable Substances Act, 1952**

An Act to declare certain substances to be dangerously inflammable and to provide of the regulation of their import, transport, storage and production by applying there to The Petroleum Act and the rules there under and for certain matters connected with such regulation.

#### **1.4.10 The Insecticides Act, 1968 (amended 2000)**

An Act to regulate the import, manufacture, sale, transport, distribution and use of insecticides with a view to prevent risk to human beings or animals and for matters connected there with. Insecticide also means any substance specified in the schedule or such other substances (including fungicides and weedicides) or any such preparation containing one or more such substances as notified from time to time. There is also prohibition against sale or storage of insecticides in certain places (Section 13 Rule 10-C), leaflet to be contained in package, so as to inform the user (Rule 18), the use of protective clothing (Rule 39), respiratory devices (Rule 40), provision of antidotes and first aid medicines (Rule 41), aerial spraying operations (Rule 43) and disposal of used packages, surplus material and washing of insecticide (Rule 44). Cautionary symbols and word POISON has to be written on the label of the

packed product. It means every action right from start to finish of the insecticide business falls in purview of Insecticide Act, 1968 and the Rules there under.

#### **1.4.11 The Oil Fields (Regulation and Development) Act, 1948**

An Act to provide for the regulation of oil fields and for the development of mineral oil resources. Also there are The Petroleum and Natural Gas (Safety in Offshore Operations) Rules, 2009.

#### **1.4.12 The Petroleum and Natural Gas Regulation Board Act, 2006**

An Act to provide for the establishment of Petroleum and Natural Gas Regulatory Board to regulate the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas so as to protect the interests of consumers and entities. Plus The Petroleum and Natural Gas (Appointment of Consultants) Regulations, 2007. Plus The Petroleum and Natural Gas Regulatory Board (Technical Standards and Specifications including Safety Standards for City or Local Natural Gas Distribution Networks) Regulations, 2008. Plus The Petroleum and Natural Gas (Safety in Offshore Operations) Rules, 2008. Plus The Petroleum and Natural Gas (Code of Practice for Emergency Response and Disaster Management Plan) Regulations, 2010.

#### **1.4.13 The Environment (Protection) Act, 1986 (amended 1991)**

An Act to provide for the protection and improvement of environment and matters connected therewith. There are also various Rules which are listed below

- The Environment (Protection) Rules, 1986 (amended 2010)
- The Manufacture Storage and Import of Hazardous Chemicals Rules, 1989 (amended 2000)
- The Rules for Manufacture, Use, Import, Export and Storage of Hazardous Micro Organisms, Genetically Engineered Organisms or Cells, 1989 (amended 2010)
- The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 [*Suppressed the Hazardous Wastes (Management, Handling and Transboundry Movement) Rules, 2008*]
- The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996
- The Bio-Medical Waste Management Rules, 2016 [*Suppressed the Bio-Medical Waste (Management & Handling) Rules, 1998*]
- The Recycled Plastics Manufacture and Usage Rules, 1999 (amended 2003)
- The Noise Pollution (Regulation & Control) Rules, 2000 (amended 2010)
- The Ozone Depleting Substances (Regulation & Control) Rules, 2000 (amended 2007)
- The Solid Waste Management Rules, 2016 [*Suppressed the Municipal Solid Wastes (Management & Handling) Rules, 2000*]



- The Construction and Demolition Waste Management Rules, 2016 [*Suppressed the Municipal Solid Wastes (Management & Handling) Rules, 2000*]
- The Batteries (Management & Handling) Rules, 2001 (amended 2010)
- The Environmental Impact Assessment Notification, 2006(amended 2013)
- The Plastic Waste Management Rules, 2016 [*Suppressed the Plastic waste Management and Handling Rules, 2011*]
- The E-Waste (Management) Rules, 2016 w.e.f 1<sup>st</sup> October, 2016 [*Suppressed the E-waste Management and Handling Rules, 2011*]
- The Coastal Regulation Zone Notification, 2011.

#### **1.4.14 The Water (Preventions Control of Pollution) Act, (Amended 1988)**

An Act to provide for the prevention and control of water pollution and the maintaining or restoring of whole someness of water, for the establishment, with a view to carrying out the purposes aforesaid, of Boards for the prevention and control of water pollution, for conferring on and assigning to such Boards powers and functions relating thereto and for matters connected therewith. Plus The Water (Prevention & Control of Pollution) Rules, 1975.

#### **1.4.14 The Water (Prevention & Control of Pollution) Cess Act, 1977 (Amended 2003)**

An Act to provide for the levy and collection of a cess on water consumed by persons carrying on certain industries and by local authorities, with a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974 and the Water (Prevention & Control of Pollution) Cess Rules, 1978.

#### **1.4.15 The Air (Prevention & Control of Pollution) Act, 1981 (Amended 1987)**

An Act to provide for the prevention, control and abatement of air pollution, for the establishment , with a view to carrying out the aforesaid purposes, of Boards, for conferring on and assigning to such Boards powers and functions relating thereto and for matters connected therewith the Air (Preventions & Control of Pollution) Rules, 1982.

#### **1.4.16 The Public Liability Insurance Act, 1991 (Amended 1992)**

An Act to provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected therewith or incidental thereto.

#### **1.4.17 The National Green Tribunal Act, 2010**

An Act for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources and giving relief and compensation for damages to persons and property.

- The National Green Tribunal (Practice & Procedure) Rules, 2011

#### **1.4.18 The Motor Vehicles Act, 1988 (Amended 2013)**

An Act to consolidate and amend the law relating to motor vehicles. Plus The Central Motor Vehicles Rules, 1989(amended 2005) and Motor Vehicles Rules of respective States.

#### **1.4.19 The Atomic Energy Act, 1962 (Amended 1987)**

An Act to provide for the development, control and use of atomic energy for the welfare of the people of India and for other peaceful purposes and for matters connected therewith. There are also various Rules which are listed below:

- The Atomic Energy (Radiation Protection) Rules, 2004
- The Atomic Energy (Working of Mines, Minerals and handling of Prescribed Substances) Rules, 1984
- The Atomic Energy (Safe Disposal of Radioactive Wastes) Rules, 1987
- The Atomic Energy (Radiation Processing of Food and Allied Products) Rules, 2012
- The Atomic Energy (Factories) Rules, 1996

#### **1.4.20 The Electricity Act, 2003 (Amended 2007)**

An Act to consolidate the laws relating to generation, transmission, distribution, trading and use of electricity and generally for taking measures conducive to development of electricity industry, promoting competition therein, protecting interest of consumers and supply of electricity to all areas, rationalisation of electricity tariff, ensuring transparent policies regarding subsidies, promotion of efficient and environmentally benign policies, constitution of Central Electricity Authority, Regulatory Commissions and establishment of Appellate Tribunal and for matters connected therewith or incidental thereto. There are also certain regulations with this Act and they are The Central Electricity Authority (Measures Relating to Safety & Electricity Supply) Regulations, 2010. The Central Electricity Authority (Safety Requirements for Construction, Operation and Maintenance of Electric Plants and Electric Lines) Regulations, 2011

#### **1.4.21 The Energy Conservation Act, 2001 (amended 2010)**

An Act to provide for efficient use of energy and its conservation and for matters connected therewith or incidental thereto.

#### **1.4.22 The Disaster Management Act, 2005**

An Act to provide for effective management of disasters and for matters connected therewith or incidental thereto.

### **1.5 Compensation to Employees**

The Workmen's Compensation Act of 1923 is an old legislation, which was in 2009 amended to Employees' Compensation Act of 1923 to provide for the payment by

certain class of Employers to their employees compensation for injury by accident. This covers all Employees including Contract Workmen that meet with an Accident or are affected by Occupational Disease. The Act defines “**Disablement**” meaning any **loss of capacity to work or move** which may result in loss or reduction of earning capacity. Disability as defined in the Act may be Total {Section 2.1(g)}, Partial {Section 2.1(l)}, Temporary or Permanent. The Act specifies the compensation payable to the employee for the type of permanent disablement dependent on the salary and age of the employee. The Act also provides compensation to be paid to the dependents of the employee that meets with a fatal accident. The Act provides for each State Government to appoint a Commissioner to decide on any disputes on the amount of compensation payable by the employer to the employee.

## **1.6 Benefits to Workers and their Families to secure sickness, disablement and medical benefits -- The Employees’ State Insurance Act, 1948**

### **The Employee’s State Insurance Act, 1948**

The objective of the Act is to provide for certain benefits to employees in case of sickness, maternity and ‘employment injury’ and to make provision for certain other matters in relation thereto. It is applicable to all factories (including factories belonging to the Government) other than seasonal factories. However, the Act is not applicable to a factory or establishment belonging to or under the control of the Government whose employees are otherwise in receipt of benefits substantially similar or superior to the benefits provided under this Act.

The provisions of the Act enforced both by the Central and the state governments. In respect of establishments under the control of the Central Government or a railway administration or a major port or a mine or oil-field, the Act is enforced by the Central Government, and in all other cases, the State Government.

An insured person or (where such medical benefit is extended to his family) a member of his family whose condition requires medical treatment and attendance are entitled to receive medical benefit. Such medical benefit may be given either in the form of out-patient treatment and attendance in a hospital or dispensary, clinic or other institution or by visits to the home of the insured person or treatment as in-patient in a hospital or other institution. The cost of medical treatment is shared by the Corporation and the state government.

The Corporation can set up with the approval of the State Government establish and maintain in State such hospitals, dispensaries and other medical and surgical services as it may think fit for the benefit of insured persons and (where such medical benefit is extended to their families) their families. The Corporation may also enter into agreement with any local authority, private body or individual in regard to the

provision of medical treatment and attendance for insured persons and (where such medical benefit is extended to their families) their families, in any area and sharing the cost thereof.

The Corporation may also enter into agreement with any local authority, local body or private body for commissioning and running Employees' State Insurance hospitals through third party participation for providing medical treatment and attendance to insured persons and where such medical benefit has been extended to their families, to their families.

Long back in 1923, the Government enacted the Workmen's Compensation Act, providing some social security to the industrial workers. However the benefits under the Workmen's Compensation Act was, however limited to compensation for injury caused by accident and the compensation was to be borne by the employer. The Government came forward with The Employees' State Insurance Act, 1948 and this introduced a scheme of social insurance to the industrial workers. This Act applies, in the first instance to all factories other than seasonal factories. However the appropriate Government may extend the provisions of this Act or any of them to any other industrial, commercial or agricultural establishment.

The Act applies to every person employed directly or indirectly including contract workers in connection with the work of a factory or establishment and whose monthly wage is less than Rs 21,000/-. The employee contributes 1.75% of his / her monthly wage and the employer contributes 4.75% of the monthly wage of the employee to The Employees State Insurance Corporation. Under the Act the covered employee is eligible for Sickness Benefit, Accident Benefit, Disablement Benefit, Dependents Benefit, Maternity Benefit and Funeral Benefit. Under Section 73 of the Act termination of a person during period of receipt of sickness benefit is prohibited.

## **1.7 ILO Conventions Ratified**

India as one of the founding members of ILO and the conventions & Protocols ratified by India are as detailed below.

### **Conventions and 1 Protocol**

- Fundamental Conventions: **6 of 8**
- Governance Conventions (Priority): **3 of 4**
- Technical Conventions: **38 of 177**
- Out of **47** Conventions and **1** Protocol ratified by India, of which **42** are in force, **4** Conventions and **0** Protocol have been denounced; **2** have been ratified in 2017

The following Conventions related to Occupational Safety and Health are ratified by India.

**C032** -Protection against Accidents (Dockers) Convention (Revised), 1932 (No.32)

**C127** - Maximum Weight Convention, 1967 (No. 127)

**C136** - Benzene Convention, 1971 (No. 136)

**C174** - Prevention of Major Industrial Accidents Convention, 1993 (No. 174)

## **1.8 International Labour Standards on Occupational Safety and Health (OSH) standards**

The ILO has the following conventions relevant to OSH. India has referred to them as useful instruments to consolidate its OSH policy-legislative frameworks.

### **Fundamental principles of occupational safety and health**

- Occupational Safety and Health Convention, 1981 (C No. 155) and its Protocol of 2002. The convention provides for the adoption of a coherent national occupational safety and health policy, as well as action to be taken by Governments and within enterprises to promote occupational safety and health and to improve working conditions.
- Occupational Health Services Convention, 1985 (C No. 161). This convention provides for the establishment of enterprise-level occupational health services which are entrusted with essentially preventive functions.
- Promotional Framework for Occupational Safety and Health Convention, 2006 (C No. 187). This Convention aims at promoting a preventative safety and health culture and progressively achieving a safe and healthy working environment.
- Hygiene (Commerce and Offices) Convention, 1964 (C No. 120). This instrument has the objective of preserving the health and welfare of workers employed in trading establishments, and establishments, institutions and administrative services in which workers are mainly engaged in office work and other related services through elementary hygiene measures responding to the requirements of welfare at the workplace.
- Occupational Safety and Health (Dock Work) Convention, 1979 (C No. 152)
- Safety and Health in Construction Convention, 1988 (C No. 167) - The convention provides for detailed technical preventive and protective measures having due regard for the specific requirements of this sector.
- Safety and Health in Mines Convention, 1995 (C No. 176)
- Safety and Health in Agriculture Convention, 2001 (C No. 184) -

### **Protection against specific risks**

- Radiation Protection Convention, 1960 (C No. 115)
- Occupational Cancer Convention, 1974 (C No. 139)
- Working Environment (Air Pollution, Noise and Vibration) Convention, 1977 (C No. 148) -
- Asbestos Convention, 1986 (C No. 162) -
- Chemicals Convention, 1990 (C No. 170)

Out of these thirteen conventions India has ratified only one convention (i.e. a convention dealing with protection against a specific risk **i.e. C 115**), however there are specific legislations dealing with OSH which have been explained in the earlier paragraphs, so as to facilitate ensuring safety at the workplace.

## **2. Authority or Body Responsible for OSH**

### **2.1 National OSH Supervision and Administration**

The Ministry of Labour & Employment (MoL&E), Government of India and Labour Departments of the State Governments and Union Territories are responsible for Occupational Safety and Health of workers, as the subject of “**Welfare of Labour including conditions of work**” is a subject listed in the concurrent list of the constitution. Therefore, the Parliament and the Legislatures of the States can enact laws on this subject matter.

As most of the legislation on safety and health are Central Government legislations, the Ministry performs the important function of piloting the bills through Parliament after inter-ministerial consultations and consultations with the State Governments and with representative organizations of employers and employees.

The occupational safety and health is one of the subjects allotted to Ministry of Labour & Employment (MoL&E), under the Government of India, allocation of Business Rules.

To deal with the subject relating to OSH in the case of Factories, the same is implemented by the State Governments under the Chief Inspector of Factories. In case of Mining, the implementation is under the Directorate General of Mine Safety (DGMS). As for Port Sector (i.e. twelve major ports) the implementation is under the Directorate General of Factory Advisory Services (DGFASLI). A separate division on industrial safety and health exists in the MoL&E. The Industrial Safety and Health division of the Ministry discharges the overall functions relating to policy decisions and laying down guidelines for countrywide adoption in the above sectors.

The Ministry also carries out liaison with the International Labour Organisation (ILO) and other countries. The Ministry undertakes co-ordination at the national level by periodically convening the State Labour Ministers Conference and State Labour Secretaries Conference, in which policy matters and issues on uniformity in labour laws are discussed. Directorate General Factory Advice Service & Labour Institutes (DGFASLI) and Directorate General of Mine Safety (DGMS) assist the Ministry in the technical aspects of occupational safety and health in the above sectors.

Chief Inspector of Factories (CIFs)/ Directorate of Industrial Safety and Health (DISH) of respective State Governments/UTs are dealing with enforcement of the Factories Act, 1948 and the State Factories Rules framed there under for the factories registered under the said Act in the aspect of occupational safety and health in the manufacturing sector.

Director General Labour Welfare (DGLW) (Labour welfare organization) is dealing the matters concerning policy and legislation related to workers in the un organized sector and administration of welfare funds for specified categories of workers through nine regions headed by welfare commissioner who implement the welfare schemes made under the welfare funds. DGLW also deals with Rasthriya Swasthya Bima Yojana (RSBY).

DGLW enforces the various Labour laws and rules made there under in the central sphere including the Building and other Workers (Conditions of Service and Regulation of Employment) Act, 1996 for the workers working in the construction sector.

## **2.2 National Tripartite OSH Committee**

### **2.2.1 The Indian Labour Conference**

The Indian Labour Conference (ILC) is the apex level tripartite consultative committee in the Ministry of Labour & Employment to advise the Government on the issues concerning working class of the country. All the 12 Central Trade Union Organisations, Central Organisations of employers, all State Governments and Union Territories and Central Ministries/Departments concerned with the agenda items, are the members of the ILC.

The first meeting of the Indian Labour Conference (then called Tripartite National Labour Conference) was held in 1942 and so far a total of 46 Sessions have been held. The agenda of the ILC is finalised by the Standing Labour Committee which is again a tripartite body after detailed discussions.

The Conference of the 48<sup>th</sup> Session of the Standing Labour Committee (SLC) was held on 11 May 2017 under the Chairmanship of Shri Bandaru Dattatreya, the Minister of State (IC) for Labour & Employment. Shri Dattatreya informed the delegates that the welfare of the workers, including their health is very important and the Ministry has been working tirelessly in this direction through its own and also through its Organizations like Employees Provident Fund Organization and Employees State Insurance Corporation. Shri Dattatreya also stressed upon educating the workers on various initiatives/measures taken for their welfare, particularly the legislative measures.

OSH is part of various items which are taken up by the SLC for discussion at the ILC, hence there is no separate National Tripartite OSH Committee.

### **2.2.2 Tripartite Committee in Docks**

As per the provisions contained under Section 9 of the Dock Workers (Safety, Health and Welfare) Act, 1986, an Advisory Committee is to advice upon such matters arising out of the administration of the said Act and is constituted by Notification. As per the provision of the Act the Advisory Committee consist of an equal number of members representing.



- (i) the appropriate Government
- (ii) the dock workers, and
- (iii) the employers of dock workers and shipping companies

The Chairman of the Advisory Committee is the Chief Inspector of Dock Safety, DGFASLI. The tenure of each Advisory Committee is of three years.

The Advisory Committee meetings have played an important role and many decisions have resulted in the improvement of OSH of Dock Workers. Some of the important points discussed and decision taken during earlier meetings:

- a) Use of spreaders/twist locks for Container Handling/ Transportation
- b) Restructuring/effective functioning of Port Safety Committees.
- c) Establishment of Occupational Health Centers in ports
- d) Supply and use of PPEs
- e) Medical Examination of dock workers.
- f) Controlling of transportation accidents
- g) Framing of Safety Policy by Ports, etc.
- h) Port Trust Doctors to undergo AFIH Course conducted by DGFASLI.
- i) Amendment of the existing Dock Safety statutes.
- j) Providing effective dust control devices in the mechanical bulk material handling system.

The Committee also deliberate on issues like dust control measures, road safety aspects, upgrading the training facilities, providing canteen facilities to private workers etc. The thirteenth annual meeting was held in December 2016.

### **2.2.3 Tripartite Committee in Mines**

The Conference on Safety in Mines is a tripartite forum at the national level in which the employers' representatives, the trade unions' representatives, the Government represented by Ministry of Labour & Employment, DGMS, various administrative ministries/ departments and State Governments and associated institutions, professional bodies, service associations, etc. take part. They review the status of safety in mines and the adequacy of existing measures in a spirit of mutual cooperation. The conference also suggests measures for further improvement in safety, welfare and health of mine workers. The first Conference was held in the year 1958 and the eleventh conference was held on 4<sup>th</sup> & 5<sup>th</sup> July, 2013 at New Delhi during

which three major issues (i) Small Scale Mining, (ii) Safety, health & welfare of Contractual workers (iii) Surface & underground transportation machinery were deliberated in detail. A number of recommendations of these conferences have been given statutory backing and most of the others have been absorbed in management practices and policies. The conclusions and recommendations drawn during the conference have already been circulated to the mining industries for compliance.

### **2.3 Directorate General of Factory Advice Service & Labour Institutes (DGFASLI)**

The Directorate General of Factory Advice Service & Labour Institutes (DGFASLI), formerly known as Chief Advisor of Factories, was set up in 1945 in Delhi, with the objective of advising the Central and State Governments on administration of the Factories Act, and liaising with factories inspection services in the States. The office was subsequently shifted to Mumbai in 1956. DGFASLI is the technical arm of the Ministry of Labour & Employment (MOLE), Government of India on matters concerned with safety, health, productivity and working conditions in factories and ports. DGFASLI serves as the technical arm of the Ministry of Labour & Employment in the formulation of national policies and strategies relating to occupational safety and health (OSH).

The DGFASLI coordinates with the State Factory Inspectorates / Directorates for the enforcement of the provisions under the Factories Act, 1948. However, it is the enforcing agency to enforce the provisions under the Dock Workers (Safety, Health & Welfare) Act, 1986 and the Regulations framed there under in all major ports in India through Inspectorates of Dock Safety (IDS).

The DGFASLI organization comprises of Head Quarters and Central Labour Institute at Mumbai, Regional Labour Institute at Kanpur, Kolkata, Chennai and Faridabad. A new Regional Labour Institute is being set up in Shillong to cater to the specific needs of the north-eastern part of the country in the field of occupational safety and health as part of the Government of India's initiative to bring this part of the country into the mainstream.

There were some mile stone events that expanded the role and scope of activities of DGFASLI. These were

- (i) The Bhopal Gas tragedy took place in the year 1984 which led to a landmark amendment in the Factories Act, 1948 in the year 1987, by introducing the definition of "hazardous process" and insertion of a complete chapter on "provisions related to hazardous process industries". The Major Accident Hazards Control Advisory (MAHCA) Division was added to the CLI in 1987 as one of the outputs of the ILO project "Establishment and Initial Operation of Major Accident Hazards Control System". The project was executed by the DGFASLI in close collaboration

with Factory Inspectorates of the various States and Union Territories. Although the project was completed in December, 1990, the Division continues to provide important service for the control of major accident hazards in the country.

- (ii) Notification of the Dock Workers (Safety, Health and Welfare) Act, 1986 followed by notification of the Dock Workers (Safety, Health and Welfare) Regulations, 1990 and enforcement given to Director General, DGFASLI as ex-officio Chief Inspector of Dock Safety in the major ports of the country.
- (iii) In the year 1986, DGFASLI initiated the drafting of Building and other Construction workers (Regulation of Employment and Conditions of Service) Act, 1996 and the same was introduced and passed by the Parliament. The enforcement of the Act is being done by the office of the Chief Labour Commissioner.
- (iv) Also in 1987 CLI added the Major Accident Hazard Control Advisory (MAHCA) Division, as one of the outputs of the ILO project "Establishment and Initial Operation of Major Accident Hazard Control System". The project was executed by DGFASLI in close collaboration with the Chief Inspector of Factories/Directorate of Industrial Safety and Health (DISH) of various states and union territories. This project was completed in December 1990; however the Division continues to provide service for control of major accident hazards in the country.
- (v) In 1989 the "Manufacture, Storage, Handling & Import of Hazardous Chemical Rules" were notified and the enforcement given to the Inspectorate of Dock safety under DGFASLI.

## **2.4 Directorate General of Mines Safety(DGMS)**

Directorate General of Mines Safety, DGMS in short, is the Regulatory Agency under the Ministry of labour and employment, Government of India in matters pertaining to occupational safety, health and welfare of persons employed in mines (Coal, Metalliferous and oil-mines).

Under the Constitution of India, safety, welfare and health of workers employed in mines are the concern of the Central Government (Entry 55-Union List-Article 246). The objective is regulated by the Mines Act, 1952 and the Rules and Regulations framed there under. These are administered by the Directorate-General of Mines Safety (DGMS), under the Union Ministry of Labour & Employment. Apart from administering the Mines Act and the subordinate legislation there under, DGMS also administers a few other allied legislation, including the Indian Electricity Act.

DGMS carries out the mandates of the Mine Act at all mining and mineral processing operations in the India, regardless of size, number of employees, commodity mined, or method of extraction.

The organisation has its headquarters at Dhanbad (Jharkhand) and is headed by Director-General of Mines Safety. At the headquarter, the Director-General is assisted by specialist staff-officers in mining, electrical & mechanical, occupational health, law, survey, statistics, administration and accounts disciplines. The headquarters has also a technical library and S&T laboratories as a back-up support to the organisation.

The field organisation has a two-tier network of field offices. The entire country is divided into eight zones, each under the charge of a Deputy Director-General of Mines Safety. There are three to four Regional offices under each zonal office. Each Region is under the charge of a Director of Mines Safety. There are in all 29 such Regional Offices. Sub-regional offices have been set up in important areas of concentrated mining activities away from Regional office. There are three such sub-regional offices, each under the charge of a Deputy Director of Mines Safety. Each Zone, besides having inspecting officers of mining disciplines has officers in electrical & mechanical engineering and occupational health disciplines.

### **Role of DGMS**

1. Inspection of mines.
2. Investigation into:
  - a) Accidents
  - b) Dangerous occurrences – emergency response
  - c) Complaints & other matters
3.
  - a) Grant of statutory permission, exemptions & relaxations - pre-view of project reports & mining plans, approval of mine safety equipment, material & appliances
  - b) Interactions for development of safety equipment, material and safe work practices through workshop etc.
  - c) Development of Safety Legislation & Standards
  - d) Safety Information Dissemination.
4. Conduct of examinations for grant of competency certificates.
5. Safety promotion initiatives including:
  - (a) Organisation of Conference on Safety in Mines and National Safety Awards Safety Weeks & Campaigns.

(b) Promoting - Safety education and awareness programmes - Workers' participation in safety management - Workmen's inspector Safety committee Tripartite reviews.

## **2.5 Role of other relevant Ministries and other institutions in OSH**

There is a largeworkforce in the agricultural sector and also the informal sector (i.e. street vendors, domestic workers, home based workers) working both in the urban and rural environment. These workers have little awareness of workplace hazards, little or training in skills development, many a time living very close to work areas, extended work hours, exploitation, vastly illiterate with little or no formal education, no concept of occupational safety and health protection, poor welfare measures, lack of social security, no or inadequate health coverage, lack of implementation of Health & Safety legislation.

In quite many cases the employer – employee relationship is fuzzy and these workers do not fall within the ambit of the four main labour legislations dealing with occupational health and safety {i.e. The Factories Act, 1948, The Mines Act, 1952 and Mines Rules, 1955, The Dock Workers (Safety, Health and Welfare) Act, 1986 followed by notification of the Dock Workers (Safety, Health and Welfare) Regulations, 1990 and The Building & Other Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996} under the Ministry of Labour.

There is a Role for the Ministries under Agriculture, Rural Development, Urban Development , Environment and Forest, Health and Family Welfare, Shipping and Transport, Industries and Chemicals and Fertilizers to be set up to discuss and finalise the modalities by which occupational health and safety of the workers employed in the agriculture and unorganized sector could be addressed. The task force could suggest necessary changes to be brought out in the existing legislation or for the enactment of new or special legislation for the agriculture and unorganized sector.

### **3. Mechanisms for Ensuring Compliance Including the System of Inspection**

#### **3.1 National and State level OSH Supervision and Inspection Systems**

At the National Level OSH advisory service is undertaken by Directorate General of Factory Advice Service & Labour Institutes (DGFASLI), under Ministry of Labour & Employment, Government of India with reference to the factories & ports in the country. The DGFASLI is an attached office of the Ministry of Labour & Employment, Government of India and serves as a technical arm to assist the Ministry in formulating national policies on occupational safety and health in factories and docks. It also advises factories on various problems concerning safety, health, efficiency and well-being of the persons at work places. OSH supervision and inspection of the twelve major ports the same is carried out by Directorate General of Factory Advice Service & Labour Institutes (DGFASLI).

At the state level the Directorate of Industrial Safety and Health / Chief Inspector of Factories in each of the States in India is the enforcement agency for OSH safety and inspection systems in the factories. The state Governments is presently adopting random inspection with risk based inspection systems for non-hazardous industries. Priority Inspection in MAH (Major Accident Hazard) factories is undertaken by a team of Officers carrying out inspection at hazardous/dangerous operations in factories.

Similarly Director General of Mine Safety (DGMS) which is under Ministry of Labour & Employment, Government of India is at the National Level involved in advisory services for mines. OSH supervision and inspection of the mines in India the same is carried out by Director General of Mine Safety (DGMS).

As for The Building & Construction activity each state Government is to have its own inspectors under The Building & Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996, to carry out OSH supervision and inspection. About 25.71 million building and other construction workers are estimated in India as per estimates of National Sample Survey (2004-2005). The building and other construction workers are one of the most vulnerable segments of the unorganised sector workers in India. Their work is of temporary nature, the relationship between employer and employee is temporary, working hours are uncertain. The building and other construction works are characterized by inherent risk to the life and limb of workers. The construction workers are basically unskilled, migrant, socially backward, uneducated with low bargaining power. Enforcement part of the Act is implemented by CLC in the Central sphere and State Government in the state sphere. Welfare part is implemented by the state Governments. At National Level, DGLW has the responsibility of enforcing the BOCW Act, 1996.

As for the Shops and Commercial Establishments they are covered under “The Shops and Commercial Establishments Acts” enacted by respective State Governments Acts and the enforcement agencies are the local municipal authorities, who once a while visit to inspect OSH compliances.

Actual inspection practices are modified in each state-level to meet their local requirements. For example, in Gujarat Joint Inspection is being done randomly as per Ease of Doing Business and the inspection process is computerized and randomized.

States like Maharashtra, Madhya Pradesh and others are also adopting self certification system and in line with ease of doing business system introduced recently. If serious violations are noticed during inspection, then prosecution are also launched against the erring management under section 92 of the Factories Act, 1948.

Also if there are complaints filed by the workers or unions in any enterprise then the relevant enforcement agency investigates the same and takes appropriate action.

### **3.2 Number of Inspectors, Inspection Visits and Results**

The number of sanctioned posts of inspectors and the strength presently available in each state for factories for the years from 2011 to 2015 are given in Annexure II.

The details of State-wise Specialist Inspectors of Factories, factories inspected, prosecutions launched are given in Annexure I. Details with reference to Ports for the years from 2011 to 2015 are given in Annexure II. (Source: Standard Reference Notes - DGFASLI)

The discipline-wise strength of the inspecting officers of DGMS (Source: Standard Reference Note of DGMS) are given in Annexure III

The number of inspections and enquiries conducted by DGMS officers during the year 2011 to 2015 are given in Annexure III (Source: Standard Reference of DGMS)

Details of prosecution cases instituted by DGMS and their status during the year 2011 to 2015 are given in Annexure III (Source: Standard Reference of DGMS)

## **4. Arrangements to promote, at the level of the undertaking, cooperation between management, workers and their representatives**

### **4.1 Number of OSH committees by the size of the undertaking**

The safety committees in each of the undertakings are constituted as per The Factories Act, 1948 and the rules framed by each of state Governments under the Act. The Act lays down that, the occupier shall, in every factory where a hazardous process takes place, or where hazardous substances are used or handled, set up a Safety Committee consisting of equal number of representatives of workers and management to promote co-operation between the workers and management in maintaining proper safety and health at work and to review periodically the measures taken in that behalf. Most state Government has extended this provision in their Rules to every factory where in 250 workers or more are ordinary employed. Number of OSH committees as per Factories Act 1947 during the year 2011 to 2015 is given in Annexure IV.

As per The Dock Workers (Safety, Health and Welfare) Act, 1986 each of the twelve ports located at Mumbai, JNPT, Kandla, Morugao, Kokota, Paradip, Vishakhapatnam, Chennai, Ennore, New Mangalore and Tuticorin have safety Committees consisting of workers and management.

In Mines much greater strides in safety can be achieved by participation of workers in safety programme, the twin institutions of 'Safety Committee & 'Workmen's Inspector' have been conceived and even given the statutory backing. DGMS is also associated with training of Workmen's Inspectors to make them effective in discharge of their duties which involves inspection and guidance. In coal mines almost all the eligible mines had a Workmen's Inspector and a Safety Committee. The status of appointment of Workmen's Inspector and Safety Committees during the year 2011 to 2015 is given in Annexure V.

### **4.2 Other arrangements in OSH at the level of the undertaking**

Other arrangements in OSH at the level of undertaking, varies from one undertaking to another. There are undertakings which constitute Contract Workers Safety Committees; OSH Forums promoting OSH attitude through motivational techniques like awards; Training programmes on Safety for all employees; Undertaking regular safety audits; Appointing safety champions on rotational basis on the shop floor.

The Hazardous Factories under The Factories Act are required to have an On- Site Emergency Plan and also the Rules of the State Governments under the Factories Act,



1947 lay down criteria for factories to have a Health and Safety Policy. State wise details are given for the years 2011 to 2015 in Annexure VI.

Under Regulation 112 of the Dock Workers (Safety, Health and Welfare) Regulations, 1990, every port shall have approved emergency action plan acceptable to the Chief Inspector to handle the emergency like:

- fires and explosions;
- collapse of lifting appliances, buildings, sheds, etc;
- gas leakages and spillage of dangerous goods;
- drowning of dock workers, sinking of vessels, retrieval of transport equipment from dock basins; and,
- floods, storms and other natural calamities.

Most of the mining companies in the organised sector have enunciated company's safety policy and set up Internal Safety Organisation (ISO) for monitoring, advising on and aiding in the implementation of safety measures in mines as per Company's policies and guidelines in keeping with the statutory provisions. ISOs are headed by a senior officer of the Executive Director/Chief General Manager level in the coal companies and are multi-disciplinary in character.

## **5. National Tripartite Advisory Body Addressing Issues**

### **5.1 Composition and Mechanism**

Whenever any amendments to Labour Laws are carried out National Tripartite Consultations take place. Though there is no permanent National Tripartite advisory body addressing OSH issues.

#### **5.1.1 Indian Labour Conference**

The Indian Labour Conference (ILC) is the apex level tripartite consultative committee in the Ministry of Labour & Employment to advise the Government on the issues concerning workers and labour of the country. All the 12 Central Trade Union Organisations, Central Organisations of employers, all State Governments and Union Territories and Central Ministries/Departments concerned with the agenda items, are the members of the ILC.

The agenda of The Indian Labour Conference (ILC) is finalised by the Standing Labour Committee which is again a tripartite body after detailed discussions.

#### **5.1.2 Advisory Committee on Docks**

As per the provisions contained under Section 9 of the Dock Workers (Safety, Health and Welfare) Act, 1986, an Advisory Committee is to advice upon such matters arising out of the administration of the said Act and is constituted by Notification. As per the provision of the Act the Advisory Committee consist of an equal number of members representing.

1. The appropriate Government units
2. The dock workers, and
3. The employers of dock workers and shipping companies

The Chairman of the Advisory Committee is the Chief Inspector of Dock Safety, DGFASLI. The tenure of each Advisory Committee is of three years.

The Advisory Committee meetings have played an important role and many decisions have resulted in the improvement of OSH of Dock Workers. Some of the important points discussed and decision taken during earlier meetings:

- 1) Use of spreaders/twist locks for Container Handling/ Transportation.
- 2) Restructuring/effective functioning of Port Safety Committees.
- 3) Establishment of Occupational Health Centres in ports.
- 4) Supply and use of PPEs.

- 5) Medical Examination of dock workers.
- 6) Controlling of transportation accidents
- 7) Framing of Safety Policy by Ports, etc.
- 8) Port Trust Doctors to undergo AFIH Course conducted by DGFASLI.
- 9) Amendment of the existing Dock Safety statutes.
- 10) Providing effective dust control devices in the mechanical bulk material handling system.

The Committee also deliberate on issues like dust control measures, road safety aspects, upgrading the training facilities, providing canteen facilities to private workers etc. The thirteenth annual meeting was held in Dec 2016.

### **5.1.3 Conference on Safety in Mines**

The Conference on Safety in Mines is a tripartite forum at the national level in which the employers' representatives, the trade unions' representatives, the Government represented by Ministry of Labour & Employment, DGMS, various administrative ministries/ departments and State Governments and associated institutions, professional bodies, service associations, etc. take part. They review the status of safety in mines and the adequacy of existing measures in a spirit of mutual cooperation. The conference also suggests measures for further improvement in safety, welfare and health of mine workers. The first Conference was held in the year 1958 and the eleventh conference was held on 4<sup>th</sup> & 5<sup>th</sup> July, 2013 at New Delhi during which three major issues (i) Small Scale Mining, (ii) Safety, health & welfare of Contractual workers & (iii) Surface & underground transportation machinery were deliberated in detail. A number of recommendations of these conferences have been given statutory backing and most of the others have been absorbed in management practices and policies. The conclusions and recommendations drawn during the conference have already been circulated to the mining industries for compliance.

## **5.2 Recent Discussion Items and Results**

The Conference of the 48<sup>th</sup> Session of the Standing Labour Committee (SLC) was held on 11 May 2017 under the Chairmanship of Shri Bandaru Dattatreya, the Minister of State (IC) for Labour & Employment. Shri Dattatreya informed the delegates that the welfare of the workers, including their health is very important and the Ministry has been working tirelessly in this direction through its own and also through its Organizations like Employees Provident Fund Organization and Employees State Insurance Corporation. Shri Dattatreya also stressed upon educating the workers on various initiatives/measures taken for their welfare, particularly the legislative measures.

## **6. Information and Advisory services on OSH**

### **6.1 Websites and other means to disseminate OSH information**

The Ministry of Labour & Employment of Government of India and the Labour Ministries of each of the State Government have a web site. These websites give information on various items including OSH information. The website of The Ministry of Labour & Employment of Government of India is (<http://labour.gov.in>).

Also the Directorate of Industrial Safety and Health and Factory Inspectorates of various State Governments have web sites and their contact details are given in Annexure VII.

The Directorate General of Factory Advice Service & Labour Institutes (DGFASLI) has a web site ([www.dgfasli.nic.in](http://www.dgfasli.nic.in)) which disseminates OSH information. DGFASLI is the technical arm of the Ministry of Labour & Employment (MOLE), Government of India on matters concerned with safety, health, productivity and working conditions in factories and ports.

National Safety Council (NSC) a Non Governmental Organisation also offers limited occupational safety services ([www.nsc.org.in](http://www.nsc.org.in)) and National Institute of Occupational Health under the Department of Health Research, Ministry of Health and Family Welfare, Govt. of India offers services in the field of occupational health on national basis. (<http://www.nioh.org>)

### **6.2 OSH advisory or consultancy services provided**

The Labour department of State Governments do not enter in consultancy activity, at the same time the factory inspectorate at times do give OSH advise to factories at times during inspection or upon enquiry. Certain state Governments like Karnataka have constituted "Karnataka State Safety Institute" through this institute, they have developed safety handbooks, manuals, pamphlets, banners and posters which are published and provided to the industries and public.

The Directorate General of Factory Advice Service & Labour Institutes (DGFASLI) carries out consultancy service on OSH. Details of unit level consultancy study and audit carried out by DGFASLI during the year 2011 to 2015 is given in Annexure VIII.

The National Safety Council (NSC) an apex, not-for-profit, self-financed, autonomous society with tripartite membership set up by the Ministry of Labour in 1966 operating with 17 Chapters in India conducts a variety of consultancy assignments such as training, research, risk assessment, or work environment measurements for different

industry sectors, covering petrochemicals, chemical, refineries, cement, power, fertilizer, insecticide, pharmaceuticals, engineering, paper, construction, hotel, hospital, co-operative society buildings, offices etc. Every year more than 120 such assignments are carried out by them. These include,

- Safety audits (General safety audits, Fire safety audits, Electrical safety audits, Construction sites safety audits)
- Risk assessment and analysis
- HAZOP studies
- Safety awareness surveys
- On-site Emergency plans preparation & mock drills
- Preparation of Safety Reports / Safety manuals

The National Institute of Occupational Health (NIOH) which is situated at Ahmedabad in Gujarat conducts research on occupational and environmental health to provide a safe, healthy and comfortable work environment and living, through multidisciplinary approach viz. education, service and related activities. NIOH has two Regional Centres at Kolkata and Bangalore to cater to the need of Eastern and Southern parts of the country. NIOH is a declared WHO Collaborating Centre for Occupational Health in South-East Asia region. Some of the research studies carried out by NIOH are (i) Identification of carcinogen-haemoglobin adduct in benzidine exposed workers; (ii) Assessment of Work Environment and Health Status of Employees of Southern Iron and Steel Company Limited, Mecheri, Tamil Nadu (Siscol); (iii) Health Surveillance of Workers Exposed to Chromium in a Chemical Industry; (iv) Interaction Effects of Noise, Illumination and Time of Day on Human Work Performance.

## 7. Provision of OSH Training

### 7.1 List of National and State Level OSH Training System

#### 7.1.1 DGFASLI

DGFASLI through Central Labour Institute & Regional Labour Institute conducts both short term and long term OSH training programmes on various topics .The Long Duration Training programmes include Professional Programmes and Specialised Training programmes. The details of Long Duration Training Programmes conducted during the year 2015 are given in table below

- **Professional Programmes:** To fulfil the need of qualified Safety Officers, and Factory Medical Officers in the industry, DGFASLI organisation conducts one year “Advance Diploma in Industrial Safety” (ADIS) Course and three months “Associate Fellow of Industrial Health” (AFIH) Certificate Course respectively. In order to meet the demands of supervisors competent to handle and supervise hazardous processes in industries, a “One Month Certificate Course in Industrial Safety & Health” was started at Central Labour Institute Mumbai as well as Regional Labour Institute Kolkata, Kanpur and Chennai. During the year 2015, a total of 10 professional programmes were conducted by DGFASLI and a total of 305 participants from 235 organisations benefitted from these programmes.
- **Specialised Training Programmes** are conducted for identified target groups such as Inspectors of Factories Senior Managers, Safety Officers, Factory Medical Officers, Supervisors, Trade Union Officials and Safety Committee members from Industry. Basic course for inspectors of factories who are freshly recruited is conducted to impart technical knowledge and skills in the field of safety and health. In view of the need for inspection of specific industries and Major Accident Hazards units, specialised courses are also conducted for senior inspectors. Some of the programmes are exclusively conducted for the union-leaders where joint participation of management personnel and union representatives from industries are the special features of some programmes. During the year 2015, a total of 56 specialised training programmes were conducted by DGFASLI and a total of 940 participants from 438 organisations benefitted from these programmes. Long Duration Training Programmes conducted by DGFASLI during the year 2011 to 2015 by DGFASLI is given in Annexure IX.

### **7.1.2 DGMS**

DGMS conduct Examinations and Award of Statutory certificates of Competency in Mining. Mining is a war against unpredictable forces of nature and since conditions of workings keep changing with time, the person at the spot has to take instantaneous decisions in respect of the work being performed, consistent with safety. Thus practical and on the spot decision of the front-line supervisor and managerial executive is of paramount importance to prevent loss of life and property. To examine the competency of persons eligible for manning such posts and to grant certificate of competency, two Boards of Mining Examination, one for Coal mines and the other for Metalliferous mines, function under the Chairmanship of the Director-General of Mines Safety. Competency examinations are different from university examinations. In these examinations stress is laid on practical aspects of managing/supervising a mine/district apart from theoretical knowledge. In the case of Manager's, Assistant Manager's, Surveyor's and Overman's/Foreman's Certificates, the competency examination consists of a written part and an oral part. In the year 2015, Computer based Manager's (First and Second Class) examination under Coal Mines Regulations 1957 was introduced. The candidates have to secure not less than 50% marks in written (computer based) and then not less than 30% marks in oral with overall percentage of 50 or above (computer based and oral combined together) to be successful. For Manager's examination under Metalliferous Mines Regulations 1961, henceforth similar is the requirement for qualifying in the examinations. For Field candidates i.e. persons not holding Degree in Mining Engineering or Diploma in Mining the candidates have to appear in five subjects viz. Mine Management, Legislation & General Safety, Winning and Working, Ventilation, Mining machinery and Mine Surveying. Depending on the qualification and experience of the candidates, exemptions from appearing in some papers/subjects are granted. For Surveyor's and Overman's/Foreman's certificates, candidates obtaining at least 40% mark in written examination in a subject is then called for the oral examination. Candidates obtaining at least 40% in orals and at least 50% in aggregate i.e. written and oral examinations are declared successful. Before a candidate is allowed to appear in an examination his application is scrutinized for valid first aid certificate, gas-testing certificate (wherever required), other statutory certificate, practical experience, character certificate, medical certificate and basic qualification certificate.

In case of junior examinations i.e. sirdar's, shotfirer's, mate's, blaster's etc. only oral examinations are held. A candidate has to secure at least 50% marks with different examiners to be declared successful. Details of examinations conducted by DGMS during the year 2011 to 2016 are given in Annexure X.

### **7.1.3 National Safety Council**

National Safety Council (NSC) a tri partite not-for-profit, autonomous society set up by the Ministry of Labour in 1966 for generating a voluntary movement on Safety and Health at national level. NSC organizes different types of OSH training programmes as given below.

- National Level Training Programmes
- Inplant/Unit level training programmes
- E-learning training courses
- Special long duration training programmes
- Collaborative training programmes

#### **7.1.4 Other Institutes**

In the state of Karnataka with the support and co-ordination with Department of Public Health, Manipal University Collage of Public Health, The Ohio State University, USA, National Institute of Occupational Health Center (Southern) Bangalore has been started for OSH training.

Also National Institute of Occupational & Health (NIOSH) supports academic degree programs and research training opportunities in the core areas of industrial hygiene, occupational health nursing, occupational medicine, and occupational safety. It was established by cooperative agreement to conduct research, education, and prevention projects to address agricultural health and safety problems. In addition, NIOSH supports a number of short-term training programs for professionals. As part of continuing education they have established

- B-Reader Training (chest radiography)
- Education and Training in Mining
- Emergency Responder Training Program
- Spirometry Training Courses
- Workplace Violence Prevention for Nurses Course

In Gujarat National Disaster Management Authority, Reliance Industries Ltd., Gujarat State Disaster Management Authority, Gujarat Institute of Disaster Management and total 51 other training institute recognized by Director Industrial Safety and Health under section 111(A) of the Factories Act, 1948 conducts OSH training.

Also Mahatma Gandhi Labour Institute in Ahmadabad conducts training programmes in OSH including post Diploma in Industrial Safety, and post Diploma in Industrial Environmental Technology and Management.

National Institute of Industrial Engineering (NITIE), Mumbai conducts a Post Graduate Diploma in Industrial Safety & Environment (PGDISEM). This is a is a unique multi-disciplinary management program, sustainability-focussed programme with emphasis on Environment, Health & Safety along with Operations and General Management, PGDISEM is a course aligned to industry's needs. It equips the students with the necessary expertise to manage industrial safety and environmental problems, thereby effectively paving the way for cleaner and safer industrial practices.



## **8. Occupational Health and Industrial hygiene Services**

### **8.1 Mechanisms**

The department officers of the factory inspectorate in each of the states are provided with certain equipments for measuring light, sound, and other work environment elements in the factories. In certain states like Gujarat, Karnataka, Kerala the factory inspectorate has a fully equipped Occupational Health & Research Centre (OHRC) and Industrial Hygiene Laboratory through which occupational health wing can conduct occupational disease detection cum Industrial Hygiene survey in different types of manufacturing processes, to find out the occupational diseases and prevent hazards responsible for the disease through industrial hygiene survey/studies conducted in those areas.

Also each of the factories is required to medically examine the employees working with them and maintains a record that they are medically fit to work. The Factory management by and large has their own occupational health centre with full time or part time medical officer, paramedical staff, ambulance room depending upon the nature and the size of industry. The factory management at times also has a tie up with nearby hospital / laboratory for periodical medical examination. Also each of the factories has to provide and maintain first – aid boxes or cupboard of not less than one for every one hundred and fifty workers employed in the factory.

Those workers who are working in hazardous operations have to be medically examined before any such worker is assigned to a job involving the handling of, or working, with a hazardous substance. The concerned worker has to be medically examined every year and their medical record is to be maintained by the employer even after the employee has ceased to be in employment.

### **8.2 List of occupational health service providers and their service contents**

#### **8.2.1 National Level Health Service Providers**

##### **DGFASLI**

The DGFASLI advises factories on various problems concerning safety, health, efficiency and well - being of the persons at work places throughout the country. The Industrial Hygiene Division located at 5 institutes is concerned with the improvement of industrial work environment and comprises of Industrial Hygiene Laboratory (IHL),

Respiratory Equipment Testing Laboratory (RETL) and Non-Respiratory Equipment Testing Laboratory (NRETL).

This Division undertakes various studies/surveys, national projects and training courses to protect the health of industrial workers through identification, evaluation and control of chemical hazards and advises the management on ways to meet the requirements prescribed in the Second Schedule (under Section 41F) to the Factories Act, 1948.

Non Respiratory PPE testing laboratory (NRTL) located at CLI, Mumbai carries out testing of non-respiratory personal protective equipment such as Safety Helmets, eye protectors, ear protectors, PVC/leather/rubber hand gloves, safety belt & full body harness, safety shoes, PVC/leather suit/clothing/apron etc.

The Personal Protective Equipment are tested at CLI, Mumbai as per the specification set by the Bureau of Indian Standards (BIS). Based on the test reports, technical advice and guidance on quality improvement are provided to entrepreneurs and manufacturers. User industries are also advised on Proper Selection, use, care and maintenance of various personal Protective equipments.

The activities of the Industrial Medicine Division are teaching, training, carrying out occupational health audits, consultancy studies and national research studies/surveys in the field of occupational and environmental health. Industrial Medicine Division conducts occupational health studies, surveys and investigation of toxic exposures in various industries such as chemical, engineering, manufacturing, ship-recycling, construction, small scale industries and ports to assess the prevalence of occupational diseases and suggests appropriate preventive & control measures.

The division conducts Post Graduate Certificate Course in Occupational Health (Associate Fellow of Industrial Health – AFIH) of 3 month's duration for medical doctors (M.B.B.S.) which is a statutory requirement for appointment of Factory Medical Officer under the Factories Act 1948, Building & Other Construction Workers (Regulation of Employment and working conditions) Act 1996 and Dockworkers (Safety, Health & Welfare) Act 1986. The Industrial Medicine Division grants recognition to other institutes in India for conducting AFIH Course.

Various other training programmes on occupational health and environmental medicine are conducted for medical doctors, occupational health nurses and paramedical professionals. The Division also conducts seminars, research projects, and workshops in collaboration with national and international agencies such as International Labour Organisation, World Health Organisation etc.

The division has a state-of-art laboratory facility known as National Referral Diagnostic Centre to diagnose occupational diseases. The investigations carried out

are Pulmonary Function Test, Audiometry, and Visual acuity test as per job specifications and bio-chemical analysis.

### **National Institute of Occupational Health (NIOH), Ahmedabad**

National Institute of Occupational Health (NIOH), Ahmedabad is one of the prime institutes of the Indian Council of Medical Research (ICMR) established in 1966 at Ahmedabad. To cater local needs of the Southern and Eastern regions, the Institute also established two Regional Occupational Health Centres (ROHC) at Bangalore (1977) and Kolkata (1980). The Institute has been established with the following objectives: To promote intensive research to evaluate environmental stresses/factors at the workplace; To promote the highest quality of occupational health through fundamental and applied research; To develop control technologies and health programs through basic and fundamental research and to generate human resources in the field. .

### **All India Institute of Hygiene & Public Health**

All India Institute of Hygiene & Public Health, established in 1932 in Kolkata has been a Pioneer Institute of its kind dedicated to teaching, training, and research in various disciplines of Public Health and allied sciences to ensure capacity building in the area of Public Health. The teaching, training, and research at All India Institute of Hygiene & Public Health, have the unique support of its field laboratories, namely, Urban Health Center, Chetla and Rural Health Unit & Training Center, Singur. The wider canvas available to the Institute has been signified not only by its field laboratories, but also by the diverse disciplines such as Biochemistry and Nutrition, Epidemiology, Health Promotion and Education, Maternal and Child Health, Microbiology, Occupational Health, Public Health Administration, Public Health Nursing, Environmental Sanitation and Sanitary Engineering, Preventive and Social Medicine, Behavioural Sciences, and Statistics operating here. The achievements and contributions of the Institute have been commensurate with the prime status attached to the Institute by its founders. The list of regular courses offered by the Institute indicates that the Institute has been following a holistic approach to the issue of Public Health. The Institute has been conducting a number of Short Courses / Training Programmes for different categories and groups of Health Force on a regular basis in coordination with State Governments/ Central Ministries/ International agencies / etc.

### **Indian Association of Occupational Health (IAOH)**

Indian Association of Occupational Health (IAOH), in the steel city of Jamshedpur, three visionaries of industrial medicine as it was known then nurtured an idea of establishing a National Scientific Forum where problems related to Industrial Medicine could be discussed. The objectives of the society are described as:

- Stimulation of enquiry and research into causes, treatment and prevention of occupational diseases.

- Guidance to industry with regards to problems of occupational medicine and hygiene, on modern scientific principles.
- To secure effective and complete organization of medical officers in the industry
- To maintain liaison with National and International Organizations interested in occupational health problems.

The society, not been aimed as an exclusive origination of physicians working in industry, included safety engineers, personnel and welfare officers, occupational nurses and ESIS panel doctors. As a matter of fact, it was meant for all persons connected with promotion and maintenance of health and safety of workers engaged in all types of industries, railways, armed forces and other government and public departments. Further, the industrial establishments were also invited to be institutional members.

### **8.2.2 State Level Health Service Providers**

In most states there are functional Industrial Hygiene Laboratories which assist the factory inspectorate of the state.

In the state of West Bengal , under the Employees State Insurance Scheme , the Government has set up in 2013 an “Institute of Pain Management” to treat persons suffering from pain because of the postures that they have to undertake while carrying out manual work involving lifting, pushing and pulling activity. Low back pain patients are predominantly from Jute mills and we have approximately 2.5 million people in India that are working in activities related to Jute.

In the state of Gujarat, there is Indian Institute of Public Health. This is the first and only Public Health University in India, established by legislative act of Gujarat assembly. It has an International Research Collaboration with The Karolinska Institute, Sweden, Aberdeen University, UK, NRDC, USA, Boston University, Columbia University et al. The major activities are (i) Full time degree, diploma and certificate courses in Public Health Management –MPH, MHA and PGDPHM ;(ii) Short term courses, Distance Learning courses, Targeted & Customized training programs and (ii) National Research collaboration -NRHM/ Ministry of Health and Family Welfare, Medical Council of India, CSIR, NABARD, NRDC, SEWA and others

Indian Institute of Toxicology Research (IITR), Lucknow, is involved in the field of Toxicology and its main campus situated in Lucknow city. It is one of the constituent laboratories of Council of Scientific & Industrial Research (CSIR), which was established in 1965 with the motto of "Safety to Environment & Health and Service to Industry". The institute is committed towards research in Fundamental and Applied Toxicology. Major thrust areas include environmental toxicology, ground and surface water

pollution, safety assessment of food & additives, toxicity evaluation of substances for human use, microbial contaminations, bioremediation, hazard identification and toxicogenomics etc.

Central Institute of Mining and Fuel Research (CIMFR) Dhanbad, is a constituent laboratory of CSIR, aimed to provide R&D inputs for the entire coal energy chain from mining to consumption through integration of the core competencies of the two (CFRI & CMRI) premier Coal institution of the country.

In Puducherry, Jawaharlal Institute of Postgraduate Medical Education & Research (JIPMER), Puducherry Government Medical College, ESI Hospital and six other private hospitals provide occupational health services to the workers employed in the factories. In Karnataka, the following organisation and institutes provide occupational health services to the workers.

- Regional Occupational Health Centre, Bengaluru
- National Safety Council, Karnataka Chapter, Bengaluru
- Bellary Koppal Regional Industrial Safety Council, Bellary
- Confederation of Indian Industries, Bengaluru
- St. Jhon Ambulance Service, Bengaluru.

In Telangana, Occupational health service provided by the following organisations:

- Indian Institute of Chemical Technology
- Environment Protection Training and Research Institute
- Vimta Laboratories
- Swan environmental agencies
- Dr. Rane Medial Centre, Mumbai.

## 9. Researches in OSH

### 9.1 Main research items and projects in OSH research and which institutions implement these.

#### 9.1.1 National Level Research Activities

##### DGFASLI

**National Studies and Surveys** are undertaken by DGFASLI, in its efforts towards helping the Central Government to ascertain the status of working conditions, safety and health in factories and docks, and to formulate the appropriate standards for inclusion in statutes. **State level Studies and Surveys** are undertaken in the State in certain priority areas to ascertain status of Safety Health and Environment at work place.

Some of the Studies and Surveys undertaken by DGFASLI in last five years are as follows.

- ILO Project on “Elimination of Silicosis
- Improvement in Working Conditions and Higher Productivity at Work Place
- Study of Impact of Glass Wool in Ship Recycling Activities
- Study on OSH in a two wheeler Automobile Industry by RLI, Faridabad
- A study of Hygiene and Environmental factors
- A study of Psycho-social and Ergonomic factors

National Institute of Occupational Health (NIOH), Ahmedabad, has carried out the following research studies:-

- Silicosis Studies in mines, ceramics, potteries, foundries, stone crushing, agate grinding, slate pencil industry etc.,

#### 9.1.2 State Level Research Activities

In the State of West Bengal under the Employees State Insurance Scheme’s “Institute of Pain Management” to treat persons suffering from pain has carried out the following studies.

##### 2013-14

- Effectiveness of trigger point injection on myofascial pain syndrome, assessed by pain disability score.
- Post-operative pain relief an appraisal of the present practice.
- Efficacy of stellate ganglion blockade for various neuropathic conditions under fluoroscopic guidance.

### **2014-15**

- A comparative study of efficacy of single dose of I.A INJ hyaluronic acid & three sitting of I.A dextroprolo therapy in grade I grade II & early grade III groups of OA Knee after completion of three months.
- A study of effects of single dose of caudal epidural steroid injection in patients with chief complaint of low back pain with leg pain after three weeks.

### **2015-16**

- Comparative study of intra articular high molecular hyaluronic acid & intra articular & particular dextrose prolotherapy in mild to moderate knee osteoarthritis.
- A comparative study of celiac plexus block with steroid versus splanchnic nerve radio-frequency ablation for chronic upper abdominal pain relief.
- Human gait analysis to assess the effectiveness of transforaminal epidural steroid injection in industrial workers suffering from low back pain due to disc herniation.
- Efficacy of motor imagery through mirror therapy in complex regional pain syndrome.
- Intra-articular hyaluronic acid injection versus radio frequency ablation of genicular nerve for the pain relief of grade I to grade III knee osteoarthritis.
- A comparative study of stellate ganglion block under fluoroscope & ultrasound guidance in patients with complex regional pain syndrome (CRPS): A pilot study.
- Association between chronic non-cancer pain with anxiety & depression among manual workers.
- A comparative study on assessment of chronic low back pain patient treated with gabapentin & amitriptyline.

### **2016-2017 (On Going Research Activities)**

- Effectiveness of suprascapular nerve radio-frequency ablation in chronic shoulder pain.
- A comparative study of epidural steroid with local anaesthetic and only local anaesthetic injection in management of chronic low back pain due to herniated disc: A prospective randomized controlled trial.
- Comparison of kinetic gait analysis in healthy adults and industrial workers presenting with prolapsed intervertebral disc with L5 or S1 radiculopathy: an analytical study.
- Incidence of anxiety and depression in fibromyalgia patients directed by HAD (Hospital Anxiety and Depression) score in OPD patients in a tertiary hospital: an observational analytical study.

- Role of Piriformis injection with local anaesthetic plus steroid for management of piriformis syndrome.
- Efficacy and durability of dextrose prolotherapy in management of chronic sacro-iliac joint pain assessed by Ronald Moris Disability Questionnaire and Numeric Rating Score.

In the state of Karnataka there is Regional Occupational Health Centre, Bangalore and JSS Academy, Bangalore.

In the state of Kerala there is Fire and Safety Engineering Department of CUSAT (Cochin University of Science and Technology) which allows research work in OSH as a part of their courses B.Tech, M.Tech etc and Department of Technical Education, Government of Kerala allow the students to do projects as part of their DIS Course.

The following institutes/colleges are offering courses of M.E/M.Tech in Industrial Safety in India.

- Bhilai Institute of Technology, Raipur, Chattisgarh
- Indore Professional Studies Academy, Indore, Madhya Pradesh
- Kalasalingam University, Salem, Tamil Nadu
- National Institute of Technology, Tiruchirapalli, Tamil Nadu
- National Institute of Technology, Rourkela, Odisha
- Rajiv Gandhi Proudyogiki Vishwavidhyalay, Bhopal, Madhya Pradesh
- Shiv Kumar Singh Institute of Technology and Science, Indore, Madhya Pradesh
- Anna University of Technology, Madurai, Tamil Nadu
- Anna University of Technology, Tirunelveli, Tamil Nadu
- Annai Mathammal Sheela Engineering College, Namakkal, Tamil Nadu
- Bharath Niketan Engineering College, Theni, Tamil Nadu
- Cauvery College of Engineering and Technology, Tiruchirapalli, Tamil Nadu
- Excel College of Engineering and Technology, Namakkal, Tamil Nadu
- Knowledge Institute of Technology, Salem, Tamil Nadu
- KSR College of Engineering, Namakkal, Tamil Nadu
- Mepco Schlenk Engineering College, Villupuram, Tamil Nadu

Visvasvaraya Technological University, Belgavi, Karnataka offers one year Post Graduate Diploma in Industrial Safety Management course in the field of safety.

In the state of Puducherry, Communication has been sent to all the engineering colleges and medical college and research institutions to carry out research in Occupational Safety and Health.



## **10. Mechanism for the Collection and Analysis of Data on Occupational Injuries and Diseases and their causes**

### **10.1 Ministry of Labour (State Level) Mechanism**

In every state in India the factory inspectorate department is collecting the information on Occupational injuries and diseases by report of accidents and diseases in Form no- 17. The accidents are investigated and analysed by the jurisdiction officer and in some complicated special cases under the supervision of senior officers. And at head office level the accidents are reviewed and analysis data with causes are consolidated, maintained and furnished to the Government and other authorities.

Also all Medical Officers in the Government as well as Private Sectors were directed by the state Governments to report the occupational disease if any find out by them during their examination to the Chief Inspector of Factories.

Also data pertaining to OSH is collected and analyzed by means of obtaining Periodical Annual Returns and Half Yearly returns from the factory managements and the same are compiled and consolidated returns are being sent by each of the state government factory inspectorates to DGFASLI, Mumbai and DG, Labour Bureau, Shimla.

### **10.2 Ministry of Health & Family Welfare and its Mechanism**

Presently it appears that Data on Occupational Injuries and Diseases and their causes is available only through Ministry of Labour & Employment. However cases also get treated of persons working in agriculture and informal sector who undertake treatment in private and public hospitals needs to be captured through a mechanism with Ministry of Health & Family Welfare.

## **11. Collaboration with insurance or social security schemes covering occupational injuries and diseases**

### **11.1 Mechanism of collaboration**

The employees whose monthly salary is below Rs 21,000/- per month are covered under the Employees State Insurance (ESI) Act and are being treated for occupational injuries and diseases at the ESI dispensary and associated hospitals in the state. Other employees who are not covered under the ESI Act are being treated in private or Government hospitals for occupational injuries and diseases with the employer bearing the cost. The employer can choose to take an insurance cover if the employer desires through an insurance company by paying the premium.

As for occupational injuries or occupational disease leading to permanent disablement then there is a provision for compensation under the Employees Compensation Act 1923 and the same is to be paid by Employees State Insurance (ESI) if the concerned employee is covered under the Act or by the employer.

In 2017, ESI opened its technical center within the campus of DGFASLI for stronger collaboration, in particular, for providing medical expertise to boost occupational health services and detect occupational diseases.

### **11.2 Number of occupational injuries and diseases covered by social security schemes**

Under the Employees State Insurance (ESI) Act, there is a provision for payment of compensation for occupational injuries based on loss of earning capacity. A similar provision is for certain specified diseases in part A, B & C of the Third Schedule of the Act. Note Before (NB) these are diseases where the work involves exposure to lead or its toxic compounds; nitrous fumes; organophosphorous compounds; phosphorous or its toxic compounds; mercury or its toxic compounds; benzene or its toxic homologues; nitro and amido toxic derivatives of benzene or its toxic homologues; chromium or its toxic compounds; arsenic or its toxic compounds; primary epithelomatous cancer of the skin caused by tar, pitch, bitumen, mineral oil, anthracene, or the compounds, products or residues of these substances; toxic halogen derivatives of hydrocarbon (of the aliphatic and aromatic series); carbon disulphide; cataract due to infra-red radiation; manganese or its toxic compounds; skin diseases caused by physical, chemical or biological agents not included in other items; hearing impairment by noise; poisoning by dinitrophenol or by the salts of such substances; beryllium or its toxic compounds; cadmium or its toxic compounds; occupational asthma caused by recognised sensitising agents inherent to the work place; fluorine or its toxic compound; nitro-glycerine or other nitroacid esters; alcohols and ketones;

asphyxiants:carbon monoxide, and its toxic derivatives, hydrogen sulphide; lung cancer and mesotheliomas caused by asbestos; primary neoplasm of the epithelial lining of the urinary bladder or the kidney or the ureter; pneumoconioses caused by sclerogenic mineral dust (silicosis, anthraosilicosis asbestosis) and silicosis; bagassosis; bronchpulmonary diseases caused by cotton, flax hemp and sisal dust (byssinosis); extrinsic allergic alveelitis caused by inhalation of organic dusts; bronchopulmonary diseases caused by hard metals.

## **12. Support Mechanisms for Disadvantageous Group of Workers**

The Government of India has enacted the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 in terms of which the definition of micro, small and medium enterprises is as under:

Enterprises engaged in the manufacture or production, processing or preservation of goods as specified below:

A micro enterprise is an enterprise where investment in plant and machinery does not exceed Rs. 25 lakh;

A small enterprise is an enterprise where the investment in plant and machinery is more than Rs. 25 lakh but does not exceed Rs. 5 crore;

A medium enterprise is an enterprise where the investment in plant and machinery is more than Rs.5 crore but does not exceed Rs.10 crore.

### **12.1 Workers in small and medium-sized enterprises {having 10 to 200 workers}**

Under the Factories Act 1947, Factories using power and having 10 or more workers were covered under the Act. Recently the limit of 10 has been revised to 20 for coverage in some states like Rajasthan, Gujarat, and Maharashtra. These workers continue to enjoy the support mechanisms as per the Act.

### **12.2 Workers in micro-enterprises (having less than 10 workers)**

Certain group of factories (i.e. engaging less than 10 workers) in various states have been covered by the respective State Government by way of issuing gazette notification under Section 85(1) of the Factories Act, 1948 since their operations are considered to be hazardous/dangerous. Therefore the workers engaged in such operations/factories are covered under the Factories Act and hence the OSH provisions apply. However the workers engaged in factories engaging less than 10 workers presently find no coverage under present legislation.

### **12.3 Workers in the informal economy**

There are a number of sectors/jobs where large number of workers is engaged, but presently they are not covered under any of the OSH legislations. Such workers under the Below Poverty Line category have been covered by the Government under Rashtriya Swasth Bima Yojna (RSBY) scheme for medical benefits. However, other workers who may not be covered under Below Poverty Line category find no coverage

under the scheme. Therefore such workers also need to be provided with some support system/mechanism.

## **12.4 Migrant workers**

The Migrant workers working in registered factories are also considered as workers and these workers are provided with the same facilities as others. These workers are also covered under the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.

The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 is an Act of the Parliament of India enacted to regulate the condition of service of inter-state labourers in Indian labour law. The Act's purpose is to protect workers whose services are requisitioned outside their native states in India. Whenever an employer faces shortage of skills among the locally available workers, the act creates provision to employ better skilled workers available outside the state. It extends to the whole of India. It applies—

(a) to every establishment in which five or more inter-State migrant workmen (whether or not in addition to other workmen) are employed or who were employed on any day of the preceding twelve months;

(b) to every contractor who employs or who employed five or more inter-State migrant workmen (whether or not in addition to other workmen) on any day of the preceding twelve months.

### **Salient features of this act as follows:**

#### **Rights of interstate workers**

In addition to the general labour laws applicable to all workers, the interstate workers are entitled with

- Equal or better wages for the similar nature & duration of work applicable for the local workmen or stipulated minimum wages under the Minimum Wages Act, 1948 whichever is more,
- Displacement allowance (Section 14),
- Home journey allowance (Section 15) including payment of wages during the period of journey,
- Suitable residential accommodation and medical facilities free of charge on mandatory basis.
- Termination of employment after the contract period without any liability.
- Right to lodge complaint with the authorities within three months of any incident, accident, etc.

### **Role of contractors**

- Registration of all contractors who employs or employed five or more interstate migrant workmen on any day of the preceding 12 months.
- Furnish the details of workmen periodically in such forms as prescribed by state government.
- Maintain the registers indicating the details of interstate workers and make available for scrutiny by the statutory authorities.
- Issue of passbook affixed with a passport-sized photograph of the workman indicating the name and the place of the establishment where the worker is employed, the period of employment, rates of wages, etc. to every inter-state migrant workman.
- Reporting by the contractor the incidence of fatal accident or serious injury of such workman to the specified authorities of both the States and also the next of kin of the workman.
- Liable for the prescribed punishments for violations committed under this Act.

### **Role of principal employers**

- Registration of all principal employers who employs or employed directly or indirectly five or more Interstate Migrant Workmen on any day of the preceding 12 months.
- Maintain the registers indicating the details of interstate workers and make available for scrutiny by the statutory authorities.
- Every principal employer shall nominate a representative duly authorized by him to be present at the time of disbursement of wages by the contractor and it shall be the duty of such representative to certify the amounts paid as wages in such manner and may be prescribed.
- Principal employer shall be liable to bear the wages and other benefits to interstate workers in case of failure by the contractor to effect the same.
- Liable for the prescribed punishments for violations committed under this Act.

### **Role of state governments**

- Appointment of inspectors to oversee implementation of this act.
- Appointment of registration officers to grant and revoke registration of contractors / principal employers / establishments.
- Appointment of licensing officers to grant, suspend and revoke licenses to contractors / principal employers / establishments

- Making rules for carrying out the purposes of this Act subject to the condition of previous publication
- Entertaining appeals from the aggrieved parties and disposal of the same as per this Act

## **12.5 Contractors**

Both the managements and contractors are registered and licensed under the Contract Labour (Regulation and Abolition) Act, 1970. The contract workers working in registered factories and establishments are also considered as workers and these workers are provided with the same facilities as others.

In certain states like Kerala safety training programmes for contract workers are conducted by using the Mobile Safety Training Vehicle as a part of outreach programme.

In Karnataka, the state government carries out the following activities to create awareness OSH to contract workers.

- Training programme in the common venue
- Conduct workshop, seminars and interactive session
- National Safety Day and Diaster Prevention Day are organised in public places
- Distribution of safety handbooks, pamphlets, safety magazine, posters

Also the workers working under The Building and Other Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996 are all registered with the state Government for receiving benefits under the Act.

## 13. Support mechanisms for women workers

### 13.1 Special arrangements for reproductive health and maternity care

The women employment in hazardous process which affects their reproductive health is restricted under The Factories Act, 1947 and the same is complied with. To protect the health of women workers, their employment is prohibited in the following hazardous processes and/or dangerous operations under Section 87 of The Factories Act, 1947 and state factories rules which have a potential to cause reproductive health problems and the main ones are listed below:--

**Table 13.1**

Sl.no	Dangerous operations under Section 87	Processes in which employment of women is prohibited
1.	Manufacture or manipulation of dangerous pesticides	Manufacture and storage area
2.	Manufacture ,handling and use of benzene	Any workroom involving exposure to benzene or substance containing benzene
3	Manufacture and treatment of Lead and compounds of Lead	Manufacturing activity
4	Manufacture of Chromic Acid or recovery of the Dichromate of Sodium/ Potassium or Ammonium	Manufacturing activity
5	Manufacture or manipulation of Nitro or Amino Compounds	Manufacturing activity
6	Manufacture of Glass Bangles and other articles from Cinematograph Film and toxic and inflammable solvents.	Manufacturing activity
7	Processes involving manufacture , use or evolution of carbon disulphide and hydrogensulphide	Manufacturing activity
8	Process of extracting oils, wax and fats from vegetable/animal sources in solvent extraction plants	Manufacturing activity
9	Manufacture and manipulation of Carcinogenic Dye Intermediates	Manufacturing activity
10	Manufacturing of fuses used in crackers, fireworks and match factories	Manufacturing activity

### Provisions under the Factories Act, 1948 for securing the Safety and Health of Women

In the Factories Act, 1948, there are various provisions safeguarding and for continuously improving the working conditions for the woman workers and the same are given below in brief:



1. Section 22- Work on or near Machinery in Motion: No woman or young person shall be allowed to clean, lubricate or adjust any part of a prime mover or of any transmission machinery while the prime mover or transmission machinery is in motion, or to clean, lubricate or adjust any part of any machine if the cleaning, lubrication or adjustment thereof would expose the woman or young person to risk of injury from any moving part either of that machine or of any adjacent machinery. No woman shall be allowed to clean, lubricate or adjust any part of the machinery while it is in motion.
2. Section 27- Prohibition on Employment of Woman and Children near Cotton Openers: No woman shall be employed in any part of a factory for pressing cotton in which a cotton opener is at work.
3. Section 34- Excessive Weights: No person shall be employed in any factory to lift, carry, or move any load so heavy that it may likely to cause injury. The maximum weights which may be lifted, carried or moved by adult men, adult women, adolescents and children employed in factories or in any class or description of factories or in carrying on any specific process is prescribed under the state factories rules.
4. Section 42- Washing Facilities: Provision for separate and adequately screened facilities for the use of female workers.
5. Section 48: Crèches: In factories where more than thirty woman workers are ordinarily employed, a suitable room under the charge of trained woman in the care of children and infants shall be provided. The State Governments are empowered to make Rules on the aspects of facilities of washing and changing clothes, provision for free milk or refreshments for children, mothers of child to feed them at necessary intervals etc.
6. Section-54: Daily Hours: No worker shall be required or allowed to work for more than nine hours in a day. No exemptions to be granted to any woman from the provisions contained in Section 54.
7. Section-66: Further Restriction on employment of woman: No woman worker shall be allowed to work in any factory except between the hours of 6 a.m. and 7 p.m. The state governments are empowered to relax the hours of restriction however no such relaxation shall allow women workers to work between the hours of 10 PM and 5 AM.
8. Section 87: Dangerous Operation-The State Government may make rules applicable to any factory declaring certain processes as dangerous process or operation and prohibiting or restricting the employment of woman, adolescent or children in such manufacturing process or operation.
9. Section 19 - Latrines and urinals – Provision of sufficient latrines and urinals separately enclosed accommodation for male and female workers.

## **Maternity Benefit Act, 1961 and its latest amendment**

The maternity benefit Act 1961 protects the employment of women during the time of her maternity and entitles her of a 'maternity benefit' - i.e. full paid absence from work - to take care for her child. The act is applicable to all establishments employing 10 or more persons. The Act is applicable to all establishments which are factories, mines, plantations, Government establishments, shops and establishments under the relevant applicable legislations, or any other establishment as may be notified by the Central Government.

- **Increased Paid Maternity Leave:**

The Maternity Benefit Amendment Act has increased the duration of paid maternity leave available for women employees from the existing 12 weeks to 26 weeks. Under the Maternity Benefit Amendment Act, this benefit could be availed by women for a period extending up to 8 weeks before the expected delivery date and remaining 18 weeks can be availed post childbirth. For women who are expecting after having 2 children, the duration of paid maternity leave shall be 12 weeks (i.e., 6 weeks pre and 6 weeks post expected date of delivery).

- **Maternity leave for adoptive and commissioning mothers:**

The Maternity Benefit Amendment Act extends certain benefits to adoptive mothers as well and provides that every woman who adopts a child shall be entitled to 12 weeks of maternity leave, from the date of adoption.

- **Work from Home option:**

The Maternity Benefit Amendment Act has also introduced an enabling provision relating to "work from home" for women, which may be exercised after the expiry of the 26 weeks' leave period. Depending upon the nature of work, women employees may be able to avail this benefit on terms that are mutually agreed with the employer.

- **Crèche facility:**

The Maternity Benefit Amendment Act makes crèche facility mandatory for every establishment employing 50 or more employees. Women employees would be permitted to visit the crèche 4 times during the day.

The Maternity Benefit Amendment Act makes it mandatory for employers to educate women about the maternity benefits available to them at the time of their appointment.

Also the provisions of the Maternity Benefit Act presently provide 26 weeks paid leave to all working women with less than two surviving children.

### **13.2 Special arrangements for other special needs of women workers, including transportation for night workers, or adjustment needs due to body size differences**

The Factories Act, 1948 is the principal legislation for regulating various aspects relating to safety, health and welfare of the workers employed in the manufacturing sector. This Act is a central enactment, which aims to secure the workers employed in factories in terms of health, safety, welfare, proper working hours, leave and other benefits. The State Governments and Union Territory Administrations frame their State Factories Rules under the Act and enforce the provisions of the Act and the Rules, through their State Factory Inspectorates/Directorates.

The Factories Act, 1948 is applicable to a premises wherein a manufacturing process is carried on with 10 or 20 workers with the aid of power or without the aid of power respectively and that at present women are not permitted to work, except between the hours of 6 am and 7 pm with further relaxation upto 10 pm.

However, the States of Andhra Pradesh, Madhya Pradesh, Tamil Nadu, Maharashtra, Gujarat, Himachal Pradesh, Punjab and Haryana have permitted woman workers to perform night shifts in the factories registered under the Factories Act, 1948 with certain safeguards.

Earlier, the Hon'ble High Court of Madras in its judgment in WP.No.4604 of 1999 (Shrimati R. Vasantha Vs UoI and others) has struck down the provisions of the Section 66(1) (b) regarding the employment of woman in night shifts.

The Ministry of Labour and Employment had requested all the state governments to permitting women to work in night shifts with the provision of adequate safety, security and transportation to the women workers.

Factories employing women workers between 7:00 pm and 6:00 am are provided with transport facility to their door steps.

In the state of Tamil Nadu many of the textile mills employ women workers and provide hostel facilities either within the factory or near the factory. To protect the safety and security of the women workers accommodated in these hostels have been stipulated in "Tamilnadu Hostel and Homes for Women and Children (Regulation) Act, 2014. The owners of these hostels are required to obtain a license under this Act from the District Collector. The provisions of this Act are enforced by the Social Welfare Department of Tamil Nadu.

## **14. Coordination and collaboration mechanisms at national and enterprise levels including national programme review mechanisms**

Each of the state Government Factory Inspectorate gets information from the factories in their respective states and then submits a periodical Consolidated Annual Returns under the Factories Act, 1948 and allied Labour Acts and rules to DGFASLI, Labour bureau, Shimla, Ministry of Labour and Returns regarding MAH factories to Ministry of Environment & forests. Similar approach is adopted by Directorate General of Mines Safety (DGMS) under Ministry of Labour & Employment, Government of India regarding the mines in the country.

Legislations pertaining to Occupational safety and health in India are reviewed from time to time due to technological advancement in manufacturing processes and rapid expansion of industries. For this, tripartite consultations involving worker's association, employers association and government officials are adopted.

DGFASLI & DG, Employees State Insurance Corporation (ESIC) in 2017 has signed a Memorandum of Understanding in the area of OSH.

## **15. Technical Standards, Codes or Practices and Guidelines on OSH**

The statutory standards and codes are prescribed under the Factories Act & Rules and the same are to be followed by the management of each factory. In the absence of the prescribed standards and codes, the factory inspectorate department advises the management to follow specific standards and codes which are relevant to their industries like Oil Industry Safety Directorate (OISD) for oil industries, etc.

Apart from the statutory standards, various voluntary standards have been formulated by the Bureau of Indian Standards for various activities concerning safety such as Personal Protective Equipment (PPE), scaffolding, safety audits, testing of chains, wire ropes, lifting tackles, pressure vessels, and also for calibration/testing of equipments and others. These standards are periodically reviewed and revised. Indian Standards related to Occupational Safety and Health is given in Annexure VII.

Indian Boiler Regulation codes and Standards are followed for all Boilers installed in the country

## **16. Educational and awareness-raising arrangements to enhance preventive safety and health culture, including promotional initiatives**

### **16.1 National Safety Day activities**

**World Day for Safety and Health at Work** is a United Nations (UN) international day that is celebrated every 28 April. It is concerned about safe work and awareness of the dimensions and consequences of work-related accidents and diseases; to place occupational safety and health (OSH) on the international and national agendas; and to provide support to the national efforts for the improvement of national OSH systems and programmes in line with relevant international labour standards.

Every year the National Safety Day is celebrated on 4<sup>th</sup> March by most factories. In quite many factories the National Safety Week i.e. 04<sup>th</sup> March to 10<sup>th</sup> March is celebrated.

National Fire Service Week 14th-20th April 2015. National Fire Service Day/Week (NSW) is celebrated every year in India from 14th April to 20th April. It is observed as a part to pay homage to those brave Fire Fighters, who sacrificed their lives in line to their duty on 14th April, 1944.

The activities in celebration involve badges, banners, posters, awareness campaigns, seminars, films, plays, exhibition, competition, contests, awards, etc for workers and factory managements.

Safety week is held every year in different mining fields; efforts are made through various audio-visual means, to inculcate safety consciousness amongst workers, supervisors and others so as to influence their behaviour at work. Further, by holding competition amongst various participating mines an attempt is made to improve the working conditions.. Based on the accident experience, special safety drives are sometimes launched to focus attention on specific cause-groups.

### **16.2 National Safety Awards**

The Ministry of Labour & Employment, Government of India gives National Safety Awards in recognition of outstanding safety performance on the part of the industrial establishments covered under the Factories Act 1948, the employers covered under the Dock Worker (Safety, Health and Welfare) Act 1986, the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and Installations under Atomic Energy Regulatory Board (AERB). Shields and Citation Certificates are awarded to Winners and Runners Up. Schemes I to X are meant for factories, construction sites and nuclear Installations and Schemes XI and XII are for Ports. The Schemes/Schedule based on lowest frequency rate of accidents were deliberated in comparison with latest national Average Frequency Data of

Accidents for the period from 2005 to 2007 for manufacturing sector and for the period from 2007 – 08 to 2009 – 10 for the Port Sector.

To appreciate the contribution made by the factories and docks towards producing quality goods and providing efficient services in safe and healthy conditions the following awards are being given.

### **Prime Minister's Shram Awards (PMSA)**

The Prime Minister's Shram Awards (PMSA) were instituted in 1985, for the workers (as defined in Industrial Disputes Act, 1947) in recognition of their outstanding contributions in organizations both in public and private sector and who have distinguished record of performance, devotion to duty of a high order, specific contribution in the field of productivity, proven innovative abilities, presence of mind and exceptional courage and also to the workmen who have made supreme sacrifice of laying down their lives in the conscientious discharge of their duties.

It has been decided from the year 2004 onwards that the private sectors shall also be included within the ambit of Prime Minister's Shram Awards and the workers in the private sector units employing 500 or more workers and engaged in manufacturing and productive processes will be eligible to apply for these awards. The number of awards has been increased from 17 to 33. The awards, in order of sequence are Shram Ratna, Shram Bhushan, ShramVir/Veerangana and Shram Shri/Devi. The recognition consists of a Sanad and cash award of Rs. 2,00,000/- (1 award), Rs. 1,00,000/- (4 awards), Rs. 60,000/- (12 awards) and Rs. 40,000/- (16 awards) respectively.

### **VishwakarmaRashtriyaPuraskar& National Safety Awards**

The DGFASLI on behalf of the Ministry of Labour and Employment has been implementing the VishwakarmaRashtriyaPuraskar (VRP) (earlier known as ShramVir National Awards) and the National Safety Awards scheme since 1965. These schemes were modified in 1971, 1978 and again in 2007. The schemes presently in operation are as follow:

- (i) Vishwakarma Rashtriya Puraskar:** It is designed to give recognition at the national level to outstanding suggestions resulting in (i) Higher Productivity (ii) Improvement in safety and working conditions (iii) Savings in foreign exchange (import substitution as well as quality and safety of products), (iv)Improvement in overall efficiency of the establishments. The prizes are grouped in three classes i.e. (a) Applications ranked 1 to 5 (5 Awards) – Class "A" Awards Rs.75,000/- Each, (b) Applications ranked 6 to 13 (8 Awards) – Class "B" Awards Rs.50,000/- Each (c) Applications ranked 14 to 28 (15 Awards) – Class "C" Awards RS.25,000/- Each. These awards are applicable to the workers of Industrial establishments covered under the Factories Act, 1948, the employees covered under the Dock Worker (Safety, Health and Welfare) Act 1986, the Building and Other Construction Workers (Regulation of Employment

and Conditions of Service) Act, 1996 and Installations under Atomic Energy Regulatory Board (AERB)

- (ii) National Safety Awards:** National Safety Awards are given in recognition of outstanding safety performance on the part of the industrial establishments covered under the Factories Act 1948, the employers covered under the Dock Worker (Safety, Health and Welfare) Act 1986, the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and Installations under Atomic Energy Regulatory Board (AERB). Shields and Citation Certificates are awarded to Winners and Runners Up. Schemes I to X are meant for factories, construction sites and nuclear Installations and Schemes XI and XII are for Ports. The Schemes/Schedule based on lowest frequency rate of accidents were deliberated in comparison with latest national Average Frequency Data of Accidents for the period from 2005 to 2007 for manufacturing sector and for the period from 2007 – 08 to 2009 – 10 for the Port Sector.

### **Achievement in 2016**

The award presentation function for Vishwakarma Rashtriya Puraskar (VRP) & National Safety Awards (NSA) for the performance year 2014 was held at Sirifort Auditorium, New Delhi on 16<sup>th</sup> September 2016. The awards were presented by the Hon'ble Minister of State (Independent Charge) for Labour & Employment Shri Bandaru Dattatreya to 117 awardees of VRP and 93 NSA awardees. The awards presentation function was chaired by the Secretary, Labour & Employment. The awards function was attended by about 1000 delegates, Safety professionals and Govt. officials. The event got wide publicity in media and leading news papers.



**Table 16.1 - National Safety Awards under different schemes (Source Table 5.3 - Standard Reference Notes DGFASLI )**

Performance Year	National Safety Awards	SCHEMES											
		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
2011	Applications	44	27	18	16	13	11	13	16	04	03	-	-
	Awards	22	17	11	12	08	10	06	08	02	02	-	-
2012	Applications	30	31	10	12	09	12	08	09	02	02	-	-
	Awards	20	19	10	10	05	07	06	08	02	02	-	-
2013	Applications	48	39	12	19	18	21	13	13	08	08	-	-
	Awards	23	20	10	12	06	06	08	09	02	02	-	-
2014	Applications	42	34	18	20	14	17	09	14	01	01	-	-
	Awards	27	17	13	13	08	06	08	09	01	01	-	-

### **National Safety Awards in Mines**

Ministry of Labour & Employment, Government of India instituted National Safety Awards (Mines) in 1983 (for the contest year 1982) with a view to promote a competitive spirit amongst mine operators for the betterment of safety standards in mines and to give due recognition to outstanding safety performance at national level. This award is generally given away by the Hon'ble President of India every year and has generated considerable enthusiasm amongst the Mining community. National Safety Awards (Mines) for the years 2011& 2012 were given away on 20<sup>th</sup> March, 2015 at New Delhi by the Hon'ble President of India. The Ministry has reconstituted the National Safety Awards (Mines) Committee vide their letter No.D-14011/01/2013-ISH.I dated 06.03.2013 for a period of three years.

**Also the National Safety Council** has launched three separate national level Safety Awards Schemes for Manufacturing sector (since 1998), Construction sector (since 2005) and for MSME sector (since 2009). These schemes are operated with an objective of providing recognition to organisations achieving meritorious performance in implementing effective OSH management systems, best practices & procedures and

achieving meritorious OSH performance. Every year the awards are given away at the hands of the Honourable Labour Minister in a specially organised function.

### **16.3 OSH Education in Schools**

As per clause 4.4.3 of National Policy on Safety, Health and Environment at Workplace (NPSHEW), there is a provision for creating awareness on OSH Education and it states that:

- by suitably incorporating teaching inputs on safety, health and environment at work place in schools, technical, medical, professional and vocational courses and distance education programme;

In certain states like Karnataka, Kerala & Puducherry to inculcate Safety awareness among the school children, lectures in certain school were organised and the students invited to see safety exhibitions and undertake safety marches. However, safety is not part of any school syllabus.

## **17. Specialized technical, medical and scientific institutions with linkages to various aspects of OSH, including research institutes and laboratories concerned with OSH**

### **17.1 List of academic institutions related to OSH**

The Ministry of Health & Family Welfare, Government of India has a Port Health Organization which undertakes surveys with reference to communicable diseases and health services in all sea port and air ports in India.

#### **(a) In Gujarat State there are following institutions**

Recognized institute by Gujarat Technical Education Board for Diploma Industrial Safety and Health course

- Reliance Industries Ltd. Surat & Jamnagar
- Mahatma Gandhi Labour Institute, Ahmedabad
- Gujarat Safety Council, Vadodara
- GNFC, Bharuch
- Ankleshwar Industries Association
- Vapi Industries Association
- Tata Chemicals, Mithapur
- EHS Training Institute, Ahmedabad

#### **For Doctors (Certificate in Industrial Health)**

- M. S. University, Vadodara
- Mahatma Gandhi Labour Institute, Ahmedabad
- National Institute of Occupational Health
- BAPS Hospital Adajan, (Surat)
- Indian Institute of Public Health

#### **(b) In Karnataka State there are following institutions**

- National Safety Council, Karnataka Chapter, Bangalore,
- Regional Occupational Health Centre, Bangalore.
- Rajiv Gandhi Institute of steel technology.
- Confederation of Indian Industries (CII), Bangalore.
- St. John Ambulance Services, Bangalore.
- Indian Institute of Science, Bangalore.
- National Institute of Technology Karnataka, Mangalore etc.,

**(c) In Kerala State there are following institutions**

- Fire & Safety Department in Cochin University of Science and Technology (CUSAT).
- Toch-H Engineering College, Kochi
- Supervisory Department Cell, Technical Education Department conducts Advanced Diploma in Industrial Safety

**(d) In the U.T. of Puducherry there are following institutions**

RLI, Chennai – whose services are utilized by the factories located in Puducherry

**(e) In Jharkhand State, there are following institutions**

- Mahatma Gandhi Memorial Medical College, Jamshedpur
- Patliputra Medical College and Hospital, Dhanbad
- Rajendra Institute of Medical Science, Ranchi

**(f) In Odisha State, there are following institutions**

- State Labour Institute, Bhubaneswar
- Umacharan Pattnaik Engineering School, Berhampur
- U.G. Institute of Engineering, Rourkela
- SKDAV Government Polytechnic, Rourkela
- MDC on SHE, Bhubaneswar
- Asian Worker's Development Institute, Rourkela
- Challengers Academy on SHE, Bhubaneswar
- Chinmay Institute of Fire & Safety Engineering, Rourkela
- Dr. A.M Institute of Industrial Safety, Rourkela
- Hingule Institute of Industrial Safety and Environmental Science

**(g) In Telengana State, there are following institutions**

- Environment Protection Training and Research Institute, Hyderabad
- Vimta Labs, Hyderabad

## **17.2 Non-Governmental OSH Organization**

**(a) In Gujarat State**

Every year Rs. 40 lakhs grant is allotted to NGOs for organizing safety awareness programmes and display hoardings at conspicuous location of industrial areas.

Table 17.1: Year and no. of NGOs

S.No.	Year	No of NGOs
1	2011-12	30
2	2012-13	34
3	2013-14	46
4	2014-15	35
5	2015-16	37
6	2016-17	39

(b) In Kerala state

- National Safety Council (Kerala Chapter) – Kalamassery
- Safety Council of Kerala, Palakkad
- FACT Technical Society, Kalamassery

(c) Goa State

- Green Triangle Society, Panaji.

(d) Jharkhand State

- Tata Memorial Hospital, Jamshedpur

(e) Bihar State

- St. John Ambulance Association
- Red Cross Society

(f) Telengana State

- Dr. Rane Institute, Diagnostic Centre

## **18. Personnel engaged in the area of OSH, such as safety and health officers, safety engineers and occupational physicians and hygienists**

Under the Factories Act wherein one thousand or more workmen are ordinarily employed ,or wherein in the opinion of the State Government based on the process or operations , can specify the number of safety officers to be statutorily employed . Also the duties, qualifications and conditions of service of the Safety Officers is prescribed by the State Government. State-wise Status of Safety Officers (SO) under 40-B (1) in factories during the year 2011 to 2015 is given in Annexure XI.

Under the Factories Act in respect of any factory carrying on “Hazardous Processes “ employing up to 50 workers , the services of a Medical Officer on retainer ship basis is to be provided by the occupier of factory . In the case of hazardous process factories employing 51 to 200 workers, the services of a Medical Officer on part –time basis are to be provided; and for those hazardous process factories employing above 200 workers, the services of a Medical Officer on full –time basis is to be provided. Also the duties, qualifications and conditions of service of the Medical Officers are prescribed by the State Government. State-wise Medical Facilities and Specialist Inspectors of Factories in factories for the year during the year 2011 to 2015 is given in Annexure XI.

Certifying Surgeons are qualified medical practitioner appointed by the State Government to facilitate the factory inspectorate in ensuring the health of the workers working in the factories. The duties, qualifications and conditions of service of the Certifying Surgeons are prescribed by the State Government. State-wise Certifying Surgeons of Factories for the year 2011 to 2015 is given in Annexure XI.

Under The Dock Workers (Safety, Health and Welfare) Act and Rules Safety Officers are to be appointed in each port. . The duties, qualifications and conditions of service of the Safety Officers are prescribed by the Central Government. Safety and Health Facilities in Major Ports during the year 2011 to 2015 is given in Annexure XII.

## **19. Occupational Injury and Disease Statistics and Events**

### **19.1 Statistics on occupational accidents**

#### **Manufacturing Sector**

The statistics of factories is collected and compiled by the Labour Bureau on the basis of the Annual Returns/Reports in respect of the Factories Act 1948, furnished by various States and Union Territories. Under the Factories Act, 1948, injuries resulting from industrial accidents, by reasons of which the person injured is prevented from attending to work for a period of 48 hours or more immediately following the accident, are recorded. The information relating to occupational injuries in factories are given in this chapter in tables 19.1 to 19.3, which are based on the statistics provided by DG, Labour Bureau up to the year 2012.

As per data collected by the Labour Bureau, State-wise total number of injuries in the factories for the years from 2009 to 2013 is given in table 19.1 in Annexure XIII. The important indices on injuries are Frequency Rate (FR) and Incidence Rate (IR). The Frequency Rate is defined as number of total injuries per 1, 00,000 man-days worked. State-wise Frequency Rates of Industrial Injuries in the Factories during the year 2009 to 2013 is given in Table 19.2 in Annexure XIII.

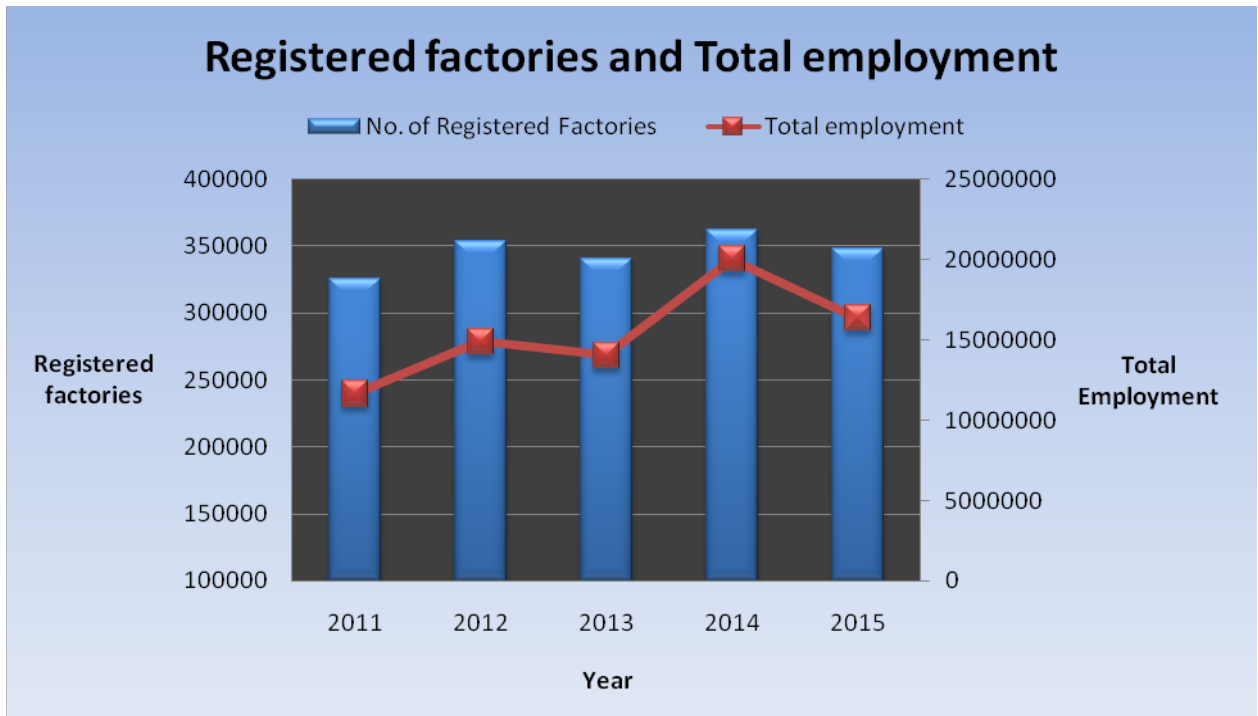
The Incidence Rate is the number of injuries per 1000 workers employed in the factories. State-wise Incidence Rates of Industrial Injuries in the Factories during the year 2009 to 2013 is given in Table 19.3 in Annexure XIII.

It should be noted that there are substantial limitations of interpreting the available statistics and information regarding occupational injuries and disease. The statistics shown below cover only manufacturing factories in the formal sector, and injuries and diseases in smaller manufacturing factories in the unorganized sector are uncovered. Another limitation is the weak reporting systems. There could be many unreported injuries and disease.

Besides these constraints, there are general increasing trends in industrial injuries in the observation periods shown in the tables below. Numbers of Industrial Injuries in Factories shown in Table 19.1 are 5972 in 2008, 6651 in 2009, 11175 in 2010, and 10441 in 2011. The numbers of fatalities are 478 in 2008, 668 in 2009, 1064 in 2010, and 1083 in 2011. The sudden decrease of the fatalities and injuries in 2012 maybe because of the missing information of industrializing states including Gujarat, Odisha and Punjab.

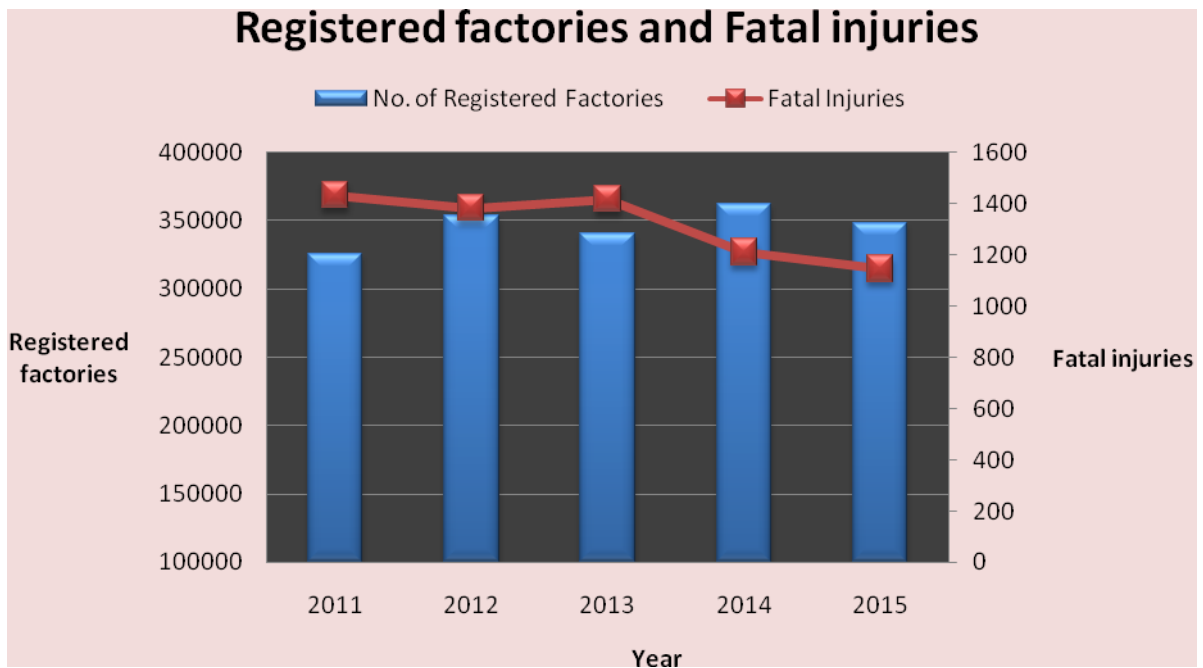
# Trends in Factories

## Registered Factories Vs Total Employment



19.1 Registered factories and Employment (2011-2015)

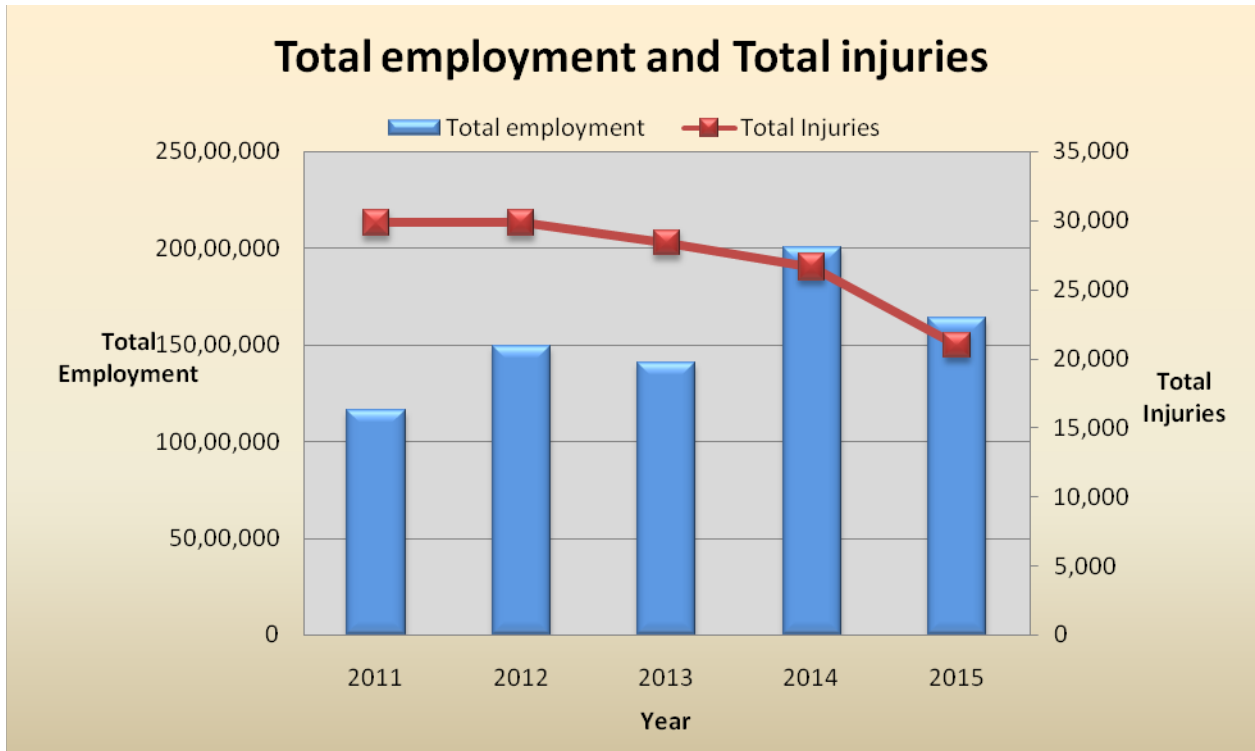
## Registered Factories Vs Fatal Injuries



19.2 Registered factories and fatal injuries (2011-2015)

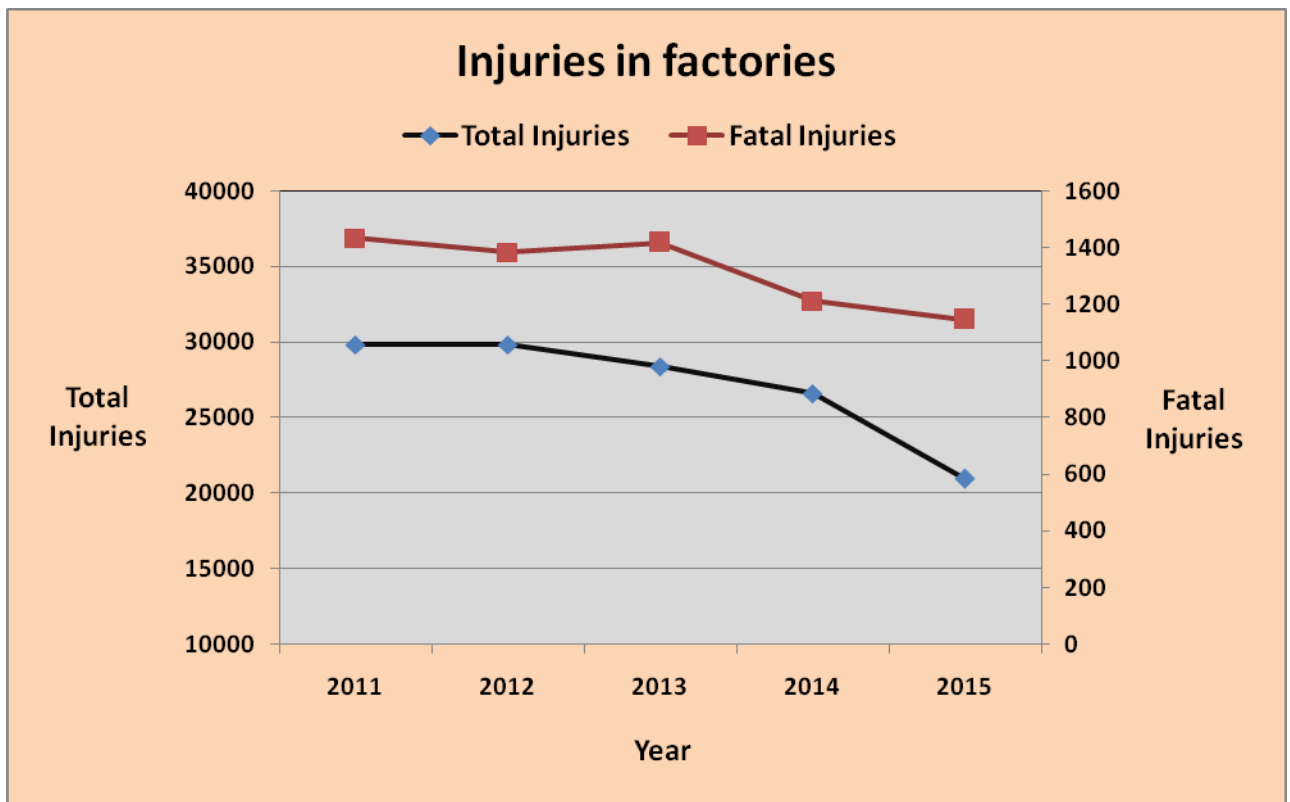


**Total employment Vs Total Injuries**



**19.3 Total employment and Total injuries (2011-2015)**

**Total Injuries Vs Fatal Injuries**



**19.4 Injuries in factories (2011-2015)**

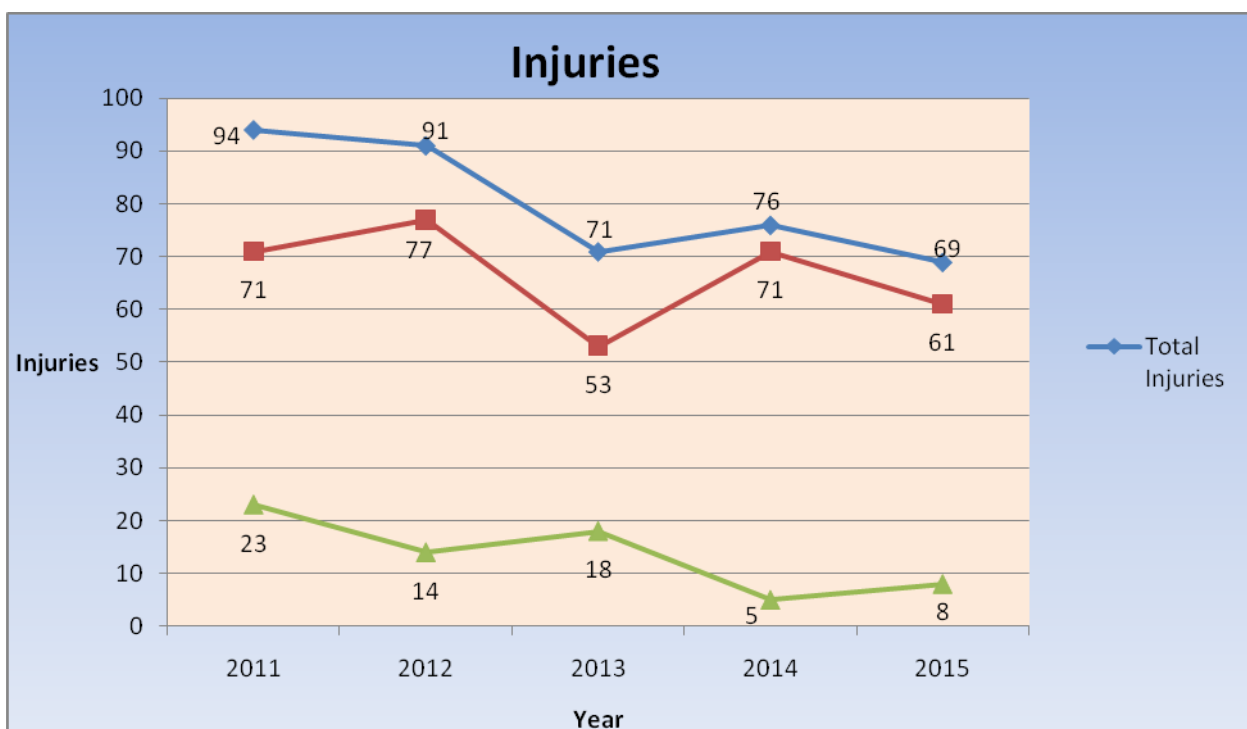
## Port Sector

The statistics of major ports is collected and compiled by the DGFASLI on the basis of the Annual Returns/Reports in respect of the Dock Workers (Safety, Health and Welfare) Act, 1986 and the Regulations, 1990 framed there under. As per provision given under the Regulation 91 of the Dock Workers (Safety, Health and Welfare) Regulations, 1990, the employers of the dock workers are required to send the notice of reportable accidents and dangerous occurrences to the Inspectorate Dock Safety within four hours of occurrence. Reportable Accidents & Dangerous Occurrences in major Ports during the Year 2011 to 2015 is placed in Annexure XIV.

The port sector has a number of hazards and could cause serious industrial accidents. Table 19.4 and 19.5 show, that some ports had high incident rates and others no. For example, the incident rates of Mumbai port and Chennai port are 22.25 and 2.96, respectively. These are much higher than other ports and indicating that a single serious accident could cause many injuries and even fatalities. Average Daily Employment & Rates of Reportable Accidents in major Ports during the year 2011 to 2015 is placed in Annexure XIV.

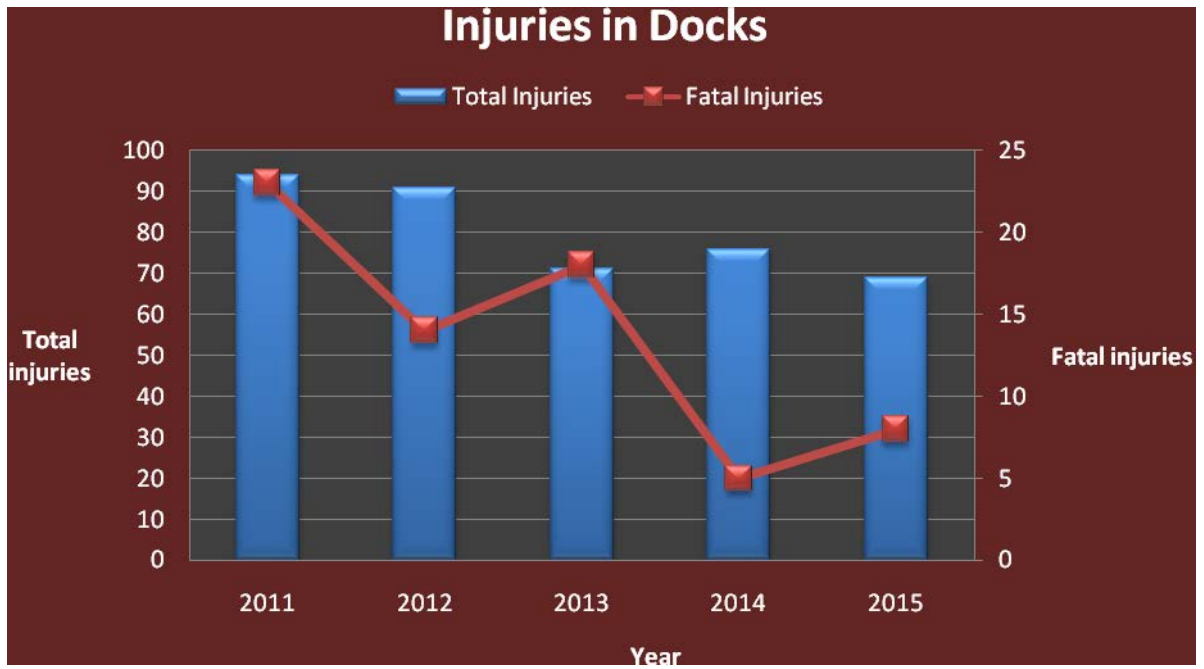
## Trends in Major Ports

### Total injuries and non fatal injuries



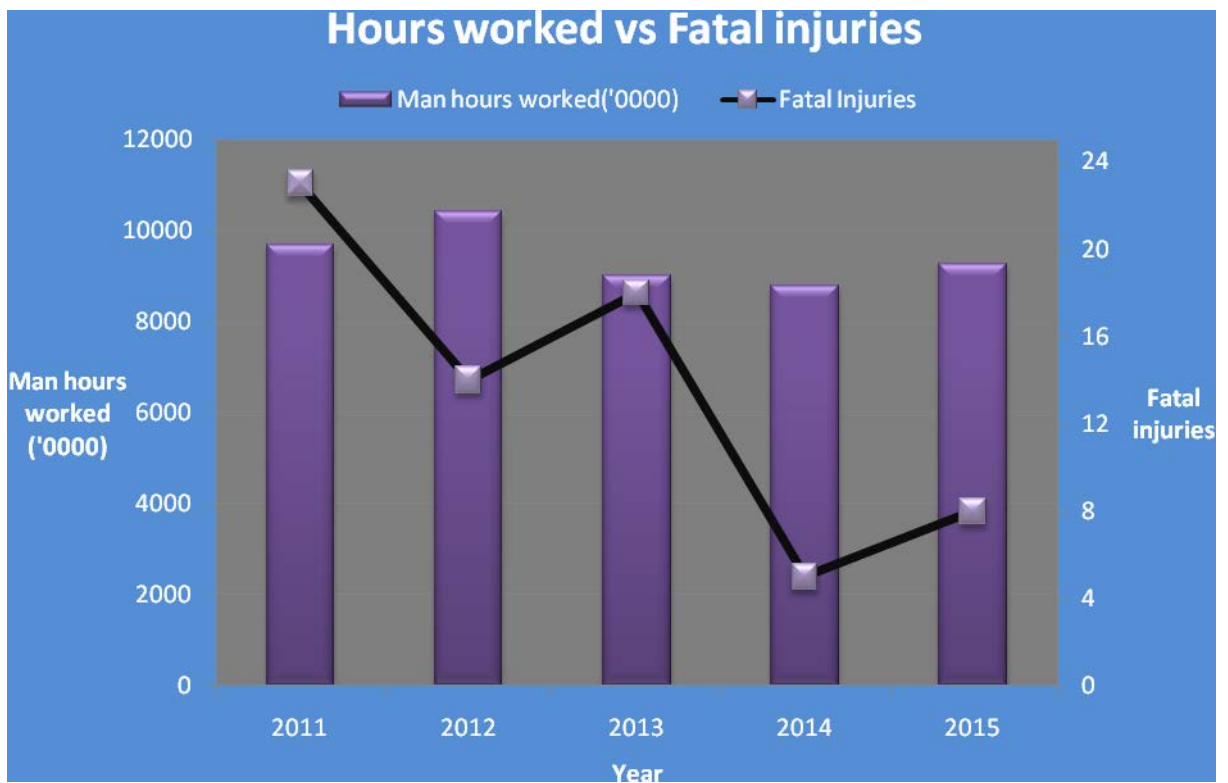
19.5 Injuries in Docks (2011-2015)

## Fatal and Non fatal injuries



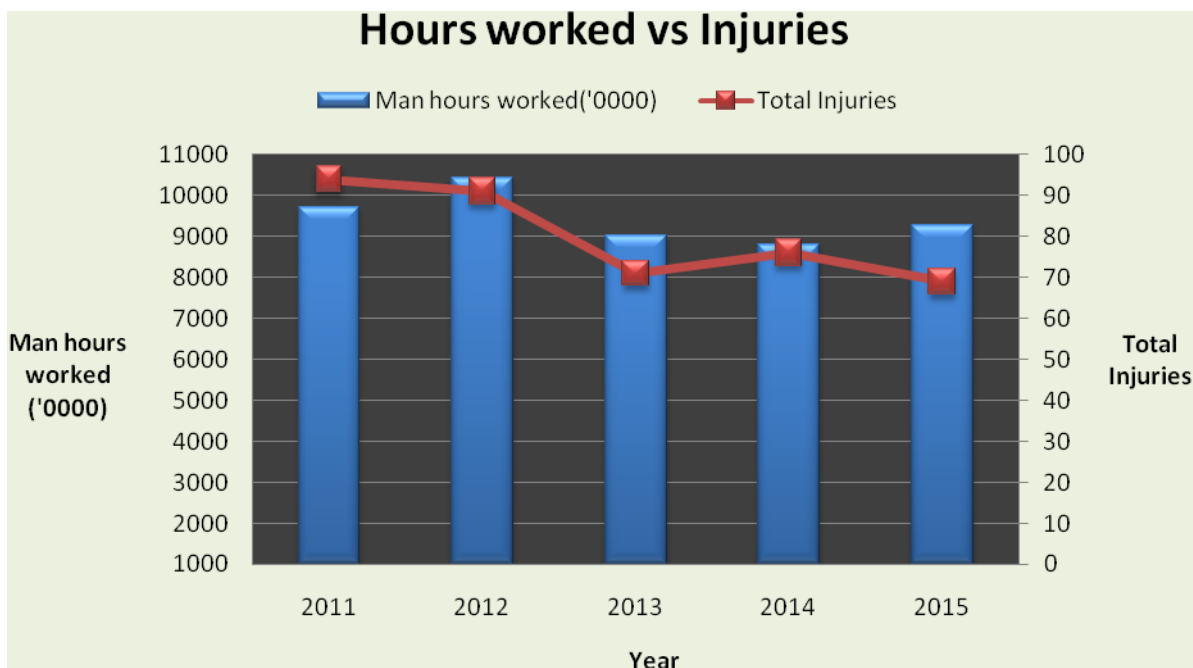
19.6 Fatal and non fatal injuries in Docks (2011-2015)

## Hours worked and Fatal Injuries



19.7 Hours worked vs Fatal injuries in docks (2011-2015)

## Hours worked and Injuries



**19.8 Hours worked vs Injuries in docks (2011-2015)**

## Mining Sector

**(Source - Standard Reference Notes DGMS dated 01 Jan 2017)**

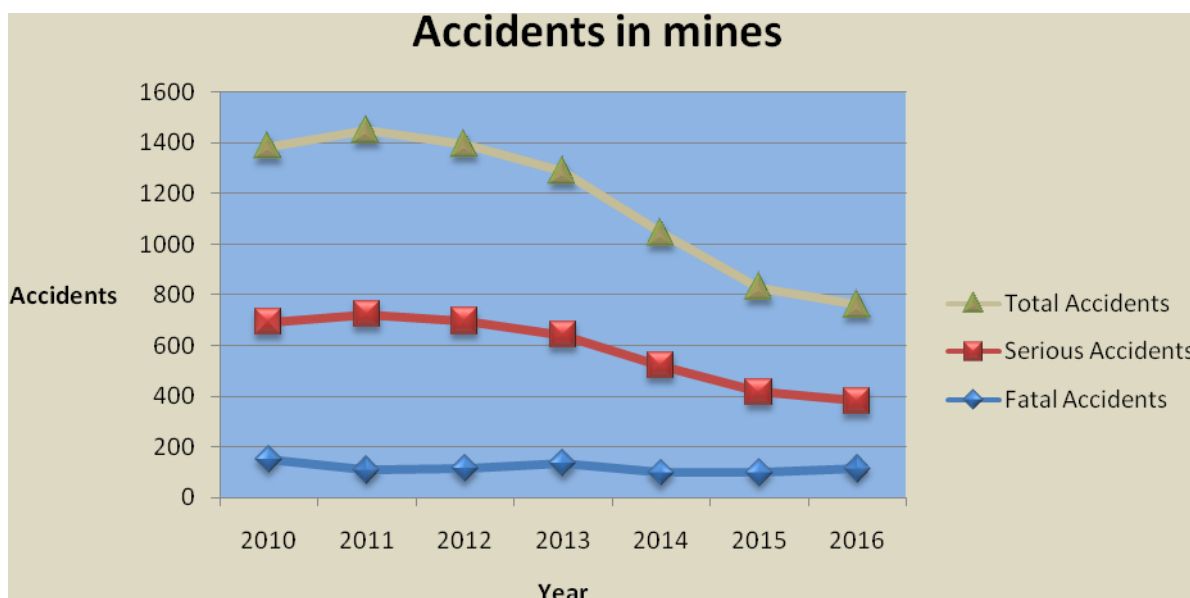
During the year 2016, there were 72, 33 and 9 fatal accidents involving 76, 42 and 9 fatalities in coal, metal and oil mines, respectively. The numbers of fatal accidents during the previous year 2015 were 53, 42 and 4 for coal, metal and oil mines respectively.

Table 19.6 indicates the trend in 10-yearly average number of fatal accidents and that of fatality rates per thousand persons employed from 1901 to 2016 for coal and non-coal mines. For coal mines, a consistent decline is observed in the 10-yearly average number of accidents per year since the 1950s and in the 10-yearly average number of fatalities since the 1970s. The same trend continued for the last 10-yearly period 2011-2016. For non-coal mines, the average number of accidents and fatalities has remained more or less at the same level during the period from 1971-80 to 1991-2000. While the last ten yearly average during the period 2001-10 have slightly decreased in number of accidents and fatalities and the last six-yearly average have fallen significantly during the period 2016.

**Table 19.6**

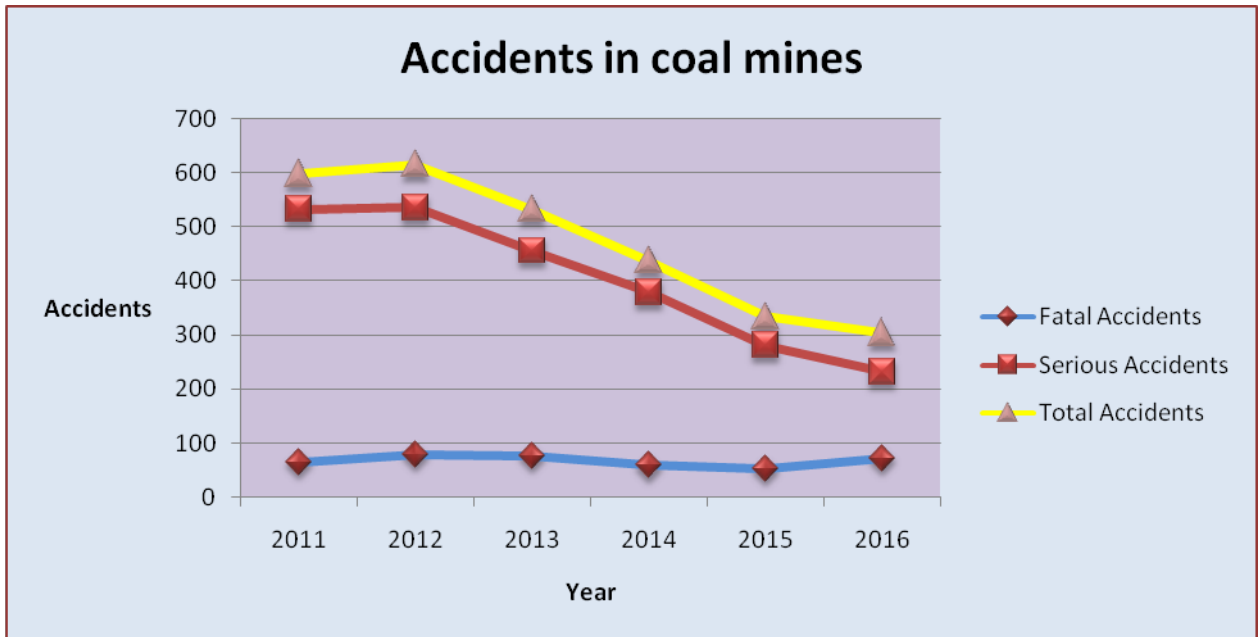
TABLE :		TREND IN INCIDENCE OF ACCIDENTS IN MINES							
Year	COAL			METAL			OIL		
	Number of accidents			Number of accidents			Number of accidents		
	Fatal	Serious	Total	Fatal	Serious	Total	Fatal	Serious	Total
2011	65	533	598	41	65	106	3	17	20
2012	79	536	615	34	35	69	2	10	12
2013	77	456	533	54	37	91	4	15	19
2014	59	379	438	34	34	68	5	10	15
2015	53	281	334	42	22	64	4	13	17

**Trends in Mines  
Accidents in Mines**



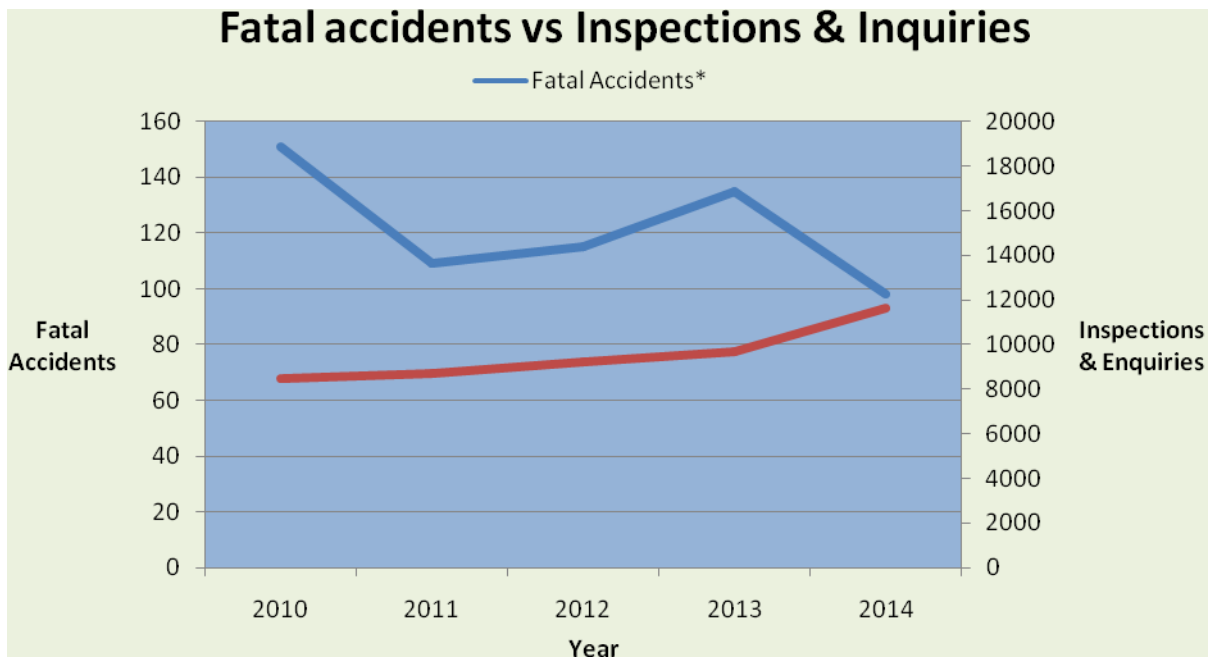
**19.9 Accidents in mines (2011-2016)**

### Accidents in Coal Mines



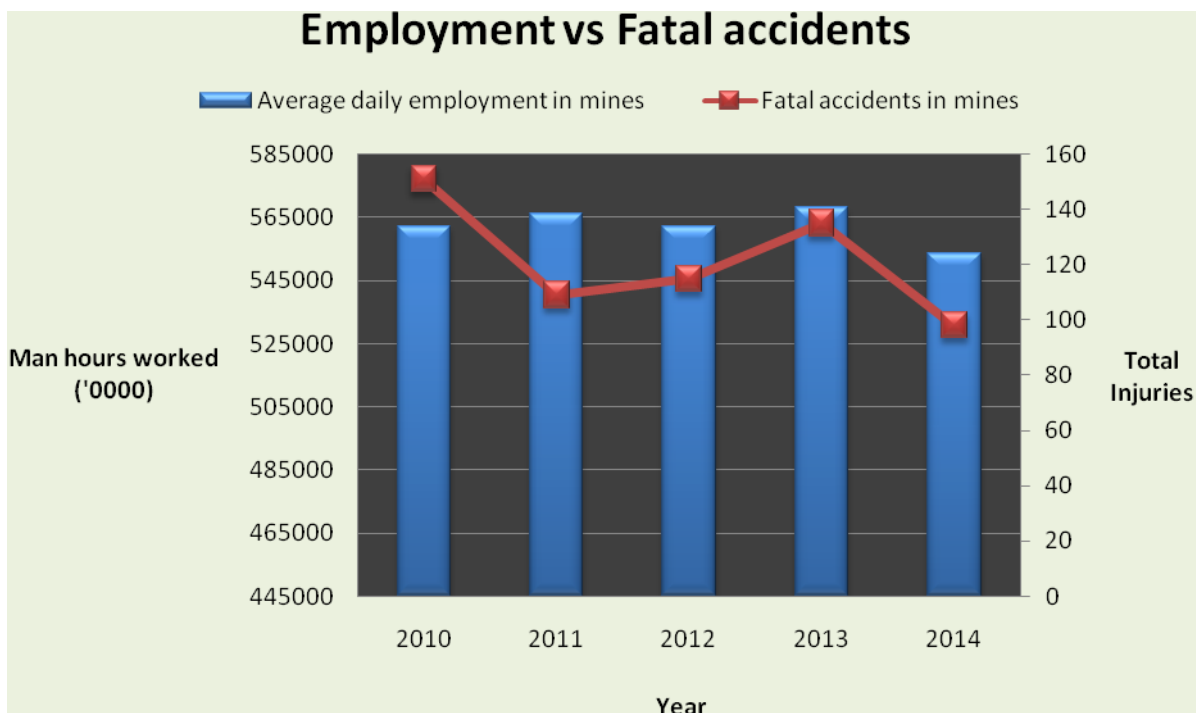
19.10 Accidents in coal mines (2011-2016)

### Fatal accidents and Inspection & Inquiries



19.11 Fatal accidents vs Inspections & Inquiries in Mines (2010-2014)

## Employment and Fatal Accidents



**19.12 employment vs Fatal accidents in Mines (2010-2014)**

## 19.2 Occupational disease list and statistics

### Occupational Diseases list of India

As per the Third Schedule of the Factories Act, 1948, following are the occupational diseases i.e. occupational lung diseases, poisonings, contact dermatitis, occupational cancers and noise-induced hearing loss. Few studies have reported statistics on notifiable diseases. Silicosis was the commonest offender with 38%–54.5% prevalence in slate pencil and precious/semi-precious stone manufacturing. The next commonest was byssinosis with a prevalence of 30%–48.8% in textile and jute manufacturing. The prevalence of asbestosis has been reported to be 3%–9% among workers involved in its manufacture. List of Notifiable Diseases as per Third Schedule of the Factories Act, 1948 is given under.

### **Schedule III**

[Under Sections 89 & 90 of the Factories Act, 1948]

#### LIST OF NOTIFIABLE DISEASES

1. Lead poisoning including poisoning by any preparation or compound of lead or their sequelae.
2. Lead-tetra-ethyl poisoning.
3. Phosphorus poisoning or its sequelae.
4. Mercury poisoning or its 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 amide 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 manifestations due to-
  - (a) radium or other radioactive substances;
  - (b) X-rays.
15. Primary epitheliomatous cancer of the skin.
16. Toxic anaemia.
17. Toxic jaundice due to poisonous substances.
18. Oil acne or dermatitis due to mineral oils and compounds containing mineral oil base.
19. Byssionosis.



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 (exposures to high noise levels).]
23. Beryllium poisoning.
24. Carbon monoxide.
25. Coal miner's pneumoconiosis.
26. Phosgene poisoning.
27. Occupational cancer.
28. Isocyanates poisoning.
29. Toxic nephritis.

There are certain occupational diseases are notified in the Schedule IV of the Dock Workers (Safety, Health and Welfare) Regulations, 1990 and they are as given under.

#### **Schedule IV**

List of Notifiable Diseases.

[See Regulation 92 (1) of Dock Workers(Safety, Health and Welfare) Regulations, 1990]

- (1) Lead poisoning, including poisoning by any preparation or compound of lead or their sequelae.
- (2) Lead tetra-ethyl poisoning.
- (3) Manganese poisoning or its sequelae.
- (4) Carbon bisulphide poisoning.
- (5) Benzene poisoning, including poisoning by any of its homologus, their nitre or amide derivatives or its sequelae.
- (6) Anthrax.
- (7) Pneumoconosis.
- (8) Poisoning by halogens or halogen derivatives of the hydrocarbons of the aliphatic series.

(9) Primary epitheliomatous cancer of the skin.

(10) Occupational dermatitis.

(11) Noise induced hearing loss (exposure to high noise)

Table 19.7 below are given list of diseases approved for occupational diseases. The third schedule: list of occupational diseases (ESI act- Section 52 A).

Table 19.7

Occupational Disease	Employment
<b>PART - A</b>	
Infectious and parasitic diseases contracted in an occupation where there is a particular risk of contamination	<ul style="list-style-type: none"> <li>• Works involving exposure to health or laboratory work</li> <li>• Works involving exposure to veterinary work</li> <li>• Works related to handling animals, animal carcasses, part of carcasses, or merchandise which may have been contaminated by animal or animal carcasses</li> <li>• Other works carrying a particular risk of contamination</li> </ul>
Diseases caused by work in compressed air	<ul style="list-style-type: none"> <li>• Works involving exposure to the risk concerned</li> </ul>
Diseases caused by lead or its toxic compounds	<ul style="list-style-type: none"> <li>• Works involving exposure to the risk concerned</li> </ul>
Poisoning by nitrous fumes	<ul style="list-style-type: none"> <li>• Works involving exposure to the risk concerned</li> </ul>
Poisoning by organic phosphorus compounds	<ul style="list-style-type: none"> <li>• Work involving exposure to the risk concerned</li> </ul>
<b>PART B : Works involving exposure to the risk concerned as mentioned</b>	
Diseases caused by phosphorus or its toxic compounds	
Diseases caused by mercury or its toxic compounds	
Diseases caused by benzene or its toxic homologues	
Diseases caused by nitro and amido toxic derivatives of benzene or its homologues	
Diseases caused by chromium or its toxic compounds	
Diseases caused by arsenic or its toxic compounds	
Diseases caused by radioactive substances and ionizing radiations	
Primary epitheliomatous cancer of the skin caused by tar, pitch, bitumen, mineral oil, anthracene, or the compounds, products or residues of these substances	
Diseases caused by the toxic halogen derivatives of hydrocarbons (of the aliphatic and aromatic series)	
Diseases caused by carbon disulphide	
Occupational cataract due to infrared Radiations	
Diseases caused by manganese or its toxic compounds	
Skin diseases caused by physical, chemical or biological agents not included in other items	
Hearing impairment caused by noise	
Poisoning by dinitrophenol or a homologue or by substituted dinitrophenol or by the	

slats of such substances
Diseases caused by beryllium or its toxic compounds
Diseases caused by fluorine or its toxic compounds
Occupational asthma caused by recognized sensitizing agents inherent to the work process,
Diseases caused by fluorine or its toxic compounds
Diseases caused by nitroglycerine or other nitroacid esters
Diseases caused by alcohols and ketones
Diseases caused by asphyxiants: carbon monoxide, and its toxic derivatives, hydrogen sulphide
Lung cancer and mesotheliomas caused by asbestos
Primary neoplasm of the epithelial lining of the urinary bladder or the kidney or the ureter
<b>PART C : Works involving exposure to the risk concerned as mentioned</b>
Pneumoconiosis caused by sclerogenic mineral dust (silicosis, anthraosilicosis asbestosis) and silico-tuberculosis provided that silicosis is an essential factor in causing the resultant incapacity or death
Bagassosis
Bronchopulmonary diseases caused by cotton, flax, hemp and sisal dust (Byssinosos)
Extrinsic allergic alveolitis caused by the inhalation of organic dusts
Bronchopulmonary diseases caused by hard metals

### **Statistics of occupational diseases**

As per the directions of Hon'ble Supreme Court of India, a survey has been undertaken under the guidance and supervision of DGFASLI in factories regarding silicosis diseases among the industries, where free silica is likely to be present. There are many suspected cases of silicosis in stone quarry and other dusty workplaces and DGFASLI was requested to make investigations to identify and confirm silicosis cases. The studies are still on-going as of November 2017.

As shown in Table 19.8, reported occupational disease cases are still very limited and it is estimated that there are so many undiagnosed and unreported occupational diseases. However, in total, 51 cases of silicosis and related diseases including 4 cases of asbestos were already reported in Goa, Gujarat, Kerala, Maharashtra, Odisha and Tamil Nadu. Eighty-eight cases of noise-induced hearing loss and 9 cases of lead poisoning cases were also reported in Goa. Byssionosis cases were also reported in Gujarat and Telangana where the garment industry is flourishing.

**Table 19.8**

**STATE WISE DETAILS OF OCCUPATIONAL DISEASES**

Sl. No.	State	Occupational Diseases	2011	2012	2013	2014	2015	Total
1	Andaman & Nicobar Islands	-	NIL	NIL	NIL	NIL	NIL	NIL
2	Andhra Pradesh	-	NIL	NIL	NIL	NIL	NIL	NIL
3	Assam	-	NIL	NIL	NIL	NIL	NIL	NIL
4	Bihar	-	NIL	NIL	NIL	NIL	NIL	NIL
5	Chandigarh	-	NIL	NIL	NIL	NR	NIL	NIL
6	Chhattisgarh	-	NIL	NIL	NIL	NIL	NIL	NIL
7	Daman & Diu and Dadra & Nagar Haveli	-	NIL	NIL	NIL	NIL	NIL	NIL
8	Delhi	-	NIL	NIL	NIL	NIL	NIL	NIL
9	Goa	Silicosis	NIL	NIL	1	NIL	NIL	1
		Lead poisoning	NIL	NIL	NIL	NIL	9	9
10	Gujarat	Byssionosis	NIL	1	1	NIL	NIL	2
		Noise Induced Hearing Loss	NIL	2	NIL	80	3	88
		Silicosis	2	1	NIL	11	NIL	13
		Nasal Septum Perforation	NIL	NIL	6	NIL	NIL	6
		Pneumoconiosis (silicosis)	NIL	12	NIL	NIL	NIL	12
		Silicotuberculosis	NIL	NIL	1	NIL	NIL	2
		Contact dermatitis	NIL	NIL	1	NIL	NIL	1
11	Haryana	-	NIL	NIL	NIL	NIL	NIL	NIL
12	Himachal Pradesh	-	NIL	NIL	NIL	NIL	NIL	NIL

13	Jammu & Kashmir	-	NIL	NIL	NR	NIL	NIL	NIL
14	Jharkhand	-	NIL	NIL	NIL	NIL	NIL	NIL
15	Kerala	Silicosis	NIL	NIL	NIL	NIL	NIL	4
16	Karnataka	-	NIL	NIL	NIL	NIL	NIL	NIL
17	Meghalaya	-	NIL	NIL	NIL	NIL	NIL	NIL
18	Maharashtra	Asbestosis	NIL	2	NIL	1	1	4
		Toxic Nephritis	NIL	NIL	4	NIL	NIL	4
		Silicosis	NIL	NIL	NIL	4	NIL	4
		Bladder Cancer	NIL	NIL	NIL	1	NIL	1
		Irritant Contact Dermatitis	NIL	NIL	NIL	1	5	6
		Chrome Ulceration	NIL	NIL	NIL	NIL	3	3
19	Manipur	-	NIL	NR	NIL	NIL	NIL	NIL
20	Madhya Pradesh	-	NIL	NIL	NIL	NIL	NIL	NIL
21	Nagaland	-	NIL	NIL	NIL	NIL	NIL	NIL
22	Odisha	Silicosis	NIL	NIL	1	7	NIL	8
		Silico-Tuberculosis	NIL	NIL	1	NIL	NIL	1
23	Pondicherry	-	NIL	NIL	NIL	NIL	NIL	NIL
24	Punjab	-	NIL	NIL	NIL	NIL	NIL	NIL
25	Rajasthan	-	NIL	NIL	NIL	NIL	NIL	NIL
26	Tamil Nadu	Silicosis – Pulmonary Fibrosis	NIL	1	NIL	NIL	NIL	1
		Miliary TB with Industrial Bronchitis suspected Silicosis	NIL	1	NIL	NIL	NIL	1
		Bilateral Cystic Bronchiectasis suspected Silicosis	NIL	1	NIL	NIL	NIL	1
27	Telangana	Byssinosis	-	-	-	1	NIL	1
28	Tripura	-	NIL	NIL	NIL	NIL	NIL	NIL

29	Uttarakhand	-	NIL	NIL	NIL	NIL	NIL	NIL
30	Uttar Pradesh	-	NIL	NR	NR	NIL	NIL	NIL
31	West Bengal	Noise Induced Hearing Loss	42	NIL	NR	NIL	NIL	NIL

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs

### 19.3 Existing occupational health hazards and possible occupational diseases

To improve identification and reporting of occupational diseases, medical professionals have carried out many studies regarding existing occupational health hazards and possible occupational diseases. Table 19.xxxx shows a summary in the manufacturing sector.

National Institute of Occupational Health (NIOH) published its own National Profile on Occupational Health and Safety. The Profile includes the in-depth description of occupational diseases situations of India, including silicosis, asbestosis, pesticide poisoning, heavy metal poisoning and musculo-skeletal disorders. Source - "Occupational Health and Safety Profile – India, 2017" by National Institute of Occupational Health.

Type of manufacturing	Occupational health hazards reported
Leather/tanning industry	Dermatological problems, respiratory illnesses, diabetes, gastrointestinal problems, DNA damage and oxidative stress; occupational skin diseases (12%), contact dermatitis (7.4%); asthma, dermatitis, hepatic/neurological disorders, malignancies
Chemical industry	Skin disease, mental stress, liver problems, tuberculosis, breathing trouble, high urinary and serum fluoride, <i>Pesticide handlers</i> : poisoning (33%), decrease in acetyl cholinesterase activity, hepatotoxicity and nephrotoxicity
Metal and allied industry	Musculoskeletal problems (31.4%), gastrointestinal problems (25.8%), respiratory problems (18.1%); dust, smoke and ultraviolet rays-related eye problems (59%), skin problems (26%), noise-related hearing problems  Lead battery manufacturing: high blood and urinary lead levels, decreased serum calcium, phosphorus and vitamin D levels, increased parathyroid hormone

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	levels, raised systolic and diastolic blood pressures
Plastic and rubber industry	High blood and urinary lead, decreased haemoglobin levels, raised liver enzymes; reduced lung volume and flow rates, reduced ferric-reducing ability of plasma, reduced glutathione level and increased level of oxidative stress; cytogenetic damage and carcinomas
Textile & weaving industry	Aches (19.4%–25.5%), respiratory diseases (12.1%-15.5%), fever (7.7%) <i>Power/handlooms:</i> musculoskeletal disorders of upper and lower back (women) or knee (men)  <i>Carpet weaving industry:</i> persistent cough, expectoration, backache, common cold, joint pains
Asbestos industry	Carcinomas, parenchymal lung disease (82%), asbestosis (22%) and pleural disease (10%)
Automobile manufacturing	Heat stress-related health impairment (28%), carcinomas and genetic changes
Ship-building industry	Hearing loss (25%), osteoarthritis (10%), addictions (69%), overweight (53%) and hypertension (20%)

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\*Parentheses show the proportion of workers reported to be affected with that condition

(Source: SHIVALI SURI, RANJAN DAS, Natl Med J India 2016;29:277–81)

## **20. Industry-specific policies and programmes for hazardous occupations**

### **20.1 Manufacturing**

#### **Hazardous process industry under the Factories Act, 1948**

The Government of India has taken the following measures / steps to prevent major accidents in the factories:-

1. Amendment to the Factories Act, 1948

In order to obviate some of the short-comings, the Factories Act, 1948 was amended in 1987 and made more comprehensive. Some of the important provisions incorporated in the Act are as follows:

a) Defining of hazardous process

Any process or activity in relation to an industry specified in the First Schedule where, unless special care is taken, raw materials used therein or the intermediate or finished products, bye-products, wastes, or effluents thereof would-

- (i) cause material impairment to the health of the persons engaged in or connected therewith, or
- (ii) result in the pollution of the general environment:

List of industries involving hazardous process has been enlisted in the First Schedule.

- b) Incorporating Section 7A relating to General Duties of Occupier  
Absolute liability of the occupier for ensuring the safety, health and welfare of the workers, with specific provision for maintenance of plant and systems of work in the factory that are safe and without risks to health, providing such information, instruction, training and supervision as are necessary to ensure the health and safety of all workers at work, every occupier shall prepare, and, revise, a written statement of his general policy with respect to the health and safety of the workers at work.
- c) Incorporating Section 7B as General Duties of Manufacturer as regards Articles and Substances for use in the factory.
- d) A separate Chapter i.e. Chapter IV A on provisions relating to hazardous process consisting of Section 41-A: Constitution of Site Appraisal Committee, Section 41-B: Compulsory Disclosure of Information regarding the dangers including health hazards, accurate information as to the



quantity, specification and other characteristics of wastes and the manner of their disposal Section 41- C: Specific responsibility of the Occupier in relation to Hazardous Process, 41-D: Power of the Central Government to appoint Inquiry Committee Section 41 – E: Emergency Standards, 41 –G: Workers Participation in Safety management, and Section 41 – H: Right of the workers to warn about the imminent danger.

- e) Provision for the Right of Worker to obtain from the Occupier information relating to workers' health and safety at work, get trained by the occupier, represent to the Inspector directly or through his representative in the manner of inadequate provisions under Section 111-A.
- f) Provision of higher penalty for contravention of provisions of Section 41B, 41C and 41H relating to Hazardous Process under Section 96 - A
- g) Further, 26 State Governments/UTs have notified the Major Accident Hazards Rules framed under the Factories Act, 1948 which adequately addresses the issues arising out of disasters, etc. mainly relating to handling of Hazardous Chemicals.
- h) The Environment (Protection) Act, 1986 and the Rules framed thereunder such as The Manufacture, Storage and Import of Hazardous Chemical (MSIHC) Rules, 1989, The Hazardous Wastes (Management & Handling) Rules, 1989, The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996 are also applicable to the factories handling hazardous chemicals and the above aspects are covered including responsibilities assigned to the Chief Inspector of Factories and other concerned authorities.
- i) The Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996: The Rules called "Chemical Accidents (Emergency Planning, Preparedness and Response) Rules" under the Environment (Protection) Act, 1986 were notified in August, 1996. These rules provides for the constitution of crisis groups at the four levels: central, state, district and local levels. The groups deal with major chemical accidents and provide expert guidance for handling major accident hazards. In conjunction with the Manufacture, Storage and Import of Hazardous Chemicals rules, 1989 these Rules will prevent the recurrence of the incidents such as "Bhopal".
- j) Major Accident Hazards Control Rules: The draft rules prepared by DGFASLI are circulated to all the state governments for adoption in their state MAH Rules.

## **20.2 Construction**

The construction industry is the most hazards prone industry from accidents point of view. A large number of accidents take place every year in the country. Under The Building and Other Construction Workers (Regulations of Employment and Conditions of Service) Act, 1996 there is provision of the safe means of access to, and the safety of, any working place, including the provision of suitable and sufficient scaffolding at various stages when work cannot be safely done from the ground or from any part of a building or from a ladder or such other means of support. There is provision of precautions to be taken in connection with the demolition of the whole or any substantial part of a building or other structure under the supervision of a competent person and the avoidance of danger from collapse of any building or other structure while removing any part of the framed building or other structure by shoring or otherwise. There is also the need to handle or use of explosive under the control of competent persons so that there is no exposure to the risk of injury from explosion or from flying material. Adequate care has to be exercised in erection, installation, use and maintenance of transporting equipment, such as locomotives, trucks, wagons and other vehicles and trailers and appointment of competent persons to drive or operate such equipment. Also the erection, installation, use and maintenance of hoists, lifting appliances and lifting gear including periodical testing and examination and heat treatment, where necessary, precautions to be taken while raising or lowering loads, restrictions on carriage of persons and appointment of competent persons on hoists or other lifting appliances. There is need for adequate and suitable lighting of every workplace and approach thereto, of every place where raising or lowering operations with the use of hoists, lifting appliances or lifting gears are in progress and of all openings dangerous to building workers employed. Also the precautions need to be taken to prevent inhalation of dust, fumes, gases or vapours during any grinding, cleaning, spraying or manipulation of any material and steps to be taken to secure and maintain adequate ventilation of every working place or confined space. Also safe measures need to be taken during stacking or unshackling, stowing or unstowing of materials or goods or handling in connection therewith. the safeguarding of machinery including the fencing of every fly-wheel and every moving part of a prime mover and every part of transmission or other machinery, unless it is in such a position or of such construction as to be safe to every worker working on any of the operations and as if it were securely fenced.

## **20.3 Mining**

Mining is considered as one of the most hazardous industry in India. At the same time mining is an essential activity in each economy to use the available mineral resources of a country. Mining has a significant contribution to the GDP. On the one hand we have large mines in the organized sector and at the same time, there are a large number of small mines in the unorganized sector. The mining practices and the

working conditions in large mines are far better, than those prevalent in small mines in the unorganised sector.

#### **20.4 Prevention of major industrial accidents**

There are 1969 Major Hazardous (MAH) factories in 2014 as per DGFASLI Standard Reference Note 2015 (refer page 51 of their report). All the MAH factories in each of the states are to be inspected at least once in a year by the jurisdictional officers and in few cases along with senior officers of the factory inspectorate. Mock drills with reference to on-site emergency are being conducted twice in a year and in the presence of jurisdictional officers. In few MAH industries Mock drills are conducted in the presence of District Crisis Group members also.

## **21. Mechanisms to Prevent Industrial Disaster, Protect Environment and Promote Public Safety**

### **National Disaster Management Authority (NDMA)**

National Disaster Management Authority, abbreviated as NDMA is an agency of the Ministry of Home Affairs whose primary purpose is to coordinate response to natural or man-made disasters and for capacity-building in disaster resiliency and crisis response. NDMA was established through the Disaster Management Act enacted by the Government of India in December 2005. The Prime Minister is the ex-officio chairperson of it. The agency is responsible for framing policies, laying down guidelines and best-practices and coordinating with the State Disaster Management Authorities (SDMAs) to ensure a holistic and distributed approach to disaster management. The board consists of 9-members and it is chaired by the Prime Minister of India. The remainder of the board consists of members nominated based on their expertise in areas such as, planning, infrastructure management, communications, meteorology and natural sciences. The day-to-day management of the agency is overseen by the office of the Vice Chair.

NDMA is operationally organized into the following divisions:

- Policy & Planning
- Mitigation
- Operations & Communications
- Administration
- Capacity Building

The National Disaster Management Authority (NDMA), headed by the Prime Minister of India, is the apex body for Disaster Management in India. Setting up of NDMA and the creation of an enabling environment for institutional mechanisms at the State and District levels is mandated by the Disaster Management Act, 2005.

India envisions the development of an ethos of Prevention, Mitigation and Preparedness. The Indian government strives to promote a national resolve to mitigate the damage and destruction caused by natural and man-made disasters, through sustained and collective efforts of all Government agencies, Non-Governmental Organizations and People's participation. This is planned to be accomplished by adopting a Technology-Driven, Pro-Active, Multi-Hazard and Multi-Sectoral strategy for building a Safer, Disaster Resilient and Dynamic India.

## **Disaster Management Act, 2005**

Disaster Management Act, 2005 has been enacted by the Parliament to provide for the effective management of disasters and for matters connected therewith or incidental thereto. The National Disaster Management Authority is the national authority to

- (a) lay down policies on disaster management;
- (b) approve the National Plan;
- (c) approve plans prepared by the Ministries or Departments of the Government of India in accordance with the National Plan;
- (d) lay down guidelines to be followed by the State Authorities in drawing up the State Plan;
- (e) lay down guidelines to be followed by the different Ministries or Departments of the Government of India for the purpose of integrating the measures for prevention of disaster or the mitigation of its effects in their development plans and projects;
- (f) coordinate the enforcement and implementation of the policy and plan for disaster management;
- (g) recommend provision of funds for the purpose of mitigation;
- (h) provide such support to other countries affected by major disasters as may be determined by the Central Government;
- (i) take such other measures for the prevention of disaster, or the mitigation, or preparedness and capacity building for dealing with the threatening disaster situation or disaster as it may consider necessary;
- (j) lay down broad policies and guidelines for the functioning of the National Institute of Disaster Management (NIDM)

The Prime Minister of India is the Chairperson of the authority. The State Disaster Management Authority constituted under the Act is responsible for laying down policies and plans for disaster management in the State and and approve the State Plan in accordance with the guidelines laid down by the National Authority.

Every State Government is required to establish District Disaster Management Authority for every district in the State with such name as may be specified in that notification. The District Plan is prepared by the District Authority, after consultation with the local authorities and having regard to the National Plan and the State Plan, to be approved by the State Authority.

To prevent the industrial disasters separate Safety Monitoring Cell have been constituted where there are hazardous factories especially in chemical zones. They carryout activities listed below to prevent occurrenceof industrial disasters.

- Dedicated expert's inspection team for better understanding and implementation.
- Creating a data bank on hazardous chemical used, manufactured and handled with holding capacities.
- Co-ordinating with other departments like district administration, Fire and emergency services, pollution control board, Drugs controller, petroleum and explosives Safety organization, etc.;
- Reviewing the on-site emergency plans of the Factories.
- Assisting and Co-ordinating the emergency mock drills to establish a foolproof system.
- Assisting the District administration in the preparation of off-site emergency plan.
- Co-ordination in off-site emergency exercises.
- Publics are involved in mock drills/ exercises conducted in MAH industries,
- Off-site emergency mock drills are conducted involving public living in the vicinity of the factory.
- The safety pamphlets are distributed in the public areas around the factory.
- The public awareness programmes are organised with the involvement of local bodies etc., as local crisis group to address important issues relating to chemical accidents have been constituted as per chemical accident (Emergency planning preparedness and Response) Rules 1996.

The hazardous factories are required to develop an Onsite Emergency Plan covering all the possible emergencies for submitting to the Directorate of Industrial Safety and Health for recording. District collector is the authority for the preparation of Off site emergency plan.

## **22. OSH policies and programmes of organizations of employers and workers**

### **22.1 Policies, programmes and activities in OSH by employers' organizations**

Employer Organizations in various parts of the country do carry out various training programmes on OSH. Confederation on Indian Industry (CII) has representatives of member companies on their Safety Committee and they also carry out certain training programmes. Some of these are conducting course on Occupational Health & Safety Management System (OHSAS)

### **22.2 Policies, programmes and activities in OSH workers' organizations**

Certain Trade Unions do carry out programmes on OSH.

In Karnataka, an awareness programme about OSH with INTUC members was conducted at Mysuru where about 60 trade union representatives of factories had attended. In Kerala, various workers trade unions organise the safety awareness programmes in collaboration and coordination with the department for the workers and trade union leaders.

In Telangana, Employees Federation of South India (EFSI) had conducted programme on OSH in the Suryapet District and new initiatives in the Factories Act and Rules after the formation of Ease of Doing Business. In Delhi, workshops are conducted with the Industrial Associations of different industrial areas.

### **23. Regular or Ongoing Activities related to OSH, including international collaboration**

The Factories Act, 1948 is the comprehensive legislation governing the safety, health and welfare of the workers working in factories. The Act being a central enactment is administered by DGFASLI under the Ministry of Labour and Employment, Government of India. The Act was last amended in the year 1987. A comprehensive amendment proposal to the Factories Act, 1948 was initiated and the Factories (Amendment) Bill was introduced in the year 2014 in the Lok Sabha. The same is referred to the Parliamentary Standing Committee on Labour. The committee has submitted their report on the Bill. The Ministry carried out tripartite consultations on the amendment proposal so as to make a consensus on the proposal. Based on the tripartite and bipartite consultations an official proposal to the Factories (Amendment) Bill, 2014 has been prepared and the same is introduced in Rajya Sabha. The salient points in the Bill are as under:

- The application for registration of Factories is proposed to be fully automated and web enabled. Proposal is included for issue of Provisional registration on real time on submission of self- certified declaration.
- For empowering women workers the amendment is included with the provisions to allow women workers to work in night shifts and overtime, on assurance of their safety and welfare.

India in South Asia is a pioneer in the field of Occupational Safety & Health in South Asia and also a fastest growing economy in the region has taken initiatives to develop cooperation amongst SAARC Nations in this field. As a commencing step, a three-day South Asian Experts' meeting on OSH was organized by the Ministry of Labour and Employment (MoLE), India, with the active support of ILO, New Delhi in 2016 to enhance the technical collaboration and knowledge sharing on OSH for upgrading OSH systems in the SAARC Nations. It was mutually agreed by the experts during the meeting to establish a SAARC - OSH Network.

In this direction two such programmes have recently organised in Nepal and as an outcome it has been suggested to include the aspect of OSH in the agenda for the next meeting of SAARC members.

The Government of India is deeply concerned for bringing the North-Eastern region into the mainstream of the country. In 2014, under a Plan Scheme of DGFASLI "Establishment of Regional Labour Institute at Shillong for the North-East region"

was initiated with the objective to cater the needs of the North-Eastern Region in the areas of Occupational, Safety & Health for addressing the safety and health issues in the factories of the North-Eastern part of the country. The Plan is now operational and land has been acquired from the State Government for developing the Institute. The Hon'ble Minister of State (IC) Labour & Employment laid the foundation stone of the Institute. The drawing & estimate is obtained from CPWD and the construction activity is expected to commence shortly.



## **24. Data addressing demography, literacy, economy and employment, as available, as well as any other relevant information**

India's 2016 population is estimated at 1,326,801,576 based on the most recent UN data. India located in South Asia, is bordered by the Bay of Bengal, the Arabian Sea, the Indian Ocean, Pakistan, Bhutan, China, Nepal, Burma, and Bangladesh. India is the world's 7th largest country by area and the second-most populous with more than 1.3 billion residents.

1 of every 6 people on the planet live in India, and between the 2001 and 2011 censuses, the country grew by 17.7%, adding 181.5 million people. The country has doubled in size in just 40 years, and is expected to unseat China as the world's most populated country in the next couple decades.

The country as a whole has a population density of 387.9 people per square kilometer (1,004.7/square mile), which ranks 31st in the world. In Mumbai, the population density is 21,000 people per square kilometer (54,000/square mile).

### **Largest States in India**

There are 29 states in India. Their populations range massively in size – the largest, Uttar Pradesh, holds almost 200 million people, the smallest, Sikkim, just over half a million.

India's largest state is Uttar Pradesh which, with a population of 199,581,520 in 2011, is larger than most countries in the world. If it were a country in its own right, it would be the fifth largest in the world, falling just behind China, India, the United States and Indonesia.

Two other Indian states are home to more than 100 million people - Maharashtra (pop: 112.4 million) and Bihar (pop: 103.8 million). The smallest state in India is Sikkim (pop: 607,688).

### **India Demographics**

Data on ethnicity is not collected by the Indian census, although the CIA World Factbook estimates the population is 72% Indo-Aryan, 25% Dravidian, and 3% Mongoloid and other.

Hinduism is the most common religion in India, accounting for about 80% of the population. Islam is the second-largest religion at 13% of the population. Other major religious groups in India are Christians (2.3%), Sikhs (1.9%), Buddhists (0.8%) and Jains (0.4%). People who claimed no religion are officially recorded under 'other' by the census. In 2011, 0.9% of Indians selected the 'No Religion' category.

While the number of Indians living in urban areas has increased over the last two decades, about 67% of people still live in rural areas. In 2011, India had a literacy rate of 74%: 82% for men and 65% for women. The literacy rate varies wildly by state. Bihar is the least literate with a rate of 63.82%.

The 2011 census was the second largest the world has ever seen - second only to China's census the previous year. It took place in two phases. The first phase, in April 2010, counted all of the buildings in India, and the second phase collected data about the people of India.

The census was a massive exercise, employing millions of Indians. The total cost of the census came to \$439 million which was actually considerably cheaper per person than most censuses held around the world. The average census costs over \$4 per person, whereas the census in India cost just \$.50 per person.

The 2011 census was the fifteenth nationwide census carried out in India. The first was held in 1881, although it was not able to cover all of British-held Indian territory. The first comprehensive nationwide census was carried out under the auspices of Lord Ripon, the British Viceroy of India at the time, and counted a population of 288 million in 1881. Since then, a census has been held every ten years in India.

### India Population Growth

While India's population growth has slowed remarkably over the last few years, it's still growing faster than China and is expected to surpass China in population by 2028, when both will have about 1.55 billion people.

Table 25.1: Literacy rate by state/union territory

State/ UT Code	State/UT	Overall (%)	Male (%)	Female (%)
1	Jammu and Kashmir	86.61	87.26	86.23
2	Himachal Pradesh	83.78	90.83	76.60
3	Punjab	76.60	81.48	71.34
4	Chandigarh	86.43	90.54	81.38
5	Uttarakhand	79.63	88.33	70.70
6	Haryana	76.64	85.38	66.77
7	Delhi	86.34	91.03	80.93
8	Rajasthan	67.06	80.51	52.66
9	Uttar Pradesh	69.72	79.24	59.26
10	Bihar	63.82	73.39	53.33

Table 25.1: Literacy rate by state/union territory

State/ UT Code	State/UT	Overall (%)	Male (%)	Female (%)
11	Sikkim	82.20	87.29	76.43
12	Arunachal Pradesh	66.95	73.69	59.57
13	Nagaland	80.11	83.29	76.69
14	Manipur	79.85	86.49	73.17
15	Mizoram	91.58	93.72	89.40
16	Tripura	87.75	92.18	83.15
17	Meghalaya	75.48	77.17	73.78
18	Assam	73.18	78.81	67.27
19	West Bengal	77.08	82.67	71.16
20	Jharkhand	67.63	78.45	56.21
21	Odisha	72.90	82.40	64.36
22	Chhattisgarh	71.04	81.45	60.59
23	Madhya Pradesh	70.63	80.53	60.02
24	Gujarat	79.31	87.23	70.73
25	Daman and Diu	87.07	91.48	79.59
26	Dadra and Nagar Haveli	77.65	86.46	65.93
27	Maharashtra	83.20	89.82	75.48
28	Andhra Pradesh	67.66	75.56	59.74
29	Karnataka	75.60	82.85	68.13
30	Goa	87.40	92.81	81.84
31	Lakshadweep	92.28	96.11	88.25
32	Kerala	93.91	96.02	91.98
33	Tamil Nadu	80.33	86.81	73.86
34	Puducherry	86.55	92.12	81.22
35	Andaman and Nicobar Islands	86.27	90.11	81.84
-	<b>Overall (India)</b>	<b>74.03</b>	<b>82.14</b>	<b>65.46</b>

## Demographics of India



Map showing the population density of each district in India.

<b>Population</b>	1,324,171,354 (2016 est.)
<b>Density</b>	382 people per.sq.km (2011 est.)
<b>Growth rate</b>	▲ 1.19% (2016) (96th)
<b>Birth rate</b>	19.3 births/1,000 population (2016 est.)
<b>Death rate</b>	7.3 deaths/1,000 population (2016 est.)
<b>Life expectancy</b>	68.89 years (2009 est.)
• male	67.46 years (2009 est.)
• female	72.61 years (2009 est.)
<b>Fertility rate</b>	2.2 children born/woman (2016 est.)
<b>Infant mortality rate</b>	41 deaths/1,000 live births (2016 est.)

### Age structure

<b>0-14 years</b>	28.6% (male 190,075,426/female 172,799,553)
<b>15-64 years</b>	63.6% (male 381,446,079/female 359,802,209) (2009 est.)
<b>65 and over</b>	5.3% (male 29,364,920/female 32,591,030) (2009 est.)

### Sex ratio

<b>At birth</b>	1.10 male(s)/female (2013 est.)
<b>Under 15</b>	1.10 male(s)/female (2009 est.)
<b>15–64 years</b>	1.06 male(s)/female (2009 est.)
<b>65 and over</b>	0.90 male(s)/female (2009 est.)
<b>Nationality</b>	
<b>Major ethnic</b>	See Ethnic Groups of India
<b>Language</b>	
<b>Official</b>	See Languages of India

India is the second most populated country in the world with nearly a fifth of the world's population. According to the 2017 revision of the World Population Prospects, the population stood at 1,324,171,354.

During 1975–2010 the population doubled to 1.2 billion. The Indian population reached the billion mark in 1998. India is projected to be the world's most populous country by 2022, surpassing the population of China. It is expected to become the first political entity in history to be home to more than 1.5 billion people by 2030, and its population is set to reach 1.7 billion by 2050. Its population growth rate is 1.2%, ranking 94th in the world in 2013.

India has more than 50% of its population below the age of 25 and more than 65% below the age of 35. It is expected that, in 2020, the average age of an Indian will be 29 years, compared to 37 for China and 48 for Japan; and, by 2030, India's dependency ratio should be just over 0.4.

India has more than two thousand ethnic groups, and every major religion is represented, as are four major families of languages (Indo-European, Dravidian, Austroasiatic and Sino-Tibetan languages) as well as two language isolates (the Nihali language<sup>[10]</sup> spoken in parts of Maharashtra and the Burushaski language spoken in parts of Jammu and Kashmir (Kashmir)).

Further complexity is lent by the great variation that occurs across this population on social parameters such as income and education. Only the continent of Africa exceeds the linguistic, genetic and cultural diversity of the nation of India. The sex ratio is 944 females for 1000 males (2016).

## **25. Gap Analysis of existing National OSH systems and Recommendations of Action Points for including in the National OSH Programme**

### **Gap Analysis of existing National OSH systems**

- 1. A comprehensive legislation on OSH covering all the sectors of economic activities which are otherwise not getting covered under any legislation on OSH, is not available. Apart from the existing OSH-related legislations for the four sectors, i.e., the manufacturing, mining, ports and construction, legislation to cover the other sectors such as agriculture sector, service sector, transport sector, etc., are not available leaving a huge gap. As per clause 4.1.9 of National Policy on Safety, Health and Environment at Workplace, there should be legislation on Safety, Health and Environment at workplaces.**
- 2. The National Policy on Safety, Health and Environment at Workplace was announced in 2009. DGFASLI has been entrusted the work operationalising the policy. The review of policy is in progress. For effective implementation, there has been no specific financial budget and scheme.**
- 3. The Factories Act, 1948 is a central enactment for securing the safety, health and welfare of workers working in the factories. Under the enabling provisions of the Act, the state governments are empowered to frame their respective state factories rules and enforce both the Act and the Rules in their states. The state governments through their Inspectorates of Factories /Directorates of Industrial Safety and Health under the labour departments enforce the provisions of the Act and the rules. The manpower strength of these Inspectorates /Directorates is insufficient to effectively enforce the Act and the Rules. Many posts under these Inspectorates /Directorates are lying vacant due to which the enforcement activity is adversely affected. Further, central rules under the Factories Act, 1948 are not available which must be framed and enforced by an authority under the central government for the factories under the administrative control of the central government and public sector undertakings.**
- 4. The Dock Workers (Safety, Health and Welfare) Act, 1986 and Regulations, 1990 framed thereunder are being enforced only in major ports by DGFASLI. For the ports, other than the major ports, the state governments are required to frame their respective state regulations and enforce the provisions of the both the Act and the Regulations in these**

ports. However, till date none of the states have framed their regulations for enforcement in these ports. Since, these ports are also handling huge quantities of cargo, including dangerous goods, the absence of regulation on safety and health of the workers and its enforcement is a major gap.

5. The Building and Other Construction Workers' Act, 1996, is being enforced by the Labour Commissioners at the Centre and at the State Level. The safety and health provisions under the Act being highly technical in nature is not being enforced in true letter and spirit. Hence, DGFASLI may be entrusted with enforcement and other consequential action for occupational safety and health matter under BOCW Act, 1996 at central level and state DISH/CIFs at the state government level.
6. Clause 4.5.1 of the NPSHEW requires providing for research in the field of safety, health and environment at workplace, including the social and psychological factors involved, and by developing innovative methods, techniques including computer aided Risk Assessment Tools, and approaches for dealing with safety, health and environment at workplace. At present only limited institutes in the country are available for research and development in the field of OSH. These institutions are not fully equipped for carrying out their activities effectively.
7. As per clause 4.7 of the NPSHEW, data capturing related to OSH on national basis from all the sectors is an issue for long time as we are capturing data for the sectors like manufacturing, mining, ports and construction only.
8. Training Institutes at national level on OSH are not available for imparting the training to workers from formal and informal sectors. Clause 4.6.2 of the NPSHEW requires for training programmes to increase the number and competence of personnel engaged in the field of occupational safety, health and environment at workplace. Clause 4.6.6 further requires adopting Occupational Safety and Health training curricula in workplace and industry programmes. Such training institutes are at present not identified in the country. Online course in the field of occupational safety and health is not available for benefitting the employed workers.
9. Clause 1.10 and 2.8 of the NPSHEW requires every Ministry or Department to work out their detailed policy relevant to their working environment as per the guidelines on the National Policy. So far Ministries or Departments have not worked out their policy in line with the NPSHEW.

10. **Clause 2.3 of the NPSHEW provides for a system of incentives to employers and employees to encourage achieving higher standards of safety and health at workplaces. Such a system is not available, except for the manufacturing and mining sectors being covered under the Factories Act, 1948 and the Mines Act, 1952 in the formal economy. Further, for the informal economy no such system is in existence.**
11. **Clause 4.1.3 of the NPSHEW provides for establishment of suitable schemes for subsidy and provision of loans to enable effective implementation of the policy. However, such a scheme has not been launched till date.**
12. **Clause 4.3.8 of the NPSHEW requires for providing a suitable accreditation machinery to recognise institutions, professionals and services relating to safety, health and environment at workplace for uniformity and greater coverage as also authenticating safe management system.**
13. **Clause 4.3.10 of the NPSHEW provides for specifically focusing on occupational diseases and developing a framework for its prevention and control as well as develop technical standards and guidelines for the same. Though such standards are available to a limited extent, but not easily accessible and available to the industry.**
14. **Clause 4.4.7 of the provides for suitably incorporating teaching inputs on safety, health and environment at work place in schools, technical, medical, professional and vocational courses and distance education programme. At present teaching inputs on safety and health are not included in the teaching curricula in schools, technical, medical, professional and vocational courses and distance education programme.**
15. **Clause 4.6.6 requires adopting Occupational Safety and Health training curricula in workplace and industry programmes. Such training institutes are at present not identified in the country.**
16. **Ratification of ILO conventions concerning occupational safety and health needs to undertaken expeditiously. ILO conventions 155 and 187 have not yet been ratified by our country.**
17. **The agriculture sector is lacking on legislation on safety and health for the workers working in this sector. There are certain Acts on occupational safety and health pertaining to certain equipments or substances, viz., the Dangerous Machines Regulation Act, the Insecticides Act. The enforcement authorities are not identified under these Acts and hence are not being enforced. The agriculture sector is the largest sector of**



**economic activity and needs to be regulated for safety and health aspects. Lack of legislation on safety and health in the agriculture sector is hindering the ratification of ILO convention 155.**

**18. Industries under MSME do not have any legislation to cover the safety and health of the workers.**

## Recommendations of Action Points for including in the National OSH Programme

S.No	Recommendation	Action plan
1.	A comprehensive legislation on OSH covering all the sectors of economic activities needs to be developed and implemented in order to accomplish the action programme as given in clause 4.1.9 of the National Policy on Safety, Health and Environment at Workplace. Such legislation will however not take into its fold the workplaces getting OSH legislation coverage under the manufacturing, mining, ports and construction.	A comprehensive legislation on OSH covering all the sectors of economic activities, except the workplaces getting covered under the existing four legislations, needs to be developed within a time frame of three years.
2.	Implementation of the National Policy on Safety, Health and Environment at Workplace shall be implemented in true letter and spirit by the both central and state governments.	For implementation, a separate budget allocation shall be provided by all the ministries /department of the central government and the state governments. The activity may be completed within a period of one year.
3.	The central rules are required to be framed and an authority identified for enforcing in the central sphere. DGFASLI is the administrative department under the Ministry of Labour and Employment dealing with the Act and coordinating with the state governments for effective enforcement of the Act throughout the country. The Model Factories Rules framed by DGFASLI may be adopted as the central rules and both the Act and the Rules to be enforced by DGFASLI in the central sphere.	The Model Factories Rules available with DGFASLI may be taken forward for enactment as the central rules under the Factories Act, 1948. The activity may be completed within a period of three years.
4.	DGFASLI has been enforcing Dock Workers (Safety, Health and Welfare) Act, 1986 is applicable in the major ports only. The enactment of the statutes can be extended to the other ports as well.	Amendments may be made in the Dock Workers (Safety, Health and Welfare) Act, 1986 to empower DGFASLI to enforce the act and regulations made thereunder in all other ports in addition to major ports. Such a system may be put in place by DGFASLI by acquiring and

		establishing its offices in the ports where Inspectorates of Dock Safety are not available. Also additional manpower needs to be sanctioned for DGFASLI for carrying out the activity. This may be completed within a period of two years.
5.	The safety and health provisions under the Building and Other Construction Workers' (RECS) Act, 1996 being highly technical in nature need to be enforced by a technically competent agency on OSH.	DGFASLI having technical expertise in the OSH field may be entrusted with enforcement of the safety and health provisions.
6.	An institution in the country need to be identified for providing research in the field of safety, health and environment at workplace, including the social and psychological factors involved, and by developing innovative methods, techniques including computer aided Risk Assessment Tools, and approaches for dealing with safety, health and environment at workplace are available for research and development in the field of OSH.	DGFASLI is the apex body in the Government of India for advising on the aspects of safety and health issues is to be developed as a National Institution /R&D centre in the field of OSH within a period of three years.
7.	There should be an online system of collecting data on national basis by developing dedicated software for each sector. Data should be collected on real time basis and updated in software.	Developing dedicated software for each sector for collecting data on national basis may be done in the time frame of three years.
8.	Every Ministry or Department should align their policy with the National Policy on Safety, Health and Environment at workplace should be taken up immediately.	The process of integrating the detailed policy of every Ministry or Department with the National Policy on Safety, Health and Environment at workplace should be completed within a time frame of one year.
9.	A proposal for an accreditation system for the manufacturing sector is under consideration of the Ministry of Labour and Employment.	The accreditation machinery may be finalised and put in place at the earliest.
10.	There is a need to develop a framework for prevention of occupational diseases and for development of technical standards and guidelines.	DGFASLI, ESIC ICMR and other national bodies sharing the platform may develop technical standards and guidelines.

11.	Incorporation of teaching inputs on safety, health and environment in schools, technical, medical, professional and vocational courses and distance education programmes.	The issue of incorporating inputs on safety, health and environment in different curriculums may be taken up with the appropriate Ministries.
12.	The informal sector is at present not getting covered any OSH legislation. For ratification of ILO convention 155, the informal sector will have to be covered under an enabling OSH legislation. Further, ratification of ILO convention 187 will be possible only after putting the national OSH programme.	<p>A comprehensive legislation on OSH covering all the sectors of economic activities, except the workplaces getting covered under the existing four legislations, needs to be developed within a time frame of five years.</p> <p>After the OSH legislation is in place, the ratification of ILO convention 155 may be undertaken and ratified within a time frame of three years.</p> <p>After preparation of the OSH profile, the national OSH programme shall be prepared within a time frame of three years. Ratification of ILO convention 187 may be undertaken and ratified within a time frame of three years.</p>
13.	Special institutions on OSH for agriculture sector shall be created under Ministry of Human Resources Development. NGOs like IAOH may be trained on OSH and other NGOs may be encouraged. ICAR may be entrusted with responsibility for providing occupational safety and health in agriculture sector. DGFASLI shall be advisory body in providing technical matters on OSH.	Creation of special institutions under Indian Council of Agricultural Research (ICAR) for agriculture sector shall be done within a time frame of three years.
14.	A system is to be developed to provide training on OSH to the workers in MSME sector under MSME Act.	Training on OSH for the workers in MSME may be entrusted with the Ministry of Small Scale Industries. DGFASLI shall be advisory body in providing technical matters on OSH. The task may be completed within a time period of two years.

**Annexure I**

**Table 3.1 - Inspectors of Factories for the year during 2011-2016**

Sl. No.	State/ Union Territory	2011		2012		2013		2014		2015		2016	
		Sanctioned	In-position	Sanctioned	In-position	Sanctioned	In-position	Sanctioned	In-position	Sanctioned	In-position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	2	2	2	2	2	2	2	2	2	2	2	2
2.	Andhra Pradesh	76	62	76	61	76	38	47	39	53	37	53	40
3.	Assam	29	25	29	25	29	23	29	20	29	26	29	26
4.	Bihar	21	8	21	8	21	9	21	13	21	13	21	10
5.	Chandigarh	0	6	0	6	0	6	0	6	0	6	0	6
6.	Chhattisgarh	27	10	27	10	27	10	27	10	27	24	30	23
7.	Daman & Diu and Dadra & Nagar Haveli	1	1	1	1	1	1	1	1	1	1	1	1
8.	Delhi	15	10	15	11	15	10	16	10	16	10	16	10
9.	Goa	7	4	7	6	7	6	7	4	7	5	7	5
10.	Gujarat	124	81	124	80	148	77	124	68	126	85	126	79
11.	Haryana	36	33	38	37	36	35	2	49	36	32	NA	NA
12.	Himachal Pradesh	2	50	2	50	2	50	2	49	2	49	2	50
13.	Jammu & Kashmir	5	5	5	4	..	..	5	5	5	5	5	5
14.	Jharkhand	25	18	25	18	25	21	25	21	25	21	25	21
15.	Karnataka	46	46	61	50	41	30	41	30	54	37	42	39
16.	Kerala	57	58	56	57	57	57	57	54	56	53	59	53
17.	Madhya Pradesh	41	28	41	28	41	28	41	28	41	26	NA	NA
18.	Maharashtra	131	72	131	98	131	88	131	82	131	74	131	68
19.	Manipur	2	3	..	..	2	3	2	3	2	2	3	3
20.	Meghalaya	4	4	4	3	3	3	4	3	3	3	4	3
21.	Mizoram	-	-	-	-	-	-	-	-	1	1		
22.	Nagaland	3	3	3	3	3	3	3	3	3	3	3	3
23.	Odisha	34	30	34	27	34	29	34	29	34	29	34	29
24.	Puducherry	10	8	10	8	9	6	9	6	9	4	9	4
25.	Punjab	25	8	28	17	27	17	28	19	28	19	28	19
26.	Rajasthan	40	21	39	21	39	21	39	21	39	20	39	18
27.	Tamil Nadu	132	102	132	70	169	97	168	95	168	95	168	109
28.	Telangana	-	-	-	-	-	-	35	30	30	29	30	30
29.	Tripura	5	4	5	4	5	5	5	5	5	5	5	5
30.	Uttar Pradesh	..	..	..	..	..	..	47	14	47	12	NA	NA
31.	Uttarakhand	..	..	3	3	2	2	2	2	2	2	2	2
32.	West Bengal	72	41	72	45	72	39	62	38	72	38	NA	NA
<b>Total</b>		972	743	991	753	1024	716	1016	759	1075	768	874	663

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 3.2.1 - State-wise Specialist Inspectors of Factories during 2011-2016**

Sl. No.	State/ Union Territory	2011							
		Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	3	1	1	0	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	0	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	1	0	0	0	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	1	1	0	0	11	5
11.	Haryana	5	3	5	5	0	0	0	0
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	4	2	4	4	0	0	2	2
17.	Madhya Pradesh	1	0	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	1	1	0	0	0	0	0	0
23.	Puducherry	1	1	1	0	0	0	1	0
24.	Punjab	0	0	3	2	0	0	0	0
25.	Rajasthan	1	1	2	2	1	1	2	1
26.	Tamil Nadu	0	0	0	0	0	0	0	0
27.	Tripura	0	0	0	0	0	0	0	0
28.	Uttar Pradesh	..	..	..	..	..	..	..	..
29.	Uttarakhand	..	..	..	..	..	..	..	..
30.	West Bengal	9	4	12	5	0	0	0	0
<b>Total</b>		<b>41</b>	<b>39</b>	<b>19</b>	<b>33</b>	<b>19</b>	<b>1</b>	<b>1</b>	<b>17</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim (ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States / UTs.

**Table 3.2.2 - State-wise Specialist Inspectors of Factories during 2011-2016**

Sl. No.	State/ Union Territory	2012							
		Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	3	1	1	0	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	0	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	1	0	0	0	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	1	1	0	0	41	35
11.	Haryana	5	2	5	5	0	0	0	0
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	5	1	5	5	0	0	0	0
17.	Madhya Pradesh	1	0	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	..	..	..	..	..	..	..	..
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	1	1	0	0	0	0	0	0
23.	Puducherry	1	1	1	0	0	0	1	1
24.	Punjab	3	2	2	2	0	0	0	0
25.	Rajasthan	1	1	3	2	1	1	2	0
26.	Tamil Nadu	1	0	0	0	0	0	0	0
27.	Tripura	0	0	0	0	0	0	0	0
28.	Uttar Pradesh	..	..	..	..	..	..	..	..
29.	Uttarakhand	0	0	0	0	0	0	0	0
30.	West Bengal	9	4	12	4	0	0	0	0
<b>Total</b>		<b>41</b>	<b>44</b>	<b>19</b>	<b>34</b>	<b>19</b>	<b>1</b>	<b>1</b>	<b>45</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim. (ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.2.3 - State-wise Specialist Inspectors of Factories during 2011-2016**

		2013							
Sl. No.	State/ Union Territory	Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	3	1	1	1	0	0	6	6
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	1	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	1	0	0	0	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	1	1	0	0	4	1
11.	Haryana	5	3	5	5	0	0	3	3
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	..	..	..	..	..	..	..	..
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	4	4	5	5	0	0	2	2
17.	Madhya Pradesh	1	0	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	1	1	0	0	0	0	0	0
23.	Puducherry	1	1	1	1	0	0	1	1
24.	Punjab	3	3	0	0	0	0	0	0
25.	Rajasthan	1	1	3	2	1	1	2	0
26.	Tamil Nadu	1	1	0	0	0	0	0	0
27.	Tripura	0	0	0	0	0	0	0	0
28.	Uttar Pradesh	..	..	..	..	..	..	..	..
29.	Uttarakhand	0	0	0	0	0	0	0	0
30.	West Bengal	9	4	12	9	0	0	0	0
<b>Total</b>		<b>41</b>	<b>43</b>	<b>25</b>	<b>32</b>	<b>25</b>	<b>1</b>	<b>1</b>	<b>19</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim. (ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.



**Table 3.2.4 - State-wise Specialist Inspectors of Factories during 2011-2016**

		2014							
Sl. No.	State/ Union Territory	Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	2	0	1	1	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	1	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	1	0	0	0	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	4	1	4	0	4	1
11.	Haryana	5	4	5	5	0	0	3	3
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	4	1	5	5	0	0	2	2
17.	Madhya Pradesh	1	0	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	1	1	0	0	0	0	0	0
23.	Puducherry	1	1	1	1	0	0	1	1
24.	Punjab	3	2	..	..	..	..	..	..
25.	Rajasthan	1	1	3	1	1	1	2	0
26.	Tamil Nadu	0	0	0	0	0	0	0	0
27.	Telangana	0	0	0	0	0	0	0	0
28.	Tripura	0	0	0	0	0	0	0	0
29.	Uttar Pradesh	0	0	0	0	0	0	0	0
30.	Uttarakhand	0	0	0	0	0	0	0	0
31.	West Bengal	9	3	12	8	0	0	0	0
<b>Total</b>		41	19	35	23	5	1	13	8

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim. (ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.2.5 - State-wise Specialist Inspectors of Factories during 2011-2016**

		2015							
Sl. No.	State/ Union Territory	Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	0	0	1	1	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	1	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	2	2	0	0	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	4	1	4	0	2	0
11.	Haryana	5	5	5	5	0	0	3	2
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	4	0	5	5	1	1	3	2
17.	Madhya Pradesh	1	1	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Mizoram	0	0	0	0	0	0	0	0
22.	Nagaland	0	0	0	0	0	0	0	0
23.	Odisha	1	1	0	0	0	0	0	0
24.	Puducherry	1	1	1	1	0	0	1	1
25.	Punjab	3	2	0	0	0	0	0	0
26.	Rajasthan	1	1	3	1	0	0	1	0
27.	Tamil Nadu	0	0	0	0	0	0	0	0
28.	Telangana	1	0	0	0	0	0	0	0
29.	Tripura	0	0	0	0	0	0	0	0
30.	Uttar Pradesh	0	0	0	0	0	0	0	0
31.	Uttarakhand	0	0	0	0	0	0	0	0
32.	West Bengal	9	2	12	8	0	0	0	0
<b>Total</b>		<b>41</b>	<b>21</b>	<b>35</b>	<b>23</b>	<b>5</b>	<b>1</b>	<b>11</b>	<b>6</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.2.6 - State-wise Specialist Inspectors of Factories during 2011-2016**

2016									
Sl. No.	State/ Union Territory	Medical		Chemical		Hygiene		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	2	0	1	1	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	1	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	2	2	0	0	0	0	0	0
7.	Daman & Diu and	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	1	4	1	4	0	2	0
11.	Haryana	NA	NA	NA	NA	NA	NA	NA	NA
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	1	1	0	0
16.	Kerala	4	0	7	7	1	1	1	0
17.	Madhya Pradesh	NA	NA	NA	NA	NA	NA	NA	NA
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Mizoram								
22.	Nagaland	0	0	0	0	0	0	0	0
23.	Odisha	1	1	0	0	0	0	0	0
24.	Puducherry	1	1	1	1	0	0	1	1
25.	Punjab	3	2	0	0	0	0	0	0
26.	Rajasthan	1	0	2	0	4	1	0	0
27.	Tamil Nadu	0	0	0	0	0	0	0	0
28.	Telangana	1	0	0	0	0	0	0	0
29.	Tripura	0	0	0	0	0	0	0	0
30.	Uttar Pradesh	NA	NA	NA	NA	NA	NA	NA	NA
31.	Uttarakhand	0	0	0	0	0	0	0	0
32.	West Bengal	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total</b>		<b>11</b>	<b>19</b>	<b>11</b>	<b>10</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>11</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim. (ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States / UTs.

**Table 3.3.1 - State-wise Certifying Surgeons of Factories during 2011-16**

2011					
Sl. No.	States/UTs	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	3	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu & Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	0	0
9.	Goa	0	0	1	0
10.	Gujarat	21	9	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	2	0	562
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	58
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Nagaland	8	0	0	0
22.	Odisha	0	0	0	0
23.	Puducherry	1	1	0	0
24.	Punjab	0	0	0	0
25.	Rajasthan	1	1	0	0
26.	Tamil Nadu	8	6	0	0
27.	Tripura	0	0	13	13
28.	Uttar Pradesh	..	..	..	..
29.	Uttarakhand	..	..	..	..
30.	West Bengal	0	0	0	0
	<b>Total</b>	<b>44</b>	<b>21</b>	<b>18</b>	<b>650</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.3.2 - State-wise Certifying Surgeons of Factories during 2011-16**

2012					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	3	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	0	0
9.	Goa	0	0	0	0
10.	Gujarat	21	8	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	0
19.	Manipur	..	..	..	..
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	0	0	0	0
23.	Puducherry	1	1	0	0
24.	Punjab	3	2	0	0
25.	Rajasthan	1	1	0	0
26.	Tamil Nadu	8	6	8	6
27.	Tripura	0	0	13	13
28.	Uttar Pradesh	..	..	..	..
29.	Uttarakhand	0	0	0	0
30.	West Bengal	9	4	0	0
<b>Total</b>		<b>48</b>	<b>24</b>	<b>25</b>	<b>36</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.3.3 - State-wise Certifying Surgeons of Factories during 2011-16**

2013					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	4	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	1	1
9.	Goa	0	0	0	0
10.	Gujarat	21	9	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	..	..	..	..
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	0
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	0	0	21	21
23.	Puducherry	1	1	0	0
24.	Punjab	0	0	0	0
25.	Rajasthan	1	1	0	0
26.	Tamil Nadu	8	7	8	7
27.	Tripura	0	0	20	20
28.	Uttar Pradesh	..	..	..	..
29.	Uttarakhand	0	0	0	0
30.	West Bengal	9	4	0	0
<b>Total</b>		<b>46</b>	<b>24</b>	<b>54</b>	<b>66</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.3.4 - State-wise Certifying Surgeons of Factories during 2011-16**

2014					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	3	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	1	1
9.	Goa	0	0	0	0
10.	Gujarat	21	8	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	0
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	0	0	21	21
23.	Puducherry	1	1	0	0
24.	Punjab	3	2	3	2
25.	Rajasthan	0	0	1	1
26.	Tamil Nadu	9	8	9	9
27.	Telangana	0	0	0	0
28.	Tripura	0	0	20	20
29.	Uttar Pradesh	0	0	0	0
30.	Uttarakhand	0	0	0	0
31.	West Bengal	9	3	0	0
<b>Total</b>		<b>48</b>	<b>24</b>	<b>59</b>	<b>71</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.3.5 - State-wise Certifying Surgeons of Factories during 2011-16**

2015					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	2	0	0	0
3.	Assam	3	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	*	*
9.	Goa	0	0	0	0
10.	Gujarat	21	8	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	0
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Mizoram	0	0	0	0
22.	Nagaland	0	0	0	0
23.	Odisha	0	0	21	21
24.	Puducherry	1	1	0	0
25.	Punjab	0	0	0	0
26.	Rajasthan	0	0	0	0
27.	Tamil Nadu	9	8	9	8
28.	Telangana	0	0	0	0
29.	Tripura	0	0	20	20
30.	Uttar Pradesh	0	0	0	0
31.	Uttarakhand	0	0	0	0
32.	West Bengal	9	2	0	0
<b>Total</b>		<b>47</b>	<b>21</b>	<b>54</b>	<b>66</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.



**Table 3.3.6 - State-wise Certifying Surgeons of Factories during 2011-16**

2016					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	3	2	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and	0	0	0	1
8.	Delhi	1	1	*	*
9.	Goa	0	0	0	0
10.	Gujarat	21	9	0	0
11.	Haryana	NA	NA	NA	NA
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	NA	NA	NA	NA
18.	Maharashtra	1	0	0	0
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Mizoram	NA	NA	NA	NA
22.	Nagaland	0	0	0	0
23.	Odisha	0	0	0	0
24.	Puducherry	1	1	0	0
25.	Punjab	3	3	3	3
26.	Rajasthan	0	0	0	0
27.	Tamil Nadu	9	8	9	8
28.	Telangana	0	0	0	0
29.	Tripura	0	0	20	20
30.	Uttar Pradesh	NA	NA	NA	NA
31.	Uttarakhand	0	0	0	0
32.	West Bengal	NA	NA	NA	NA
<b>Total</b>		<b>39</b>	<b>24</b>	<b>36</b>	<b>48</b>

**Table 3.4 - No. of Factories Inspected during 2011-16**

Sl. No.	State/ Union Territory	2011		2012		2013		2014		2015		2016	
		All Factories	Hazardous Factories	All Factories	Hazardous Factories	All Factories	Hazardous Factories	All Factories	Hazardous Factories	All Factories	Hazardous Factories	All Factories	Hazardous Factories
1.	Andaman & Nicobar Islands	21	2	19	2	28	2	31	2	31	2	15	2
2.	Andhra Pradesh	7643	1179	7967	425	10198	1419	4607	421	4708	427	4348	404
3.	Assam	1169	0	1154	0	1629	16	1610	16	2103	24	1059	24
4.	Bihar	2055	40	1816	45	1194	45	1059	45	1289	69	0	0
5.	Chandigarh	38	4	28	0	24	0	19	0	1	0	7	6
6.	Chhattisgarh	836	208	716	304	1152	353	1311	511	1385	427	1661	605
7.	Daman & Diu and Dadra & Nagar Haveli	180	22	190	23	180	20	160	12	140	10	141	11
8.	Delhi	1830	161	2167	157	1775	183	1105	177	1036	145	1001	110
9.	Goa	161	54	211	13	224	15	161	35	66	31	105	26
10.	Gujarat	11202	4574	13916	2394	16490	2727	13499	2543	14056	3491	7483	2312
11.	Haryana	2744	479	2720	240	1562	195	2742	444	347	53	NA	NA
12.	Himachal Pradesh	1750	83	1093	83	1093	83	1201	83	1165	362	1211	363
13.	Jammu & Kashmir	1052	24	1065	24	..	..	1295	12	1166	19	1382	19
14.	Jharkhand	15973	38	17282	38	2795	537	2630	578	2544	503	1920	368
15.	Karnataka	8542	1056	8176	993	7979	1025	9160	1144	8395	1149	8140	1196
16.	Kerala	15894	726	14043	759	12852	698	13656	776	12615	980	12936	1386
17.	Madhya Pradesh	3324	885	3066	978	3423	1073	3024	1232	2249	1320	NA	NA
18.	Maharashtra	8113	1548	11873	2240	18184	2735	14352	2290	11333	3096	6311	2223
19.	Manipur	205	6	..	..	150	6	162	6	185	8	279	7
20.	Meghalaya	42	6	70	33	35	3	17	8	19	7	42	17
21.	Mizoram	..	..	..	..	..	..	..	..	0	0		
22.	Nagaland	0	0	152	0	204	0	210	0	263	2	883	2
23.	Odisha	2472	389	2545	433	2434	444	2824	580	3189	580	1113	580
24.	Pudduchery	1345	160	1066	150	1670	160	1167	152	1082	136	942	172
25.	Punjab	1304	96	1003	170	2904	176	2599	232	2141	287	2051	428
26.	Rajasthan	4103	0	3051	0	2163	0	3194	0	2819	0	5730	0
27.	Tamil Nadu	25335	4584	25030	1965	34787	1431	27634	1186	29781	2150	30668	1739
28.	Telangana	..	..	..	..	..	..	3849	1586	2529	1232	3229	1532
29.	Tripura	1001	19	1271	19	1330	22	1124	31	907	32	1109	31
30.	Uttar Pradesh	..	..	..	..	..	..	1087	109	1421	157	NA	NA
31.	Uttarakhand	..	..	53	48	78	34	107	35	141	39	80	14
32.	West Bengal	3418	578	4366	852	3813	1207	3356	1057	2044	461	NA	NA
<b>Total</b>		121752	16921	126109	12388	130350	14609	118952	15303	111150	17199	93846	13577

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.  
(ii) P : Provisional (iii) .. : Not Available **Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.5.1 Prosecution & Convictions under Section 92 & Section 96A during 2011-2016**

2011							
Sl. No.	States/ UTs	Pending from Previous year	Launched during the year	Decided during the year	Convictions	Imprisonment (Person)	Total fine Imposed (Rs.)
1.	Andaman & Nicobar Islands	0	0	0	0	0	0
2.	Andhra Pradesh	4164	1357	844	434	0	5658660
3.	Assam	7	17	0	1	0	0
4.	Bihar	53	12	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0
6.	Chhattisgarh	722	428	314	226	16	10226100
7.	Daman & Diu & Dadra & Nagar Haveli	0	0	0	0	0	0
8.	Delhi	394	398	107	107	0	1377000
9.	Goa	27	12	9	9	0	175500
10.	Gujarat	25268	2359	1319	829	0	3798750
11.	Haryana	5760	4249	1565	1477	0	4921000
12.	Himachal Pradesh	160	86	69	69	0	728500
13.	Jammu & Kashmir	96	66	25	0	0	83000
14.	Jharkhand	185	45	0	0	0	0
15.	Karnataka	557	227	191	101	0	4756700
16.	Kerala	71	27	26	25	0	323000
17.	Madhya Pradesh	3272	156	147	0	0	2786550
18.	Maharashtra	1237	652	713	713	0	11836350
19.	Manipur	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0
22.	Odisha	1312	291	8	0	0	52600
23.	Puducherry	2	10	10	8	0	393000
24.	Punjab	1348	89	267	57	0	2069700
25.	Rajasthan	921	121	31	31	1	227825
26.	Tamil Nadu	12403	3477	2693	1733	0	23256125
27.	Tripura	25	3	14	14	0	81000
28.	Uttar Pradesh	..	..	..	..	..	..
29.	Uttarakhand	..	..	..	..	..	..
30.	West Bengal	516	518	25	25	0	632550
<b>Total</b>		<b>58500</b>	<b>14600</b>	<b>8377</b>	<b>5859</b>	<b>17</b>	<b>73383910</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii).. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 3.5.2 Prosecution & Convictions under Section 92 & Section 96A during 2011-2016**

2012							
Sl. No.	State/ Union Territory	Pending from Previous year	Launched during the year	Decided during the year	Convictions	Imprisonment (Person)	Total fine Imposed (Rs.)
1.	Andaman & Nicobar Islands	0	0	0	0	0	0
2.	Andhra Pradesh	4677	1211	1053	573	0	5595500
3.	Assam	12	19	0	0	0	0
4.	Bihar	65	16	0	15	0	0
5.	Chandigarh	0	0	0	0	0	0
6.	Chhattisgarh	1142	500	267	1167319	1	8877800
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0
8.	Delhi	554	100	421	421	0	3596000
9.	Goa	30	19	7	6	0	152500
10.	Gujarat	12642	1547	522	0	0	4652205
11.	Haryana	8784	7756	6007	4004	0	18705200
12.	Himachal Pradesh	177	88	57	57	0	655000
13.	Jammu & Kashmir	147	33	29	0	0	98000
14.	Jharkhand	187	31	0	0	0	0
15.	Karnataka	605	214	127	86	0	2653150
16.	Kerala	72	64	40	37	0	356000
17.	Madhya Pradesh	3281	165	269	0	1	3275700
18.	Maharashtra	1176	187	244	242	0	4903500
19.	Manipur	..	..	..	..	..	..
20.	Meghalaya	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0
22.	Odisha	1595	222	5	0	0	0
23.	Puducherry	2	12	6	6	0	256000
24.	Punjab	1170	91	140	3	1	1502000
25.	Rajasthan	932	77	18	18	0	113000
26.	Tamil Nadu	13193	4504	7855	7292	0	29384600
27.	Tripura	11	9	10	10	0	50000
28.	Uttar Pradesh	..	..	..	..	..	..
29.	Uttarakhand	98	30	5	0	0	215000
30.	West Bengal	579	114	43	43	0	853500
<b>Total</b>		<b>51131</b>	<b>17009</b>	<b>17125</b>	<b>1180132</b>	<b>3</b>	<b>85894655</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.5.3 Prosecution & Convictions under Section 92 & Section 96A during 2011-2016**

2013							
Sl. NO.	State/ Union Territory	Pending from Previous year	Launched during the year	Decided during the year	Convictions	Imprisonment (Person)	Total fine Imposed (Rs.)
1.	Andaman & Nicobar Islands	0	0	0	0	0	0
2.	Andhra Pradesh	4831	1216	886	525	0	4360750
3.	Assam	19	17	0	0	0	0
4.	Bihar	81	33	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0
6.	Chhattisgarh	795	465	331	180	9	17795000
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0
8.	Delhi	233	22	166	166	0	158900
9.	Goa	42	15	8	7	0	208500
10.	Gujarat	8921	2047	382	137	0	2669800
11.	Haryana	8032	4712	4686	2398	0	10209234
12.	Himachal Pradesh	208	96	57	57	0	445550
13.	Jammu & Kashmir	..	..	..	..	..	..
14.	Jharkhand	223	42	3	0	0	0
15.	Karnataka	450	199	109	48	1	1623911
16.	Kerala	96	66	38	32	0	516750
17.	Madhya Pradesh	3177	150	99	0	0	2629000
18.	Maharashtra	1119	910	791	791	0	13693500
19.	Manipur	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0
22.	Odisha	1812	162	54	6	0	25000
23.	Puducherry	8	4	10	10	0	795000
24.	Punjab	1121	119	183	15	0	24269500
25.	Rajasthan	991	66	107	103	1	1715000
26.	Tamil Nadu	9847	4054	3591	2560	3	23393390
27.	Tripura	12	9	6	6	0	13000
28.	Uttar Pradesh	..	..	..	..	..	..
29.	Uttarakhand	67	38	2	0	0	100000
30.	West Bengal	338	118	103	103	0	2096500
<b>Total</b>		<b>42423</b>	<b>14560</b>	<b>11612</b>	<b>7144</b>	<b>14</b>	<b>106718285</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.5.4 Prosecution & Convictions under Section 92 & Section 96A during 2011-2016**

2014							
Sl. NO.	State/ Union Territory	Pending from Previous year	Launched during the year	Decided during the year	Convictions	Imprisonment (Person)	Total fine Imposed (Rs.)
1.	Andaman & Nicobar Islands	0	0	0	0	0	0
2.	Andhra Pradesh	2068	546	431	303	0	4276500
3.	Assam	48	10	0	0	0	0
4.	Bihar	114	34	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0
6.	Chhattisgarh	1228	674	272	82	6	17186000
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0
8.	Delhi	89	88	53	53	0	582000
9.	Goa	25	15	15	10	0	175900
10.	Gujarat	28989	2430	633	223	0	4174450
11.	Haryana	8795	10242	7498	5905	0	14923450
12.	Himachal Pradesh	247	195	73	73	0	511500
13.	Jammu & Kashmir	139	17	05	0	0	50000
14.	Jharkhand	356	34	1	0	0	0
15.	Karnataka	598	310	112	98	0	2239000
16.	Kerala	129	57	42	37	0	855000
17.	Madhya Pradesh	3228	165	146	0	0	3090800
18.	Maharashtra	1238	745	473	473	0	8847500
19.	Manipur	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0
22.	Odisha	1920	172	0	0	0	0
23.	Puducherry	2	10	9	9	0	520000
24.	Punjab	1057	109	80	50	0	877300
25.	Rajasthan	950	44	61	58	0	529000
26.	Tamil Nadu	9420	4003	2374	3276	7	26051050
27.	Telangana	1814	793	886	385	0	3454700
28.	Tripura	16	5	10	10	0	64000
29.	Uttar Pradesh	1995	53	292	35	0	1024500
30.	Uttarakhand	133	43	31	0	0	710000
31.	West Bengal	355	101	68	68	0	2161500
<b>Total</b>		<b>64953</b>	<b>20895</b>	<b>13565</b>	<b>11148</b>	<b>13</b>	<b>92304150</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 3.5.5 Prosecution & Convictions under Section 92 & Section 96A during 2011-2016**

2015							
Sl. No.	State/ Union Territory	Pending from Previous year	Launched during the year	Decided during the year	Convictions	Imprisonment (Person)	Total fine Imposed (Rs.)
1.	Andaman & Nicobar Islands	0	0	0	0	0	0
2.	Andhra Pradesh	2145	456	615	591	0	5171000
3.	Assam	58	9	0	0	0	0
4.	Bihar	148	15	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0
6.	Chhattisgarh	1632	499	549	365	13	22041100
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0
8.	Delhi	124	63	27	27	0	322000
9.	Goa	24	5	9	8	0	170000
10.	Gujarat	30786	1733	1498	1199	0	10245900
11.	Haryana	9585	5963	5136	3728	0	14742100
12.	Himachal Pradesh	369	94	113	113	0	1401700
13.	Jammu & Kashmir	151	39	23	4	0	228000
14.	Jharkhand	389	47	0	0	0	0
15.	Karnataka	718	175	189	167	1	4062600
16.	Kerala	219	73	48	38	0	898000
17.	Madhya Pradesh	3213	169	147	0	0	3100800
18.	Maharashtra	1238	632	599	599	0	11662500
19.	Manipur	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0
21.	Mizoram	0	0	0	0	0	0
22.	Nagaland	0	0	0	0	0	0
23.	Odisha	2150	157	18	18	0	3410000
24.	Puducherry	3	10	11	11	0	507000
25.	Punjab	1086	121	143	11	1	901500
26.	Rajasthan	933	22	31	31	0	182000
27.	Tamil Nadu	11049	4138	3450	3448	12	24613200
28.	Telangana	2634	1412	645	677	0	5682800
29.	Tripura	10	3	4	3	0	21000
30.	Uttar Pradesh	2041	82	52	51	0	1230000
31.	Uttarakhand	145	44	5	0	0	81000
32.	West Bengal	388	26	6	6	0	251000
<b>Total</b>		<b>71238</b>	<b>15987</b>	<b>13318</b>	<b>11095</b>	<b>27</b>	<b>110925200</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 3.5.6 Prosecution & Convictions under Section 92 & Section 96A during 2011-2016**

Sl. NO.	State/ Union Territory	Pending from Previous year	Launched during the year	Decided during the year	Convictions	Imprisonment (Person)	Total fine Imposed (Rs.)
1.	Andaman & Nicobar	0	0	0	0	0	0
2.	Andhra Pradesh	1991	463	616	582	0	8984000
3.	Assam	10	10	0	0	0	0
4.	Bihar	163	3	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0
6.	Chhattisgarh	1582	387	241	211	4	15421800
7.	Daman & Diu and	0	0	0	0	0	0
8.	Delhi	160	90	53	53	0	698500
9.	Goa	17	6	5	5	0	140000
10.	Gujarat	31021	1637	1198	1166	0	10424600
11.	Haryana	NA	NA	NA	NA	NA	NA
12.	Himachal Pradesh	350	89	61	61	0	735700
13.	Jammu & Kashmir	167	45	36	36	0	167000
14.	Jharkhand	351	44	1	0	0	100000
15.	Karnataka	704	122	179	162	0	3031000
16.	Kerala	141	44	51	45	0	801250
17.	Madhya Pradesh	NA	NA	NA	NA	NA	NA
18.	Maharashtra	1271	584	421	421	0	8072500
19.	Manipur	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0
22.	Odisha	2289	93	11	0	0	330000
23.	Puducherry	0	6	4	2	0	144000
24.	Punjab	1064	52	54	12	0	686000
25.	Rajasthan	924	43	21	21	0	121000
26.	Tamil Nadu	11737	2669	3189	2989	18	28012100
27.	Telangana	3194	398	199	199	3	3302500
28.	Tripura	10	9	5	5	0	385000
29.	Uttar Pradesh	NA	NA	NA	NA	NA	NA
30.	Uttarakhand	123	37	4	0	0	714000
31.	West Bengal	NA	NA	NA	NA	NA	NA
<b>Total</b>		<b>57269</b>	<b>6831</b>	<b>6349</b>	<b>5970</b>	<b>25</b>	<b>82270950</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.



**Annexure - II**

**Table 3.6.1 -Details of Inspections and other visits in Major Ports during the Year 2011**

Sl. No.	Port	Ship	Docks	Gear	Isolated Storage/Pipelines	Other Visits
1.	Mumbai	191	34	191	01	277
2.	JNPT	43	39	01	00	92
3.	Kandla	174	74	174	01	153
4.	Mormugao	79	62	79	03	64
5.	Kolkata	260	50	139	07	140
6.	Paradip	79	24	79	12	52
7.	Visakhapatnam	72	21	72	00	69
8.	Chennai	170	117	169	02	126
9.	Kochi	28	21	30	04	50
10.	N. Mangalore	106	03	106	02	201
11.	Tuticorin	133	47	87	00	15
<b>Total</b>		<b>1335</b>	<b>492</b>	<b>1127</b>	<b>32</b>	<b>1239</b>

**Table 3.6.2 -Details of Inspections and other visits in Major Ports during the Year 2012**

Sl. No.	Port	Ship	Docks	Gear	Isolated Storage/Pipelines	Other Visits
1	Mumbai	157	026	157	01	301
2	JNPT	048	034	00	00	068
3	Kandla	102	063	102	00	107
4	Mormugao	072	072	068	03	057
5	Kolkata	141	072	108	06	123
6	Paradip	079	023	079	07	051
7	Visakhapatnam	079	017	079	02	071
8	Chennai	239	194	235	02	214
9	Kochi	031	029	032	02	067
10	New Mangalore	063	005	063	02	211
11	Tuticorin	167	031	107	00	016
<b>Total</b>		<b>1178</b>	<b>566</b>	<b>1030</b>	<b>25</b>	<b>1286</b>

**Table 3.6.3 -Details of Inspections and other visits in Major Ports during the Year 2013**

Sl. No.	Port	Ship	Docks	Gear	Isolated Storage/Pipelines	Other Visits
1.	Mumbai	156	26	156	01	213
2.	JNPT	36	29	Nil	01	40
3.	Kandla	99	40	127	Nil	76
4.	Mormugao	67	48	60	02	48
5.	Kolkata	137	72	73	04	103
6.	Paradip	68	23	68	10	51
7.	Visakhapatnam	77	09	77	04	78
8.	Chennai	174	146	174	04	203
9.	Kochi	24	67	25	Nil	38
10.	N. Mangalore	101	14	101	02	441
11.	Tuticorin	170	33	124	04	10
<b>Total</b>		<b>1109</b>	<b>507</b>	<b>985</b>	<b>32</b>	<b>1301</b>

**Table 3.6.4 -Details of Inspections and other visits in Major Ports during the Year 2014**

Sl. No.	Port	Ship	Docks	Gear	Isolated Storage/Pipelines	Other Visits
1.	Mumbai	135	19	133	00	220
2.	JNPT	43	41	01	00	20
3.	Kandla	105	59	110	03	75
4.	Mormugao	71	42	76	04	28
5.	Kolkata	104	60	72	10	72
6.	Paradip	66	24	66	11	50
7.	Visakhapatnam	62	02	62	02	47
8.	Chennai	239	223	203	05	305
9.	Kochi	19	124	14	00	29
10.	N. Mangalore	75	60	80	00	132
11.	Tuticorin	101	39	90	04	07
<b>Total</b>		<b>1020</b>	<b>693</b>	<b>907</b>	<b>39</b>	<b>985</b>

**Table 3.6.5 -Details of Inspections and other visits in Major Ports during the Year 2015**

Sl. No.	Port	Ship	Docks	Gear	Isolated Storage/ Pipelines	Other Visits
1.	Mumbai	191	012	185	02	272
2.	JNPT	046	039	002	03	022
3.	Kandla	098	053	087	01	082
4.	Mormugao	073	056	079	05	049
5.	Kolkata	108	052	070	06	080
6.	Paradip	060	024	060	12	051
7.	Visakhapatnam	078	002	078	02	078
8.	Chennai	213	139	186	02	282
9.	Kochi	009	152	009	00	026
10.	N. Mangalore	125	131	120	01	133
11.	Tuticorin	097	050	106	04	012
<b>Total</b>		<b>1098</b>	<b>710</b>	<b>982</b>	<b>38</b>	<b>1087</b>

**Table 3.6.6 -Details of Inspections and other visits in Major Ports during the Year 2016**

Sl.	Port	Ship	Docks	Gear	Isolated	Other
1.	Mumbai	162	122	102	01	293
2.	JNPT	12	22	02	00	23
3.	Kandla	93	52	93	01	70
4.	Mormugao	73	57	40	05	23
5.	Kolkata	34	47	50	01	76
6.	Paradip	70	31	70	10	47
7.	Vishakhapatanam	60	02	60	01	57
8.	Chennai	181	48	195	03	220
9.	Kochi	41	161	15	04	07
10.	N. Mangalore	96	109	106	01	103
11.	Tuticorin	131	20	131	02	07
<b>Total</b>		<b>953</b>	<b>671</b>	<b>864</b>	<b>29</b>	<b>926</b>

**Table 3.7.1 - Details of Prosecution in Major Ports during the Year 2011**

Sl. No.	Port	Pending From Previous Year	Launched during the year	Decided during the year	Convicted
1.	Mumbai	03	01	03	00
2.	JNPT	01	00	00	00
3.	Kandla	14	00	06	06
4.	Mormugao	00	00	00	00
5.	Kolkata	03	00	00	00
6.	Paradip	03	00	01	00
7.	Visakhapatnam	00	00	00	00
8.	Chennai	08	02	03	03
9.	Kochi	01	00	00	00
10.	New Mangalore	02	00	00	00
11.	Tuticorin	00	00	00	00
<b>Total</b>		<b>35</b>	<b>03</b>	<b>13</b>	<b>09</b>

**Table 3.7.2 - Details of Prosecution in Major Ports during the Year 2012**

Sl. No.	Port	Pending From Previous Year	Launched during the year	Decided during the year	Convicted
1	Mumbai	02	00	01	00
2	JNPT	01	00	01	00
3	Kandla	09	02	01	01
4	Mormugao	00	00	00	00
5	Kolkata	03	00	00	00
6	Paradip	02	00	00	00
7	Visakhapatnam	03	00	00	00
8	Chennai	06	00	00	00
9	Kochi	01	00	00	00
10	New Mangalore	01	00	01	01
11	Tuticorin	00	00	00	00
<b>Total</b>		<b>28</b>	<b>02</b>	<b>04</b>	<b>02</b>

**Table 3.7.3 - Details of Prosecution in Major Ports during the Year 2013**

Sl. No.	Port	Pending From Previous Year	Launched during the year	Decided during the year	Convicted
1.	Mumbai	01	Nil	Nil	Nil
2.	JNPT	Nil	Nil	Nil	Nil
3.	Kandla	10	Nil	Nil	Nil
4.	Mormugao	Nil	Nil	Nil	Nil
5.	Kolkata	03	01	Nil	Nil
6.	Paradip	02	Nil	Nil	Nil
7.	Visakhapatnam	05	Nil	Nil	Nil
8.	Chennai	06	Nil	Nil	Nil
9.	Kochi	01	01	01	01
10.	New Mangalore	Nil	Nil	Nil	Nil
11.	Tuticorin	Nil	02	02	02
<b>Total</b>		<b>28</b>	<b>04</b>	<b>03</b>	<b>03</b>

**Table 3.7.4 - Details of Prosecution in Major Ports during the Year 2014**

Sl. No.	Port	Pending From Previous Year	Launched during the year	Decided during the year	Convicted
1.	Mumbai	01	01	00	00
2.	JNPT	00	00	00	00
3.	Kandla	10	03	00	00
4.	Mormugao	00	00	00	00
5.	Kolkata	04	00	01	00
6.	Paradip	02	01	00	00
7.	Visakhapatnam	05	00	00	00
8.	Chennai	06	01	01	01
9.	Kochi	01	01	00	00
10.	New Mangalore	00	00	00	00
11.	Tuticorin	00	00	00	00
<b>Total</b>		<b>29</b>	<b>07</b>	<b>02</b>	<b>01</b>

**Table 3.7.5 - Details of Prosecution in Major Ports during the Year 2015**

Sl. No.	Port	Pending From Previous Year	Launched during the year	Decided during the year	Convicted
1.	Mumbai	02	01	00	00
2.	JNPT	00	00	00	00
3.	Kandla	13	01	00	00
4.	Mormugao	00	00	00	00
5.	Kolkata	03	00	00	00
6.	Paradip	03	00	00	00
7.	Visakhapatnam	05	00	00	00
8.	Chennai	06	00	01	00
9.	Kochi	02	00	02	02
10.	New Mangalore	00	00	00	00
11.	Tuticorin	00	00	00	00
<b>Total</b>		<b>34</b>	<b>02</b>	<b>03</b>	<b>02</b>

**Table 3.7.5 - Details of Prosecution in Major Ports during the Year 2016**

Sl. No.	Port	Pending From Previous Year	Launched during the year	Decided during the year	Convicted
1.	Mumbai	00	01	00	N/A
2.	JNPT	00	00	00	00
3.	Kandla	13	00	01	01
4.	Mormugao	00	00	00	00
5.	Kolkata	03	00	00	00
6.	Paradip	03	00	00	00
7.	Vishakhapatnam	05	00	00	00
8.	Chennai	05	00	00	00
9.	Kochi	01	00	00	00
10.	New Mangalore	00	00	00	00
11.	Tuticorin	00	00	00	00
<b>Total</b>		<b>30</b>	<b>1</b>	<b>1</b>	<b>1</b>

**Table 3.8.1- Investigation into Reportable Fatal Accidents/Dangerous Occurrences in 2011**

<b>Sl. No.</b>	<b>Port</b>	<b>Pending from Previous Year</b>	<b>Initiated during the year</b>	<b>Concluded during the year</b>
1.	Mumbai	04	02	05
2.	JNPT	03	01	03
3.	Kandla	06	08	12
4.	Mormugao	03	01	04
5.	Kolkata	02	07	01
6.	Paradip	06	01	05
7.	Visakhapatnam	01	00	01
8.	Chennai	07	05	03
9.	Kochi	01	00	00
10.	New Mangalore	03	00	01
11.	Tuticorin	01	02	01
<b>Total</b>		<b>37</b>	<b>27</b>	<b>36</b>

**Table 3.8.2- Investigation into Reportable Fatal Accidents/Dangerous Occurrences in 2012**

<b>Sl. No.</b>	<b>Port</b>	<b>Pending from Previous Year</b>	<b>Initiated during the year</b>	<b>Concluded during the year</b>
1.	Mumbai	04	02	05
2.	JNPT	02	01	02
3.	Kandla	09	07	11
4.	Mormugao	00	02	00
5.	Kolkata	01	04	02
6.	Paradip	00	01	01
7.	Visakhapatnam	00	00	00
8.	Chennai	06	02	03
9.	Kochi	00	01	00
10.	New Mangalore	00	00	00
11.	Tuticorin	00	02	00
<b>Total</b>		<b>22</b>	<b>22</b>	<b>24</b>

**Table 3.8.3- Investigation into Reportable Fatal Accidents/Dangerous Occurrences in 2013**

<b>Sl. No.</b>	<b>Port</b>	<b>Pending from Previous Year</b>	<b>Initiated during the year</b>	<b>Concluded during the year</b>
1.	Mumbai	01	02	01
2.	JNPT	Nil	Nil	Nil
3.	Kandla	03	06	06
4.	Mormugao	Nil	02	01
5.	Kolkata	Nil	05	01
6.	Paradip	Nil	01	Nil
7.	Visakhapatnam	Nil	02	Nil
8.	Chennai	05	02	02
9.	Kochi	01	01	02
10.	New Mangalore	Nil	01	Nil
11.	Tuticorin	Nil	02	Nil
<b>Total</b>		<b>10</b>	<b>24</b>	<b>13</b>

**Table 3.8.4- Investigation into Reportable Fatal Accidents/Dangerous Occurrences in 2014**

<b>Sl. No.</b>	<b>Port</b>	<b>Pending from Previous Year</b>	<b>Initiated during the year</b>	<b>Concluded during the year</b>
1.	Mumbai	02	02	01
2.	JNPT	00	00	00
3.	Kandla	02	06	01
4.	Mormugao	01	00	00
5.	Kolkata	05	02	05
6.	Paradip	00	00	00
7.	Visakhapatnam	00	02	00
8.	Chennai	05	00	05
9.	Kochi	00	00	00
10.	New Mangalore	01	00	00
11.	Tuticorin	01	01	01
<b>Total</b>		<b>17</b>	<b>13</b>	<b>13</b>



**Table 3.8.5- Investigation into Reportable Fatal Accidents/Dangerous Occurrences in 2015**

<b>Sl. No.</b>	<b>Port</b>	<b>Pending from Previous Year</b>	<b>Initiated during the year</b>	<b>Concluded during the year</b>
1.	Mumbai	03	04	04
2.	JNPT	00	00	00
3.	Kandla	07	02	07
4.	Mormugao	00	01	00
5.	Kolkata	00	01	01
6.	Paradip	00	00	00
7.	Visakhapatnam	00	00	00
8.	Chennai	00	02	00
9.	Kochi	00	00	00
10.	New Mangalore	01	00	01
11.	Tuticorin	00	01	01
<b>Total</b>		<b>11</b>	<b>11</b>	<b>14</b>

**Table 3.8.6- Investigation into Reportable Fatal Accidents/Dangerous Occurrences in 2016**

<b>Sl. No.</b>	<b>Port</b>	<b>Pending from Previous Year</b>	<b>Initiated during the year</b>	<b>Concluded during the year</b>
1.	Mumbai	00	02	02
2.	JNPT	00	00	00
3.	Kandla	02	05	01
4.	Mormugao	00	00	00
5.	Kolkata	00	02	00
6.	Paradip	00	00	00
7.	Vishakhapatnam	00	00	00
8.	Chennai	00	00	00
9.	Kochi	00	00	00
10.	New Mangalore	00	00	00
11.	Tuticorin	00	02	00
<b>Total</b>		<b>02</b>	<b>11</b>	<b>03</b>

**Annexure -III**

The table below shows the discipline-wise strength of the inspecting officers of DGMS (as on 1.1.2011)

		Discipline							
Sl.No	Designation	Mining		Electrical		Mechanical		O.H.	
		S	P	S	P	S	P	S	P
1.	DIRECTOR-GENERAL	1	1	-	-	-	-	-	-
2.	DY.DIRECTOR-GENERAL	9	6	1	1	1	-	-	-
3.	DIRECTOR	50	23	16	9	16	6	-	-
4.	DY.DIRECTOR	99	61	34	6	33	1	5	1
5.	ASSTT.DIRECTOR Gr. I	-	-	-	-	-	-	GR.I- 4	2
<b>TOTAL</b>		<b>159</b>	<b>91</b>	<b>51</b>	<b>16</b>	<b>50</b>	<b>07</b>	<b>9</b>	<b>3</b>

The table below shows the discipline-wise strength of the inspecting officers of DGMS (as on 1.1.2012)

		Discipline							
Sl. No	Designation	Mining		Electrical		Mechanical		O.H.	
		S	P	S	P	S	P	S	P
1.	DIRECTOR-GENERAL	1	1	-	-	-	-	-	-
2.	DY.DIRECTOR-GENERAL	9	9	1	1	1	1	-	-
3.	DIRECTOR	50	20	16	10	16	2	-	-
4.	DY.DIRECTOR	99	61	34	2	33	1	5	1
5.	ASSTT.DIRECTOR	-	-	-	-	-	-	GR.I- 4	2
<b>TOTAL</b>		<b>159</b>	<b>91</b>	<b>51</b>	<b>13</b>	<b>50</b>	<b>4</b>	<b>9</b>	<b>3</b>

The table below shows the discipline-wise strength of the inspecting officers of DGMS (as on 1.1.2013)

Sl.No	Designation	Discipline							
		Mining		Electrical		Mechanical		O.H.	
		S	P	S	P	S	P	S	P
1.	DIRECTOR-GENERAL	1	1	-	-	-	-	-	-
2.	DY.DIRECTOR-GENERAL	9	9	1	1	1	1	-	-
3.	DIRECTOR	50	48	16	7	16	2	-	-
4.	DY.DIRECTOR	99	54	34	8	33	5	5	0
5.	ASSTT.DIRECTOR	-	-	-	-	-	-	GR.I- 4	2
<b>TOTAL</b>		<b>159</b>	<b>112</b>	<b>51</b>	<b>16</b>	<b>50</b>	<b>08</b>	<b>9</b>	<b>2</b>

The table below shows the discipline-wise strength of the inspecting officers of DGMS (as on 1.1.2014)

Sl.No	Designation	Discipline							
		Mining		Electrical		Mechanical		O.H.	
		S	P	S	P	S	P	S	P
1.	DIRECTOR-GENERAL	1	1	-	-	-	-		
2.	DY.DIRECTOR-GENERAL	9	8	1	1	1	0		
3.	DIRECTOR	50	47	16	5	16	2		
4.	DY.DIRECTOR	99	62	34	8	33	5	5	0
5.	ASSTT.DIRECTOR Gr.I	-	-	-	-	-	-	4	2
<b>TOTAL</b>		<b>159</b>	<b>118</b>	<b>51</b>	<b>14</b>	<b>50</b>	<b>07</b>	<b>9</b>	<b>2</b>

The table below shows the discipline-wise strength of the inspecting officers of DGMS (as on 1.1.2015)

Sl.No	Designation	Discipline							
		Mining		Electrical		Mechanical		O.H.	
		S	P	S	P	S	P	S	P
1.	DIRECTOR-GENERAL	1	1	-	-	-	-		
2.	DY.DIRECTOR-GENERAL	9	6	1	1	1	1		
3.	DIRECTOR	50	43	16	5	16	1		
4.	DY.DIRECTOR	99	81	34	19	33	14	5	0
5.	ASSTT.DIRECTOR Gr. I	-	-	-	-	-	-	4	2
<b>TOTAL</b>		<b>159</b>	<b>131</b>	<b>51</b>	<b>25</b>	<b>50</b>	<b>16</b>	<b>9</b>	<b>2</b>

The number of inspections and enquiries conducted by DGMS officers during the year 2011 is shown in appended Table-6

Discipline	Inspection				Enquiries				Inspections & Enquiries			
	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total
Electrical	371	93	59	523	24	3	0	27	395	96	59	550
Mechanical	209	85	23	317	59	7	0	66	268	92	23	383
Mining	2485	3508	239	6232	833	442	68	1343	3318	3950	307	7575
O.H.	151	2	0	153	40	0	0	40	191	2	0	193
<b>TOTAL</b>	<b>3216</b>	<b>3688</b>	<b>321</b>	<b>7225</b>	<b>956</b>	<b>452</b>	<b>68</b>	<b>1476</b>	<b>4172</b>	<b>4140</b>	<b>389</b>	<b>8701</b>

The number of inspections and enquiries conducted by DGMS officers during the year 2012 is shown in appended Table-6

Discipline	Inspection				Enquiries				Inspections & Enquiries			
	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total
Electrical	521	102	48	671	21	4	0	25	542	106	48	696
Mechanical	244	91	27	362	41	3	0	44	285	94	27	406
Mining	2957	3441	217	6615	854	530	40	1424	3811	3971	257	8039
O.H.	89	1	0	90	17	0	0	17	106	1	0	107
<b>TOTAL</b>	<b>3811</b>	<b>3635</b>	<b>292</b>	<b>7738</b>	<b>933</b>	<b>537</b>	<b>40</b>	<b>1510</b>	<b>4744</b>	<b>4172</b>	<b>332</b>	<b>9248</b>

The number of inspections and enquiries conducted by DGMS officers during the year 2013 is shown in appended Table-6

Discipline	Inspection				Enquiries				Inspections & Enquiries			
	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total
Electrical	805	167	109	1081	49	10	1	60	854	177	110	1141
Mechanical	348	167	28	543	53	10	4	67	401	177	32	610
Mining	2858	3544	186	6588	759	429	55	1243	3617	3973	241	7831
O.H.	27	20	6	53	29	0	0	29	56	20	6	82
<b>TOTAL</b>	<b>4038</b>	<b>3898</b>	<b>329</b>	<b>8265</b>	<b>890</b>	<b>449</b>	<b>60</b>	<b>1399</b>	<b>4928</b>	<b>4347</b>	<b>389</b>	<b>9664</b>

The number of inspections and enquiries conducted by DGMS officers during the year 2014 is shown in appended Table-6

Discipline	Inspection				Enquiries				Inspections & Enquiries			
	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total
Electrical	884	329	138	1351	58	21	9	88	942	350	147	1439
Mechanical	470	165	62	697	126	24	13	163	596	189	75	860
Mining	3297	4177	388	7862	796	476	89	1361	4093	4653	477	9223
O.H.	13	23	0	36	55	19	0	74	68	42	0	110
<b>TOTAL</b>	<b>4664</b>	<b>4694</b>	<b>588</b>	<b>9946</b>	<b>1035</b>	<b>540</b>	<b>111</b>	<b>1686</b>	<b>5699</b>	<b>5234</b>	<b>699</b>	<b>11632</b>

The number of inspections and enquiries conducted by DGMS officers during the year 2015 is shown in appended Table-6

Discipline	Inspection				Enquiries				Inspections & Enquiries			
	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total
Electrical	1314	349	155	1818	122	25	0	147	1436	374	155	1965
Mechanical	718	250	97	1065	117	24	3	144	835	274	100	1209
Mining	3950	5257	534	9741	986	604	33	1623	4936	5861	567	11364
O.H.	65	33	0	98	55	0	0	55	120	33	0	153
<b>TOTAL</b>	<b>6047</b>	<b>5889</b>	<b>786</b>	<b>12722</b>	<b>1280</b>	<b>653</b>	<b>36</b>	<b>1969</b>	<b>7327</b>	<b>6542</b>	<b>822</b>	<b>14691</b>

The number of inspections and enquiries conducted by DGMS officers during the year 2016 is shown in appended Table-6

Discipline	Inspection				Enquiries				Inspections & Enquiries			
	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total	Coal	Metal	Oil	Total
Electrical	1033	338	154	1525	71	11	1	83	1104	349	155	1608
Mechanical	689	269	91	1049	65	5	40	110	754	274	131	1159
Mining	2881	7123	385	10389	998	570	55	1623	3879	7693	440	10212
O.H.	31	36	8	75	31	0	0	31	62	36	8	106
<b>TOTAL</b>	<b>4634</b>	<b>7766</b>	<b>638</b>	<b>13038</b>	<b>1165</b>	<b>586</b>	<b>96</b>	<b>1847</b>	<b>5799</b>	<b>8352</b>	<b>734</b>	<b>14885</b>

Note: Figures are provisional

Details of prosecution cases instituted and their status during the year 2011 are given below:

Prosecution	Coal	Metal	Oil
Launched	13	25	--
Disposed off	04	14	--
Pending	149*	294*	09

\* Figure of pending cases has been counted from the year 2000-2011.

Details of prosecution cases instituted and their status during the year 2012 are given below:

Prosecution	Coal	Metal	Oil
Launched	17	91	Nil
Disposed off	06	10	Nil
Pending	155	352	09

\* Figure of pending cases has been counted from the year 2000-2012.

Details of prosecution cases instituted and their status during the year 2013 are given below:

<b>Prosecution</b>	<b>Coal</b>	<b>Metal</b>	<b>Oil</b>
Launched	14	81	Nil
Disposed off	01	12	Nil
Pending	169	420	10

**Figure of pending cases has been counted from the year 2000-2013.**

Details of prosecution cases instituted and their status during the year 2014 are given below:

<b>Prosecution</b>	<b>Coal</b>	<b>Metal</b>	<b>Oil</b>
Launched	13	20	Nil
Disposed off	02	20	Nil
Pending	178	433	10

**Figure of pending cases has been counted from the year 2000-2014.**

Details of prosecution cases instituted and their status during the year 2015 are given below:

<b>Prosecution</b>	<b>Coal</b>	<b>Metal</b>	<b>Oil</b>
Launched	13	21	1
Disposed off	1	8	0
Pending	147	149	0

**Figure of pending cases has been counted from the year 2000-2015.**

Details of prosecution cases instituted by DGMS and their status during the year 2016 are given below (Source Standard Reference Note 2016 of DGMS dated 01 Jan 2017)

Table 3.13

<b>Prosecution</b>	<b>Coal</b>	<b>Metal</b>	<b>Oil</b>
<b>Launched</b>	4	13	0
<b>Disposed off</b>	0	2	0
<b>Pending</b>	191	446	11

**Figure of pending cases has been counted from the year 2000-2016.**



**Annexure - IV**

**Table 4.1.1 - State-wise Constitution of Safety Committee during 2011**

<b>2011</b>			
<b>Sl. No.</b>	<b>States/ Union Territories</b>	<b>Factories Requiring Safety Committee</b>	<b>Factories Having Safety Committee</b>
1.	Andaman & Nicobar Islands	0	0
2.	Andhra Pradesh	946	771
3.	Assam	12	12
4.	Bihar	5	5
5.	Chandigarh	0	1
6.	Chhattisgarh	469	400
7.	Daman & Diu & Dadra & Nagar Haveli	58	75
8.	Delhi	118	96
9.	Goa	245	136
10.	Gujarat	3666	3608
11.	Haryana	954	870
12.	Himachal Pradesh	83	83
13.	Jammu & Kashmir	17	17
14.	Jharkhand	95	84
15.	Karnataka	1231	990
16.	Kerala	374	307
17.	Madhya Pradesh	652	635
18.	Maharashtra	1674	1232
19.	Manipur	6	6
20.	Meghalaya	24	14
21.	Nagaland	0	0
22.	Odisha	153	153
23.	Puducherry	29	29
24.	Punjab	226	203
25.	Rajasthan	156	146
26.	Tamil Nadu	2175	1925
27.	Tripura	19	1
28.	Uttar Pradesh	..	..
29.	Uttarakhand	..	..
30.	West Bengal	493	493
	<b>Total</b>	<b>13880</b>	<b>12292</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii).. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 4.1.2 - State-wise Constitution of Safety Committee during 2012**

2012			
Sl. No.	State/ Union Territory	Factories Requiring Safety Committee	Factories Having Safety Committee
1.	Andaman & Nicobar Islands	0	0
2.	Andhra Pradesh	979	747
3.	Assam	12	12
4.	Bihar	5	5
5.	Chandigarh	2	2
6.	Chhattisgarh	538	478
7.	Daman & Diu and Dadra & Nagar Haveli	60	80
8.	Delhi	120	98
9.	Goa	96	131
10.	Gujarat	3320	3052
11.	Haryana	1006	897
12.	Himachal Pradesh	83	83
13.	Jammu & Kashmir	26	26
14.	Jharkhand	95	84
15.	Karnataka	1053	1002
16.	Kerala	325	257
17.	Madhya Pradesh	677	658
18.	Maharashtra	1709	1260
19.	Manipur	..	..
20.	Meghalaya	75	20
21.	Nagaland	0	0
22.	Odisha	155	155
23.	Puducherry	29	29
24.	Punjab	244	219
25.	Rajasthan	161	152
26.	Tamil Nadu	1893	1786
27.	Tripura	19	1
28.	Uttar Pradesh	..	..
29.	Uttarakhand	628	518
30.	West Bengal	852	98
<b>Total</b>		<b>14162</b>	<b>11850</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 4.1.3 - State-wise Constitution of Safety Committee during 2013**

2013			
Sl. No.	State/ Union Territory	Factories Requiring Safety Committee	Factories Having Safety Committee
1.	Andaman & Nicobar Islands	0	0
2.	Andhra Pradesh	979	747
3.	Assam	12	12
4.	Bihar	5	5
5.	Chandigarh	0	0
6.	Chhattisgarh	492	431
7.	Daman & Diu and Dadra & Nagar Haveli	62	82
8.	Delhi	123	99
9.	Goa	169	185
10.	Gujarat	5013	4509
11.	Haryana	469	414
12.	Himachal Pradesh	83	83
13.	Jammu & Kashmir	..	..
14.	Jharkhand	153	137
15.	Karnataka	986	741
16.	Kerala	337	268
17.	Madhya Pradesh	688	669
18.	Maharashtra	2637	1830
19.	Manipur	6	6
20.	Meghalaya	75	20
21.	Nagaland	0	0
22.	Odisha	347	144
23.	Puducherry	29	29
24.	Punjab	388	350
25.	Rajasthan	163	153
26.	Tamil Nadu	1696	1516
27.	Tripura	22	1
28.	Uttar Pradesh	..	..
29.	Uttarakhand	518	518
30.	West Bengal	852	98
<b>Total</b>		<b>16304</b>	<b>13047</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 4.1.4 - State-wise Constitution of Safety Committee during 2014**

2014			
Sl. No.	State/ Union Territory	Factories Requiring Safety Committee	Factories Having Safety Committee
1.	Andaman & Nicobar Islands	0	0
2.	Andhra Pradesh	616	497
3.	Assam	130	17
4.	Bihar	5	5
5.	Chandigarh	0	0
6.	Chhattisgarh	454	387
7.	Daman & Diu and Dadra & Nagar Haveli	62	82
8.	Delhi	114	114
9.	Goa	168	185
10.	Gujarat	5583	5168
11.	Haryana	926	822
12.	Himachal Pradesh	83	83
13.	Jammu & Kashmir	9	9
14.	Jharkhand	153	138
15.	Karnataka	1153	892
16.	Kerala	328	257
17.	Madhya Pradesh	689	672
18.	Maharashtra	2098	1906
19.	Manipur	6	6
20.	Meghalaya	75	20
21.	Nagaland	0	0
22.	Odisha	616	423
23.	Puducherry	29	29
24.	Punjab	343	307
25.	Rajasthan	166	157
26.	Tamil Nadu	1396	1232
27.	Telangana	67	459
28.	Tripura	22	2
29.	Uttar Pradesh	3281	3822
30.	Uttarakhand	520	520
31.	West Bengal	852	124
<b>Total</b>		<b>19944</b>	<b>18335</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 4.1.5 - State-wise Constitution of Safety Committee during 2015**

2015			
Sl. No.	State/ Union Territory	Factories Requiring Safety Committee	Factories Having Safety Committee
1.	Andaman & Nicobar Islands	0	0
2.	Andhra Pradesh	768	521
3.	Assam	47	0
4.	Bihar	5	5
5.	Chandigarh	0	0
6.	Chhattisgarh	471	402
7.	Daman & Diu and Dadra & Nagar Haveli	63	82
8.	Delhi	115	114
9.	Goa	180	174
10.	Gujarat	6202	5691
11.	Haryana	939	858
12.	Himachal Pradesh	83	83
13.	Jammu & Kashmir	9	9
14.	Jharkhand	189	168
15.	Karnataka	1181	1674
16.	Kerala	243	198
17.	Madhya Pradesh	692	681
18.	Maharashtra	1701	1447
19.	Manipur	8	8
20.	Meghalaya	75	20
21.	Mizoram	0	0
22.	Nagaland	0	0
23.	Odisha	484	387
24.	Pudduchery	29	29
25.	Punjab	361	325
26.	Rajasthan	163	160
27.	Tamil Nadu	1561	1376
28.	Telangana	142	98
29.	Tripura	5	0
30.	Uttar Pradesh	4098	3148
31.	Uttarakhand	655	635
32.	West Bengal	903	41
<b>Total</b>		<b>21372</b>	<b>18334</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 4.1.6 - State-wise Constitution of Safety Committee during 2016**

Sl. No.	State/ Union Territory	Factories Requiring	Factories Having
1.	Andaman & Nicobar Islands	0	0
2.	Andhra Pradesh	861	564
3.	Assam	135	135
4.	Bihar	1	1
5.	Chandigarh	0	0
6.	Chhattisgarh	425	368
7.	Daman & Diu and Dadra & Nagar Haveli	65	85
8.	Delhi	118	117
9.	Goa	212	185
10.	Gujarat	5255	5296
11.	Haryana	NA	NA
12.	Himachal Pradesh	363	363
13.	Jammu & Kashmir	9	9
14.	Jharkhand	191	174
15.	Karnataka	1351	1108
16.	Kerala	321	314
17.	Madhya Pradesh	NA	NA
18.	Maharashtra	2535	1391
19.	Manipur	6	6
20.	Meghalaya	75	20
21.	Nagaland	0	0
22.	Odisha	218	134
23.	Puducherry	32	32
24.	Punjab	362	326
25.	Rajasthan	152	139
26.	Tamil Nadu	1694	1564
27.	Telangana	506	434
28.	Tripura	5	0
29.	Uttar Pradesh	NA	NA
30.	Uttarakhand	675	635
31.	West Bengal	NA	NA
<b>Total</b>		<b>15567</b>	<b>13400</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Annexure -V**

The table below shows the status of appointment of Workmen's Inspector and Safety Committees during 2011:

Type of Mine	No. of Safety Committees		No. of Workmen's Inspectors	
	Required	Provided	Required	Provided
Coal	555	555	1446	1444
Metal	380	398	395	432
Oil	67	67	99	100
<b>Total</b>	<b>1002</b>	<b>1020</b>	<b>1940</b>	<b>1976</b>

The table below shows the status of appointment of Workmen's Inspector and Safety Committees during 2012:

Type of Mine	No. of Safety Committees		No. of Workmen's Inspectors	
	Required	Provided	Required	Provided
Coal	525	525	1482	1480
Metal	360	372	345	389
Oil	45	45	64	64
<b>Total</b>	<b>930</b>	<b>942</b>	<b>1891</b>	<b>1933</b>

The table below shows the status of appointment of Workmen's Inspector and Safety Committees during 2013:

Type of Mine	No. of Safety Committees		No. of Workmen's Inspectors	
	Required	Provided	Required	Provided
Coal	555	555	1476	1617
Metal	369	351	362	409
Oil	39	39	55	63
<b>Total</b>	<b>963</b>	<b>945</b>	<b>1893</b>	<b>2089</b>

The table below shows the status of appointment of Workmen's Inspector and Safety Committees during 2014:

Type of Mine	No. of Safety Committees		No. of Workmen's Inspectors	
	Required	Provided	Required	Provided
Coal	523	494	1379	1440
Metal	376	362	486	556
Oil	74	71	189	77
<b>Total</b>	<b>973</b>	<b>927</b>	<b>2054</b>	<b>2073</b>

The table below shows the status of appointment of Workmen's Inspector and Safety Committees during 2015:

Type of Mine	No. of Safety Committees		No. of Workmen's Inspectors	
	Required	Provided	Required	Provided
Coal	539	540	1555	1561
Metal	372	328	499	508
Oil	82	82	98	113
<b>Total</b>	<b>993</b>	<b>950</b>	<b>2152</b>	<b>2182</b>



**Annexure - VI**

**Table 4.3.1 - State-wise On-site Emergency Plan (in respect of MAH Units) during 2011**

<b>2011</b>			
<b>Sl. No.</b>	<b>States/ Union Territories</b>	<b>Factories Requiring On-site Emergency Plan</b>	<b>Factories Having On-site Emergency Plan</b>
1.	Andaman & Nicobar Islands	3	3
2.	Andhra Pradesh	158	151
3.	Assam	12	12
4.	Bihar	3	3
5.	Chandigarh	0	0
6.	Chhattisgarh	21	21
7.	Daman & Diu & Dadra & Nagar Haveli	0	20
8.	Delhi	17	17
9.	Goa	17	17
10.	Gujarat	384	370
11.	Haryana	57	57
12.	Himachal Pradesh	8	8
13.	Jammu & Kashmir	5	11
14.	Jharkhand	9	9
15.	Karnataka	77	77
16.	Kerala	47	47
17.	Madhya Pradesh	71	71
18.	Maharashtra	365	305
19.	Manipur	6	6
20.	Meghalaya	4	4
21.	Nagaland	0	0
22.	Odisha	23	23
23.	Puducherry	3	3
24.	Punjab	36	36
25.	Rajasthan	71	71
26.	Tamil Nadu	115	108
27.	Tripura	2	2
28.	Uttar Pradesh	..	..
29.	Uttarakhand	..	..
30.	West Bengal	85	85
	<b>Total</b>	<b>1599</b>	<b>1537</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii).. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 4.3.2 - State-wise On-site Emergency Plan (in respect of MAH Units) during 2012**

2012			
Sl. No.	State/ Union Territory	Factories Requiring On-site Emergency Plan	Factories Having On-site Emergency Plan
1.	Andaman & Nicobar Islands	3	3
2.	Andhra Pradesh	158	155
3.	Assam	12	12
4.	Bihar	0	0
5.	Chandigarh	0	0
6.	Chhattisgarh	14	14
7.	Daman & Diu and Dadra & Nagar Haveli	0	20
8.	Delhi	17	17
9.	Goa	17	17
10.	Gujarat	530	530
11.	Haryana	76	68
12.	Himachal Pradesh	8	8
13.	Jammu & Kashmir	5	11
14.	Jharkhand	9	9
15.	Karnataka	228	236
16.	Kerala	41	41
17.	Madhya Pradesh	72	72
18.	Maharashtra	379	345
19.	Manipur	..	..
20.	Meghalaya	1	1
21.	Nagaland	0	0
22.	Odisha	24	24
23.	Puducherry	3	3
24.	Punjab	28	28
25.	Rajasthan	77	77
26.	Tamil Nadu	112	91
27.	Tripura	2	2
28.	Uttar Pradesh	..	..
29.	Uttarakhand	40	40
30.	West Bengal	85	85
<b>Total</b>		<b>1941</b>	<b>1909</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 4.3.3 - State-wise On-site Emergency Plan (in respect of MAH Units) during 2013**

2013			
Sl. No.	State/ Union Territory	Factories Requiring On-site Emergency Plan	Factories Having On-site Emergency Plan
1.	Andaman & Nicobar Islands	3	3
2.	Andhra Pradesh	158	155
3.	Assam	12	12
4.	Bihar	0	0
5.	Chandigarh	0	0
6.	Chhattisgarh	29	29
7.	Daman & Diu and Dadra & Nagar Haveli	0	21
8.	Delhi	17	17
9.	Goa	17	16
10.	Gujarat	295	295
11.	Haryana	35	34
12.	Himachal Pradesh	8	8
13.	Jammu & Kashmir	..	..
14.	Jharkhand	18	18
15.	Karnataka	334	261
16.	Kerala	45	45
17.	Madhya Pradesh	73	73
18.	Maharashtra	344	340
19.	Manipur	6	6
20.	Meghalaya	1	1
21.	Nagaland	0	0
22.	Odisha	24	24
23.	Puducherry	3	3
24.	Punjab	70	70
25.	Rajasthan	79	79
26.	Tamil Nadu	175	153
27.	Tripura	3	3
28.	Uttar Pradesh	..	..
29.	Uttarakhand	41	40
30.	West Bengal	85	85
<b>Total</b>		<b>1875</b>	<b>1791</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 4.3.4 - State-wise On-site Emergency Plan (in respect of MAH Units) during 2014**

2014			
Sl. No.	State/ Union Territory	Factories Requiring On-site Emergency Plan	Factories Having On-site Emergency Plan
1.	Andaman & Nicobar Islands	3	3
2.	Andhra Pradesh	88	86
3.	Assam	17	17
4.	Bihar	..	..
5.	Chandigarh	0	0
6.	Chhattisgarh	27	27
7.	Daman & Diu and Dadra & Nagar Haveli	0	21
8.	Delhi	16	16
9.	Goa	15	15
10.	Gujarat	353	353
11.	Haryana	71	68
12.	Himachal Pradesh	8	8
13.	Jammu & Kashmir	14	14
14.	Jharkhand	18	18
15.	Karnataka	280	263
16.	Kerala	47	47
17.	Madhya Pradesh	74	74
18.	Maharashtra	346	350
19.	Manipur	6	6
20.	Meghalaya	1	1
21.	Nagaland	0	0
22.	Odisha	24	24
23.	Puducherry	3	3
24.	Punjab	66	66
25.	Rajasthan	82	82
26.	Tamil Nadu	118	88
27.	Telangana	78	75
28.	Tripura	2	2
29.	Uttar Pradesh	109	106
30.	Uttarakhand	18	18
31.	West Bengal	85	85
<b>Total</b>		<b>1969</b>	<b>1936</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 4.3.5 - State-wise On-site Emergency Plan (in respect of MAH Units) during 2015**

2015			
Sl. No.	State/ Union Territory	Factories Requiring On-site Emergency Plan	Factories Having On-site Emergency Plan
1.	Andaman & Nicobar Islands	3	3
2.	Andhra Pradesh	78	78
3.	Assam	24	24
4.	Bihar	19	11
5.	Chandigarh	0	0
6.	Chhattisgarh	28	28
7.	Daman & Diu and Dadra & Nagar Haveli	0	25
8.	Delhi	16	16
9.	Goa	14	14
10.	Gujarat	406	406
11.	Haryana	64	56
12.	Himachal Pradesh	8	8
13.	Jammu & Kashmir	14	14
14.	Jharkhand	18	18
15.	Karnataka	71	71
16.	Kerala	46	46
17.	Madhya Pradesh	74	74
18.	Maharashtra	340	338
19.	Manipur	8	8
20.	Meghalaya	0	0
21.	Mizoram	0	0
22.	Nagaland	0	0
23.	Odisha	32	32
24.	Pudduchery	3	3
25.	Punjab	81	81
26.	Rajasthan	83	84
27.	Tamil Nadu	150	134
28.	Telangana	78	75
29.	Tripura	5	5
30.	Uttar Pradesh	113	112
31.	Uttarakhand	47	47
32.	West Bengal	85	85
<b>Total</b>		<b>1908</b>	<b>1896</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 4.3.6 - State-wise On-site Emergency Plan (in respect of MAH Units) during 2016**

Sl. No.	State/ Union Territory	Factories Requiring Emergency Plan	Factories Having On-site Emergency
1.	Andaman & Nicobar Islands	2	2
2.	Andhra Pradesh	78	78
3.	Assam	24	24
4.	Bihar	19	15
5.	Chandigarh	0	0
6.	Chhattisgarh	18	18
7.	Daman & Diu and Dadra & Nagar	0	26
8.	Delhi	16	16
9.	Goa	14	14
10.	Gujarat	450	446
11.	Haryana	NA	NA
12.	Himachal Pradesh	8	8
13.	Jammu & Kashmir	14	14
14.	Jharkhand	18	18
15.	Karnataka	73	73
16.	Kerala	46	56
17.	Madhya Pradesh	NA	NA
18.	Maharashtra	329	283
19.	Manipur	6	6
20.	Meghalaya	0	0
21.	Nagaland	0	0
22.	Odisha	32	32
23.	Puducherry	3	3
24.	Punjab	81	81
25.	Rajasthan	31	30
26.	Tamil Nadu	171	155
27.	Telangana	0	0
28.	Tripura	12	9
29.	Uttar Pradesh	NA	NA
30.	Uttarakhand	40	40
31.	West Bengal	NA	NA
<b>Total</b>		<b>1485</b>	<b>1447</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Annexure - VII**

<b>Sl. No.</b>	<b>State/ Union Territory</b>	<b>Website address</b>
1.	Andaman & Nicobar Islands	<a href="http://labour.and.nic.in/">http://labour.and.nic.in/</a>
2.	Andhra Pradesh	<a href="http://factories.ap.gov.in/">factories.ap.gov.in/</a>
3.	Assam	<a href="http://ciflabour.assam.gov.in/">http://ciflabour.assam.gov.in/</a>
4.	Bihar	<a href="http://labour.bih.nic.in/">http://labour.bih.nic.in/</a>
5.	Chandigarh	<a href="http://chandigarh.gov.in/dept_labour.htm">http://chandigarh.gov.in/dept_labour.htm</a>
6.	Chhattisgarh	<a href="http://cglabour.nic.in/ShramAyukt/ShramAyuktHome.aspx">http://cglabour.nic.in/ShramAyukt/ShramAyuktHome.aspx</a>
7.	Daman & Diu and Dadra &	<a href="http://www.daman.nic.in/">http://www.daman.nic.in/</a>
8.	Delhi	<a href="http://www.delhi.gov.in/">http://www.delhi.gov.in/</a>
9.	Goa	<a href="http://ifbgoa.gov.in/">http://ifbgoa.gov.in/</a>
10.	Gujarat	<a href="https://dish.gujarat.gov.in/">https://dish.gujarat.gov.in/</a>
11.	Haryana	<a href="https://hrylabour.gov.in/">https://hrylabour.gov.in/</a>
12.	Himachal Pradesh	<a href="http://himachal.nic.in/">http://himachal.nic.in/</a>
13.	Jammu & Kashmir	<a href="http://labcom.jk.gov.in/">http://labcom.jk.gov.in/</a>
14.	Jharkhand	<a href="http://shramadhan.jharkhand.gov.in">http://shramadhan.jharkhand.gov.in</a>
15.	Karnataka	<a href="http://labour.kar.nic.in/fandb/fact-index.asp">labour.kar.nic.in/fandb/fact-index.asp</a>
16.	Kerala	<a href="http://www.fabkerala.gov.in/">http://www.fabkerala.gov.in/</a>
17.	Madhya Pradesh	<a href="http://www.labour.mp.gov.in/">http://www.labour.mp.gov.in/</a>
18.	Maharashtra	<a href="https://mahakamgar.maharashtra.gov.in/dish-index.htm">https://mahakamgar.maharashtra.gov.in/dish-index.htm</a>
19.	Manipur	<a href="http://dcimanipur.gov.in/">http://dcimanipur.gov.in/</a>
20.	Meghalaya	<a href="http://meghalaya.gov.in">http://meghalaya.gov.in</a>
21.	Nagaland	<a href="http://nlsic.nagaland.gov.in/">http://nlsic.nagaland.gov.in/</a>
22.	Odisha	<a href="http://dfbodisha.gov.in/">http://dfbodisha.gov.in/</a>
23.	Puducherry	<a href="http://labour.pondicherry.gov.in/">http://labour.pondicherry.gov.in/</a>
24.	Punjab	
25.	Rajasthan	<a href="http://rajfab.nic.in/">http://rajfab.nic.in/</a>
26.	Tamil Nadu	<a href="https://dish.tn.gov.in/">https://dish.tn.gov.in/</a>
27.	Telangana	<a href="https://tsfactories.cgg.gov.in/">https://tsfactories.cgg.gov.in/</a>
28.	Tripura	<a href="http://factory.tripura.gov.in/factory/welcome.html">http://factory.tripura.gov.in/factory/welcome.html</a>
29.	Uttar Pradesh	<a href="http://www.uplabour.gov.in/">http://www.uplabour.gov.in/</a>
30.	Uttarakhand	<a href="http://www.labour.uk.gov.in/">http://www.labour.uk.gov.in/</a>
31.	West Bengal	<a href="https://wblabour.gov.in/">https://wblabour.gov.in/</a>

**Annexure - VIII**

**Table 6.1 -Unit level Consultancy Studies and Audits undertaken during 2011**

<b>2011</b>			
<b>Sl.</b>	<b>Area</b>	<b>No. of Consultancy Studies</b>	
		<b>Completed</b>	<b>Under Progress</b>
<b>1</b>	Safety Audit	17	3
<b>2</b>	Occupational Safety & Health Study	1	-
<b>3</b>	Airborne Chemical Contaminants	13	1
<b>4</b>	Noise Assessment Study	4	1
<b>5</b>	Ventilation	-	1
<b>6</b>	Hazard Identification	2	2
<b>7</b>	Ergonomic Study	1	-
<b>8</b>	Work Environmental study	3	-
<b>9</b>	Illumination study	2	1
<b>10</b>	Breathing Air Quality Testing	1	1
<b>11</b>	Risk Analysis study	-	1
<b>12</b>	Quality Compressor Breathing Air	1	-
<b>13</b>	HAZOP	1	-
<b>14</b>	Vibration Study	1	-
	<b>Total:</b>	<b>47</b>	<b>11</b>



**Table 6.2 -Unit level Consultancy Studies and Audits undertaken during 2012**

<b>2012</b>		
<b>Sl. No.</b>	<b>Area</b>	<b>No. of Consultancy Studies (Completed)</b>
1.	Safety Audit	18
2.	Safety Audit Risk Analysis of LPG Bullets	1
3.	Industrial Hygiene Survey	1
4.	Risk Analysis study	1
5.	Assessment of Work Environmental	6
6.	HAZOP study	1
7.	Noise Assessment Study	5
8.	Ventilation Study	1
9.	Illumination study	2
10.	Testing Quality Compressor Breathing Air	3
11.	Construction Safety Audit	1
12.	Ergonomic Evaluation Study	3
13.	Environmental Study	1
14.	Testing of Compressor Air Purity Test	1
15.	Ventilation & Heat Stress Evaluation study	2
16.	Occupational Health Audit	1
17.	Quantitative Risk Assessment	-
18.	Workplace Environment Air Monitoring	-
	<b>Total:</b>	<b>48</b>

**Table 6.3 -Unit level Consultancy Studies and Audits undertaken during 2013**

2013		
Sl. No.	Area/ Topic	No. of Consultancy Studies Completed)
1.	Safety Audit	17
2.	Environmental Monitoring Study	1
3.	Industrial Hygiene Study	3
4.	Risk Analysis study	1
5.	HAZOP study	3
6.	Noise Study	1
7.	Ventilation Study	2
8.	Illumination Level study	4
9.	Testing Quality Compressor Breathing Air	4
10.	Assessment of Asbestos Fibres	1
11.	Evaluation of Asbestos Fibre levels	1
12.	Safety Survey	1
13.	Heat Stress study	1
14.	Occupational Health Audit	1
15.	Quantitative Risk Assessment	1
16.	Workplace Environment Air Monitoring	4
17.	Onsite Emergency Plan Study	1
<b>Total</b>		<b>47</b>

**Table 6.4 -Unit level Consultancy Studies and Audits undertaken during 2014**

2014		
Sl. No.	Area/ Topic	No. of Consultancy Studies (Completed)
1.	Safety Audit	20
2.	Assessment of Airborne contaminants	9
3.	Evaluation of airborne chemical contaminants in the workplace environment	1
4.	Air Quality Test for Compressor	2
5.	MCLS Study by Dispersion modeling	1
6.	Training Need Assessment in Safety, Health & Environment	1
7.	Working conditions and Improvement in Higher Productivity at Workplace	2
8.	On-Site Emergency Plan and Risk Analysis Study	1
9.	A Safety and Occupational Health Survey conducted as per Sec. 91A of the Factories Act, 1948 Fireworks	1
10.	Risk Analysis Study	1
11.	Testing of the Breathing Air Quality of Compressor	5
12.	Industrial Hygiene Study	2
13.	Noise Study	4
14.	Work Environment Monitoring Study	1
<b>Total</b>		<b>51</b>

**Table 6.5 -Unit level Consultancy Studies and Audits undertaken during 2015**

<b>2015</b>		
<b>Sl. No.</b>	<b>Area/ Topic</b>	<b>No. of Consultancy Studies (Completed)</b>
1.	Safety Audit	15
2.	Study on Evaluation of Asbestos Fibre Levels	1
3.	Safety Audit and Risk Assessment study	1
4.	Environmental Study in Coal Handling	1
5.	Industrial Hygiene Survey on "Physical Health Hazard"	1
6.	Environmental Study	1
7.	Improvement in Working conditions and Higher Productivity at Workplace in Small Scale / Medium Scale Industries	4
8.	On-Site Emergency Plan and Risk Analysis Study	4
9.	Study on 'Safety in Power Press Operations'	1
10.	Ventilation Study at design stage for the up-coming plant	1
11.	Occupational Health Audit in collaboration with CIF Goa	1
12.	Workplace Environmental Air Monitoring Study	6
13.	Noise Level Study	1
14.	Safety Survey of Steel Industries	6
15.	Breathing air Quality of Compressor Air	1
16.	MCLS study at MAH factory	2
17.	Illumination and Space Adequacy Study	1
18.	HAZOP Study	2
19.	Heat Stress Study	1
20.	Assessment of Airborne contaminants	3
21.	Work zone air monitoring study	1
<b>Total</b>		<b>55</b>

**Table 6.6 -Unit level Consultancy Studies and Audits undertaken during 2016**

<b>2016</b>		
<b>Sl. No.</b>	<b>Area/ Topic</b>	<b>No. of</b>
1.	Consultancy Study	1
2.	Fire Safety Audit	1
3.	HAZOP study	4
4.	Industrial Hygiene Study	3
5.	Industrial Hygiene Survey	1
6.	Noise Survey	1
7.	Occupational Health Audit	1
8.	Safety Audit	18
9.	Study on Evaluation of Asbestos Fibre Levels	1
10.	Testing of the Quality of Compressor Breathing air	6
11.	Workplace Environment Monitoring Study	15

**Annexure -IX**

**Table 7.1 - Long Duration Training Programmes conducted during 2011**

<b>Sl.No.</b>	<b>Area and Participant</b>	<b>Programmes</b>	<b>Participants</b>	<b>Organisations</b>
<b>A.</b>	<b>Professional Programmes</b>			
	Advance Diploma in Industrial Safety	5	200	163
	AFIH	2	30	30
	One-month Certificate Course for Supervisory Personnel in hazardous processes factories	3	42	32
<b>B.</b>	<b>Inspectors of Factories</b>			
	Basic course	1	15	3
	Refresher course	1	8	4
	Chemical Safety	3	49	21
	Construction Safety	1	23	8
<b>C.</b>	<b>Management Personnel</b>			
	Refresher course for Medical Officer	1	13	11
	Refresher course for Safety Officer	1	11	11
	Industrial Safety	16	347	138
	Industrial Hygiene	3	46	21
	Occupational Health	2	40	25
	Industrial Physiology	1	10	5
	MAHC	5	59	25
	Construction Safety	2	26	16
	Environmental Pollution	2	26	9
	Hazardous Substances	2	27	16
<b>D.</b>	<b>Supervisors</b>			
	Hazardous Substances	1	9	3
	Safety & Health	8	211	102
	Construction Safety	1	23	1
	Productivity	3	53	17
	Psychology	3	47	17
<b>E.</b>	<b>Trade Union Leaders/Workers/Joint Participation</b>			
	Industrial Safety	3	75	3
	Chemical Safety	1	15	6
	Occupational Health	3	35	16
	<b>Total:</b>	<b>74</b>	<b>1440</b>	<b>703</b>

**Table 7.2 - Long Duration Training Programmes conducted during 2012**

Sl. No.	Area and Participant	Programmes	Participants	Organisations
A.	<b>Professional Programmes</b>			
	Advance Diploma in Industrial Safety	5	200	143
	AFIH	1	50	50
	One-month Certificate Course for Supervisory Personnel in hazardous processes factories	2	30	19
B.	<b>Inspectors of Factories</b>			
	Basic course	2	46	6
	Refresher course	1	6	3
	Chemical Safety	3	29	15
	Construction Safety	1	26	11
C.	<b>Management Personnel</b>			
	Refresher course for Medical Officer	1	35	22
	Industrial Safety	9	212	96
	Industrial Hygiene	4	85	34
	Occupational Health	2	74	57
	Industrial Physiology	1	17	5
	MAHC	5	67	34
	Hazardous Substances	1	19	12
	Construction Safety	1	19	10
	Environmental Pollutants	2	51	20
Industrial Productivity	4	93	19	
D.	<b>Supervisors</b>			
	Safety & Health	4	133	66
	Construction Safety	2	22	8
	Hazardous Substances	1	41	9
	Industrial Productivity	1	26	1
E.	<b>Trade Union Leaders/Workers/Joint Participation</b>			
	Industrial Safety	4	84	25
	Chemical Safety	1	13	5
	Occupational Health	2	51	47
	Industrial Productivity	4	87	18
6.	<b>Educational Institution</b>			
	Industrial Safety	3	55	5
	Industrial Health	3	5	3
	<b>Total:</b>	<b>70</b>	<b>1576</b>	<b>743</b>

**Table 7.3 - Long Duration Training Programmes conducted during 2013**

<b>Programme/ Area</b>	<b>No. of Programmes</b>	<b>No. of Participants</b>	<b>No. of Organisations</b>
<b>A. Professional Programmes [Total:(a+ b +c)]</b>	<b>8</b>	<b>281</b>	<b>216</b>
a) ADIS	5	200	143
b) AFIH	1	50	50
c) One-month Certificate Course for Supervisory Personnel in hazardous processes factories	2	31	23
<b>B. Specialised Training Programmes [ Total: (I +II + III +IV + V + VI)]</b>	<b>60</b>	<b>1193</b>	<b>603</b>
<b>I. Programme for Inspectors of Factories [Total: (a+ b +c)]</b>	<b>4</b>	<b>30</b>	<b>16</b>
a) Basic course	1	15	6
b) Refresher Course	1	10	7
c) Chemical Safety	2	5	3
<b>II. Programme for Management Personnel [Total:(a to u)]</b>	<b>41</b>	<b>818</b>	<b>448</b>
a) Certificate Course on Occupational Safety (in association with Madras Management Association)	1	24	19
b) Specialised Training Programme on Analysis of Silica	2	8	2
c) Selection & Quality Assurance for Effective Use of PPE	1	7	2
d) Management of Safety, Health & Environment in Industries	1	17	5
e) Safety & Health Awareness programme for members of Safety Committee	1	17	5
f) Safe Handling of Chemical for Safety Committee Members	3	15	10
g) Workshop on Industrial Ventilation	1	6	4
h) 2nd All India Conference on OSH Professional on the Theme "Building & maintaining OSH Culture"	1	235	140
i) Management of Physical Hazards and Hazardous Wastes in Industries	1	27	10
j) Industrial Safety	3	57	37
k) Safety in Material Handling and Storage	1	19	10
l) Safety and Fire Fighting Management in Industries	1	19	17
m) Safety, Health & Environment at Workplace	3	69	35
n) Safety in Engineering Industry	1	22	10

<b>Programme/ Area</b>	<b>No. of Programmes</b>	<b>No. of Participants</b>	<b>No. of Organisations</b>
o) Workshop on Industrial Noise and Vibration	2	11	9
p) Industrial Physiology	1	14	12
q) MAHC	2	35	11
r) Hazardous Substances	5	66	34
s) Construction Safety	5	77	40
t) Environmental Pollutants	2	24	17
u) Industrial Productivity	3	49	19
<b>III. Programme for Factory Supervisors [Total:(a+ b +c)]</b>	<b>3</b>	<b>48</b>	<b>18</b>
a) Safety & Health	1	16	9
b) Training on Safety & Law	1	14	2
c) Industrial Productivity	1	18	7
<b>IV. Programme for Trade Union Leaders/Workers/Joint Participation [Total:(a to e)]</b>	<b>6</b>	<b>140</b>	<b>30</b>
a) Safety Training	1	26	1
b) Chemical Safety	1	19	6
c) Industrial Safety & Health	1	27	9
d) Industrial Productivity	2	46	8
e) Safety, Health & Environment	1	22	6
<b>V. Programme for Educational Institutions [Total:(a+ b )]</b>	<b>5</b>	<b>150</b>	<b>84</b>
a) Industrial Safety	2	50	2
b) Occupational Health	3	100	82
<b>VI. Programme for Dock Safety Inspectors</b>	<b>1</b>	<b>7</b>	<b>7</b>
a) Induction programme organized for newly joined Dock Safety Inspections	1	7	7
<b>Grand Total: (A+B)</b>	<b>68</b>	<b>1474</b>	<b>819</b>



**Table 7.4 - Long Duration Training Programmes conducted during 2014**

Programme/ Area	No. of Programmes	No. of Participants	No. of Organisations
<b>C. Professional Programmes [Total:(a+ b +c)]</b>	<b>10</b>	<b>312</b>	<b>245</b>
d) ADIS	5	200	145
e) AFIH	2	54	50
f) One-month Certificate Course for Supervisory Personnel in hazardous processes Industries	3	58	50
<b>D. Specialised Training Programmes [ Total: (I +II + III +IV + V + VI)]</b>	<b>48</b>	<b>889</b>	<b>421</b>
<b>VI. Programme for Inspectors of Factories [Total: (a+ b +c)]</b>	<b>4</b>	<b>48</b>	<b>33</b>
d) Basic course	--	--	--
e) Refresher Course	3	35	27
f) Chemical Safety	1	13	6
<b>VII. Programme for Management Personnel [Total:(a to z)]</b>	<b>35</b>	<b>695</b>	<b>338</b>
v) Workshop on "Training Methodologies for Trainers in Safety, Health & Environment in Industries"	1	22	4
w) Training programme on "Ergonomics a Major Factor in Management of Safety, Health, and Productivity at Workplace"	2	27	19
x) Workshop on Industrial Noise and Vibration	1	5	5
y) Workshop on "Productivity & Quality Improvement"	1	32	2
z) Training Programme on Chemical Safety at workplace and Workshop on Hazard and Operatability Study	2	47	30
aa) Impact of Environmental Pollutants and their control at work place`	1	20	11
bb) Specialised Training Programme on 'Safety Management'	1	19	1
cc) Team Building in Safety, Health & Environment	1	10	3
dd) 3-days collaborative Training Programme with NSC Maharashtra Chapter on 'Safety Management'	3	62	36
ee) 5-days Specialised Training Programmeon "Industrial Safety" for officers of Indian Ord. Factories	1	12	1
ff) Personal Growth and Group Dynamics for improving safety and health at Work	1	21	5

place			
gg) Recognition & Evaluation of Chemical Hazard at workplace	1	12	6
<b>Programme/ Area</b>	<b>No. of Programmes</b>	<b>No. of Participants</b>	<b>No. of Organisations</b>
hh) Making safety committee more effective	2	55	19
ii) Training Programme on Safety in Storage, Handling and Management of Hazardous Substances in Process Industries	2	23	22
jj) Management of Safety, Health & Environment at Workplace	1	19	7
kk) US-DOL Training Programme on OSH in Maritime / Port Sector	2	37	9
ll) Evaluation and Control of Environment at Workplace	1	16	7
mm) Safety Audit in Factories, Ports & Construction Industries	3	56	40
nn) Occupational Safety & Health in Construction Industries	1	21	10
oo) Safety & Fire Fighting Management in Industries	1	30	16
pp) Safety & Health Awareness programme for Members of Safety Committee	1	45	16
qq) Safety for Productivity & Quality Improvement in Industries	1	16	5
rr) Five day Certificate Course on "Occupational Safety"	1	26	26
ss) Training programme on Major Accident Hazards in Industries for Inspectors of Factories	1	12	7
tt) Training programme on Process Safety Management	1	29	19
uu) Training programme on Safety and Law in the Power Generation Units	1	21	12
<b>VIII. Programme for Factory Supervisors [Total:(a to c)]</b>	<b>3</b>	<b>33</b>	<b>5</b>
d) Workshop on "Participative Skills for Safety Committee Members in SHE"	1	29	2
e) Environmental Hazard and their Management at the workplace	1	3	2
f) Orientation Training Programme on I.H. Techniques for the Chemist of Directorate of Industrial Safety and Health	1	1	1
<b>IX. Programme for Trade Union Leaders/Workers/Joint Participation [Total:(a to c)]</b>	<b>3</b>	<b>38</b>	<b>18</b>
f) PTP (Quality Improvement through Effective Employee Participation)	1	13	3
g) Workers Development programme on "Safety, Health and Environment" in	1	15	10

Factories, Ports & Construction Projects.			
<b>Programme/ Area</b>	<b>No. of Programmes</b>	<b>No. of Participants</b>	<b>No. of Organisations</b>
h) Three days training programme on Prevention & Control of Fire in Industries	1	10	5
<b>X. Programme for Educational Institutions [Total:(a+ b)]</b>	<b>3</b>	<b>75</b>	<b>27</b>
c) Workshop on Silicosis & ILO radiographs on pneumoconiosis	1	25	25
d) Industrial Safety for the students of Post Graduate Diploma in Human Resource Development & Labour Welfare of SLI, Kolkata, Govt. of W.B. in two batches	2	50	2
<b>VII. Programme for Dock Safety Inspectors</b>	--	--	--
<b>Grand Total: (A+B)</b>	<b>58</b>	<b>1201</b>	<b>666</b>

**Table 7.5 - Long Duration Training Programmes conducted during 2015**

<b>Programme/ Area</b>	<b>No. of Programmes</b>	<b>No. of Participants</b>	<b>No. of Organisations</b>
<b>E. Professional Programmes [Total:(a+ b +c)]</b>	<b>10</b>	<b>305</b>	<b>235</b>
g) ADIS	5	214	161
h) AFIH	2	46	42
i) One-month Certificate Course for Supervisory Personnel in hazardous processes Industries	3	45	32
<b>F. Specialised Training Programmes [ Total: (I +II + III +IV + V + VI)]</b>	<b>56</b>	<b>940</b>	<b>438</b>
<b>XI. Programme for Inspectors of Factories [Total: (a+ b +c+d)]</b>	<b>5</b>	<b>50</b>	<b>25</b>
g) Basic course	1	15	5
h) Refresher Course	1	5	4
i) Chemical Safety	2	20	12
j) Refresher course on “Safety in MSME Industry for Factory Inspector”	1	10	4
<b>XII. Programme for Management Personnel [Total:(a to aa )]</b>	<b>34</b>	<b>558</b>	<b>300</b>
a) Impact of Environmental Pollutants and their control	1	17	10
b) Three days Training Programme on Physical Hazards its Evaluation and Control	1	5	5
c) Training programme on Chemical Safety at Workplace	1	6	6
d) Training Programme on Need of Industrial Hygiene in Industry	1	10	4
e) Training Programme on Environmental Hazards and their Management at workplace	1	17	7
f) Recognition & Evaluation of Chemical Hazards at workplace	2	28	15
g) Training Workshop on Selection and quality assurance for effective use of PPE	1	8	7
h) Motivation for Safety, Health & Productivity	1	12	2
i) Training Methodology for Trainers in SHE	1	7	6
j) 3-days collaborative Trg. Programme with NSC Maharashtra Chapter on ‘Safety Management’	5	116	59
k) 4-days SpecialisedTrg. Prog. On	1	24	1

	'Industrial Safety' for Officers of Indian Ord. Factories			
l)	3-days Trg. Workshop on 'Accident Reporting' Investigation & Analysis	1	15	10
m)	4-days Refresher Course for Safety Officer	1	12	9
n)	Two weeks Certificate Course on Safety "Management in Transmission System"	1	17	1
o)	Training programme for Supervisors & Safety Member on "Safety in Construction Industry"	1	15	8
p)	Five days Certificate Course on "Occupational Safety" in association with MMA.	1	32	32
q)	Occupational Safety & Health in Construction Industry	1	13	8
r)	Environmental Hazards & their control in Industries	1	17	14
s)	Training Programme on "Safety and Fire Fighting Management in Factories, Ports and Construction Industries"	2	48	22
t)	Safety in Construction Industries	1	18	11
u)	Occupational health & Safety Management in Industries	1	7	7
v)	Identification, Evaluation & Control of Hazards in Industries	1	26	10
w)	Safety Audit in Factories, ports and Construction Industries	1	19	15
x)	"Safety in Material Handling in Factories, Ports, and Construction Industries"	1	16	7
y)	"Safety in Storage, Handling & Management of Hazardous Chemicals"	1	14	9
z)	5 days training programme on "Safety, Health & Environment at Workplace in Factories, Ports & Construction Industries"	1	15	4
aa)	5 days training programme on "Safety & Health Awareness" for Safety Committee Members	1	14	8
ab)	5 days training programme on "Safety for Productivity & Quality Improvement in Industries"	1	10	3
<b>XIII.</b>	<b>Programme for Factory Supervisors [Total:(a to b)]</b>	<b>2</b>	<b>37</b>	<b>12</b>

a) Training Concept & Methodology on SHE in industries.	1	26	4
b) Training programme on Safety & Law	1	11	8
<b>XIV. Programme for Trade Union Leaders/Workers/Joint Participation [Total:(a to c)]</b>	<b>7</b>	<b>135</b>	<b>36</b>
a) Participative Skills for S, H & E at work place	1	29	5
b) Productivity & Quality Improvement through Effective Employee Participation	2	27	3
c) Training – cum Workshop on “Team Building for Health, Safety & Environment at Workplace”	1	25	8
d) Productivity & Quality Improvement through Effective Employee Participation	1	22	3
e) Workers Development Programme on "Safety, health and Environment' in Factories, Ports and Construction Projects	1	13	9
f) Safety & Health Awareness in Ferrous and Non-Ferrous Metals & Paper Industries	1	19	8
<b>XV. Programme for Educational Institutions [Total:(a to e )]</b>	<b>5</b>	<b>120</b>	<b>61</b>
a) Training Workshop on Occupational Health & ILO Radiograph on Pneumoconiosis for Doctors from SECL	1	12	1
b) Training Programme on Occupational, Health practice for Nurses, Health/Medical Assistants	1	28	20
c) Advanced Training Programme on Occupational Health & Environment Medicine	1	45	28
d) Three days Training Programme on "Occupational First Aid"	1	20	11
e) 5 days Study Tour/Training for Batch – I students of PG Diploma in HRD & Labour Welfare, State Labour Institute, Kolkata	1	15	1
<b>XVI. Enforcement Officer [Total:(a to c )]</b>	<b>3</b>	<b>40</b>	<b>4</b>
a) Industrial Noise and Vibration	1	5	2
b) Three days Training Programme on	1	20	1

Occupational Safety & Health in Construction Industry			
c) 3-days Training programme on "Safety and Health Awareness in Construction Industry"	1	15	1
<b>Grand Total: (A+B)</b>	<b>66</b>	<b>1245</b>	<b>673</b>

**Table 7.6 - Long Duration Training Programmes conducted during 2016**

<b>Programme/ Area</b>	<b>No. of Participants</b>	<b>No. of Organizations</b>
<b>A. Professional Programmes [Total:(a+ b +c)]</b>	<b>355</b>	<b>297</b>
a) ADIS	212	188
b) AFIH	133	101
c) One-month Certificate Course for Supervisory Personnel in hazardous processes Industries	10	8
<b>B. Specialised Training Programmes [ Total: (I +II + III +IV + V + VI+VII)]</b>		
<b>I. Programme for Inspectors of Factories [Total: (a+ b +c)]</b>	<b>47</b>	<b>20</b>
a) Basic course	12	2
b) Refresher Course	13	13
c) Chemical Safety	22	5
<b>II. Programme for Management Personnel [Total:(a to r )]</b>	<b>341</b>	<b>167</b>
a) 3- days training Programme on 'Internal Safety Audit'	17	13
b) 5- days training programme on "Identification, Evaluation and Control of Hazards in Industries"	34	15
c) 5 days training programme on "Safety & Health Awareness in Ferrous and Non-Ferrous Metals & Paper Industries"	14	4
d) 3 days training programme on "Safety, Health & Environment in Factories, Ports and Construction Industries"	14	4
e) Training programme on Environmental Hazards & its Management in Industries	24	10
f) 5 days training programme on "Safety & Fire Management in Factories, Ports, Construction Industries"	33	15
g) 3-days collaborative Trg. Prog. With NSC-Maharashtra Chapter on "Safety Management"	20	10
h) 5 days training programme on "Safety & Health Awareness in Construction Industry"	13	7
i) Training programme on "Environmental Hazards & their management at work place"	13	7
j) 3 days training workshop on 'Incident/Accident Reporting Investigation & Analysis'	18	12
k) 5 days training programme on "Identification, Evaluation and Control of Hazards in Industries"	38	12



l) Productivity & Quality Improvements through Effective Employees Participation in SHE	8	4
m) 4-days Trg. Prog. On 'Safe Use of Lifting Machine & Tackles'	26	19
n) Management of workplace hazard in industry	12	5
o) Training programme on safety and health management in process industries	5	4
p) 214th Training Course in Industrial Safety for National Safety Council, Maharashtra Chapter	25	13
q) Recognition and evaluation of chemical hazards at work place	15	7
r) Selection and quality assurance of PPE	12	6
<b>III. Programme for Management Personnel and Factory Supervisors</b>	<b>65</b>	<b>18</b>
a) Training Programme on "Personal Growth & Group Dynamics for Improving Health, Safety and Environment of workers at work	10	1
b) Training Programme on Making Safety Committee More Effective	23	2
c) Training workshop on Productivity & Quality Improvement through Effective Employee Participation in Safety, Health and Environment	8	4
d) 215th Training Course in Industrial Safety for National Safety Council – Maharashtra Chapter	24	11
<b>IV. Programme for Factory Supervisors [Total:(a to b)]</b>	<b>61</b>	<b>18</b>
c) Participative Skills in Safety, Health & Environment For Safety Committee Member	9	1
d) Industrial Hygiene Techniques	7	6
e) Inspection & Testing of LA & LG	11	2
f) Environmental hazards and their management at workplace	14	6
g) 5 days training programme in Safety Audit	10	2
h) 5 days training programme on "Safety in Storage, Handling and Management of Hazardous Chemicals	10	1
<b>V. Programme for Trade Union Leaders/Workers/Joint Participation [Total:(a to c)]</b>	<b>66</b>	<b>12</b>
g) 5 days training programme on "Safety in Storage, Handling and Management of Hazardous Chemicals"	10	1
h) Participative Skill for safety Committee member in Safety, Health & Environment in Industries	23	2
i) Participative Skill for safety Committee member in Safety, Health & Environment in Industries	7	2
j) Team Building for Safety, Health & Environment at Work Place	9	3

k) Productivity and Quality Improvement through Effective Employees Participation in Safety, Health and Environment	17	4
<b>VI. Programme for Medical Doctors</b>	<b>15</b>	<b>14</b>
f) Advanced Refresher Course on Occupational and Environmental Health for Medical Doctors from 08 - 12 August 2016	15	14
<b>VII. Programme for Paramedical Professionals</b>	<b>29</b>	<b>19</b>
d) Training Programme on Occupational Health practice for Nurses, Health/Medical assistant	29	19
<b>Grand Total: (A+B)</b>	<b>979</b>	<b>565</b>

**Annexure -X****DGMS: DETAILS OF EXAMINATIONS CONDUCTED IN THE YEAR 2011 UPTO DECEMBER**

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
<b>Under Coal Mines Regulations, 1957</b>				
1.	First Class Manager's Certificate Examination held in December, 2010	2262	175	
	First Class Manager's Certificate Examination held in December, 2011	2302	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in December, 2010	1757	192	
	Second Class Manager's Certificate Examination held in December, 2011	2036	-	Result not yet declared
3.	Mine Surveyor's Certificate Examination held in December, 2010	280	38	
	Mine Surveyor's Certificate Examination held in December, 2011	290	-	Result not yet declared
4.	Overman's Certificate Examination held in December, 2010	1503	186	
	Overman's Certificate Examination held in December, 2011	1476	-	Result not yet declared
5.	Medical Examinations			
	(a) 5 yearly under Reg. 27(1)			
	(i) Overman	110	106	
	(ii) Mining Sirdar			
	(iii) Shotfirer	145	140	
	(iv) Winding Engine Driver 1 <sup>st</sup> Class			
	(v) Winding Engine Driver 2 <sup>nd</sup> Class	--	--	
	(b) Senior Medical Board under Reg. 28			
	(i) First Class Manager's	12	12	
	(ii) Second Class manager's			
(iii) Surveyor's	10	10		
(c) Junior Medical Board under Reg.28				
(i) Overman				
(ii) Mining Sirdar				
(iii) Shotfirer	12	9		
(iv) Winding Engine Driver 1 <sup>st</sup> Class				
(v) Winding Engine Driver 2 <sup>nd</sup> Class	10	9		

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
		6	6	
		21	20	
		15	13	
		-	-	
		3	3	
		2	2	
6..	Exchange cases	3	-	Exam yet to be conducted
		Application received	Certificate/ auth. issued	
7.	Exemption cases	547	671*	*Also included cert. in respect of application received during previous year
<b>Under Metalliferous Mines Regulations, 1961</b>				
<b>I. Un-Restricted</b>				
1.	First Class manager's Certificate Examination held in October, 2010	171	27	
	First Class manager's Certificate Examination held in October, 2011	166	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in October, 2010	148	19	
	Second Class Manager's Certificate Examination held in October, 2011	113	-	Result not yet declared
3.	Surveyor's Certificate Examination held in October, 2010	08	1	
	Surveyor's Certificate Examination held in October, 2011	11	-	Result not yet declared
4.	Foreman's Certificate Examination held in October, 2010	43	12	

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
	Foreman's Certificate Examination held in October, 2011	52	-	Result not yet declared
<b>II. Restricted to Opencast Workings only</b>				
1.	First Class Manager's Certificate Examination held in October, 2010	1299	93	
	First Class Manager's Certificate Examination held in October, 2011	1347	-	Result not yet declared.
2.	Second Class Manager's Certificate Examination held in October, 2010	1000	75	
	Second Class Manager's Certificate Examination held in October, 2011	863	-	Result not yet declared.
3.	Surveyor's Certificate Examination held in October, 2010	78	7	
	Surveyor's Certificate Examination held in October, 2011	75	-	Result not yet declared
4.	Foreman's Certificate Examination held in October, 2010	541	63	
	Foreman's Certificate Examination held in October, 2011	613	-	Result not yet declared
<b>III. Medical Examinations</b>				
	(a) 5 yearly under Reg. 30(1)			
	(i) Foreman, Un-restricted	-	-	
	(ii) Foreman, Restricted			
	(iii) Mining Mate, Un-restricted	140	134	
	(iv) Mining Mate, Restricted			
	(v) Blaster, Un-restricted	1	1	
	(vi) Blaster, Restricted			
	(vii) Winding Engine Driver 1 <sup>st</sup> Class	120	118	
	(viii) Winding Engine Driver 2 <sup>nd</sup> Class			
	(b) Senior Medical Board	1	1	
	(i) First Class Manager's			
	(ii) Second Class manager's	2	2	
	(iii) Surveyor's			
	(c) Junior Medical Board	-	-	
	(i) Foreman			
	(ii) Mining Mate	-	-	
	(iii) Blaster			

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
		111	107	
		49	47	
		3	2	
		21	18	
		56	54	
		4	3	
10.	Exchange cases	02	-	Exam yet to be conducted.
11.	Exemption cases	Application received	Certificate auth. Issued	
		379	592*	*Also included cert. in respect of application received during previous year

**DETAILS OF EXAMINATIONS CONDUCTED IN THE YEAR 2012 UPTO DECEMBER**

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
<b>Under Coal Mines Regulations, 1957</b>				
1.	First Class Manager's Certificate Examination held in December, 2011	2302	192	
	First Class Manager's Certificate Examination held in December, 2012	2427	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in December, 2011	2036	154	
	Second Class Manager's Certificate Examination held in December, 2012	2451	-	Result not yet declared
3.	Mine Surveyor's Certificate Examination held in December, 2011	290	13	
	Mine Surveyor's Certificate Examination held in December, 2012	308	-	Result not yet declared
4.	Overman's Certificate Examination held in December, 2011	1476	196	
	Overman's Certificate Examination held in December, 2012	1352	-	Result not yet declared
5.	Medical Examinations			
	(a) 5 yearly under Reg. 27(1)			
	(vi) Overman	111	108	
	(vii) Mining Sirdar			
	(viii) Shotfirer	140	138	
	(ix) Winding Engine Driver 1 <sup>st</sup> Class			
	(x) Winding Engine Driver 2 <sup>nd</sup> Class	--	--	
	(c) Senior Medical Board under Reg. 28			
	(iv) First Class Manager's	11	11	
	(v) Second Class manager's			
(vi) Surveyor's	10	10		
(d) Junior Medical Board under Reg.28				
(vi) Overman				
(vii) Mining Sirdar				
(viii) Shotfirer	14	13		
(ix) Winding Engine Driver 1 <sup>st</sup> Class				
(x) Winding Engine Driver 2 <sup>nd</sup> Class	11	10		

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
		5	5	
		25	23	
		17	15	
		1	1	
		4	4	
		2	2	
6..	Exchange cases	3	3	
		Application received	Certificate/ auth. issued	
7.	Exemption cases	555	506*	*Also included cert. in respect of application received during previous year
<b>Under Metalliferous Mines Regulations, 1961</b>				
<b>I. Un-Restricted</b>				
1.	First Class manager's Certificate Examination held in October, 2011	166	21	
	First Class manager's Certificate Examination held in October, 2012	187	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in October, 2011	113	09	
	Second Class Manager's Certificate Examination held in October, 2012	168	-	Result not yet declared
3.	Surveyor's Certificate Examination held in October, 2011	11	5	
	Surveyor's Certificate Examination held in October, 2012	08	-	Result not yet declared
4.	Foreman's Certificate Examination held in October, 2011	52	16	
	Foreman's Certificate Examination held in October, 2012	80	-	Result not yet declared



Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
<b>II. Restricted to Opencast Workings only</b>				
1.	First Class Manager's Certificate Examination held in October, 2011	1347	120	
	First Class Manager's Certificate Examination held in October, 2012	1377	-	Result not yet declared.
2.	Second Class Manager's Certificate Examination held in October, 2011	863	92	
	Second Class Manager's Certificate Examination held in October, 2012	1059	-	Result not yet declared.
3.	Surveyor's Certificate Examination held in October, 2011	75	11	
	Surveyor's Certificate Examination held in October, 2012	101	-	Result not yet declared
4.	Foreman's Certificate Examination held in October, 2011	613	118	
	Foreman's Certificate Examination held in October, 2012	799	-	Result not yet declared
<b>III. Medical Examinations</b>				
	(a) 5 yearly under Reg. 30(1)			
	(ix) Foreman, Un-restricted	-	-	
	(x) Foreman, Restricted			
	(xi) Mining Mate, Un-restricted	145	138	
	(xii) Mining Mate, Restricted			
	(xiii) Blaster, Un-restricted	-	-	
	(xiv) Blaster, Restricted			
	(xv) Winding Engine Driver 1 <sup>st</sup> Class	125	115	
	(xvi) Winding Engine Driver 2 <sup>nd</sup> Class			
	(c) Senior Medical Board	1	1	
	(iv) First Class Manager's			
	(v) Second Class manager's	1	1	
	(vi) Surveyor's			
	(d) Junior Medical Board	1	1	
	(iv) Foreman			
	(v) Mining Mate	-	-	
	(vi) Blaster			
		114	106	

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
		50	48	
		4	3	
		23	20	
		60	55	
		3	2	
10.	Exchange cases	01	1	Exam yet to be conducted.
11.	Exemption cases	Application received	Certificate auth. Issued	
		356	412*	*Also included cert. in respect of application received during previous year

**DETAILS OF EXAMINATIONS CONDUCTED IN THE YEAR 2013 UPTO DECEMBER**

SN	Type of Examination	No. of Candidates		Remarks
	<b>Under Coal Mines Regulations, 1957</b>	<b>Appeared</b>	<b>Successful</b>	
1.	First Class Manager's Certificate Examination held in December, 2012	2427	199	
	First Class Manager's Certificate Examination held in December, 2013	2242	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in December, 2012	2451	192	
	Second Class Manager's Certificate Examination held in December, 2013	2133	-	Result not yet declared
3.	Mine Surveyor's Certificate Examination held in December, 2012	308	50	
	Mine Surveyor's Certificate Examination held in December, 2013	319	-	Result not yet declared
4.	Overman's Certificate Examination held in December, 2012	1352	204	
	Overman's Certificate Examination held in December, 2013	1278	-	Result not yet declared
5.	Medical Examinations (a) 5 yearly under Reg. 27(1) (i) Overman (ii) Mining Sirdar (iii) Shotfirer (iv) Winding Engine Driver 1st Class (v) Winding Engine Driver 2nd Class (b) Senior Medical Board under Reg.28 (i) First Class Manager's (ii) Second Class Manager's (iii) Surveyor's	  85 140 14 10 02  90 40	  84 139 14 10 02  86 38	

	(c) Junior Medical Board under Reg.28	12	12	
	(i) Overman			
	(ii) Mining Sirdar	25	24	
	(iii) Shotfirer	27	26	
	(iv) Winding Engine Driver 1st Class	03	03	
	(v) Winding Engine Driver 2nd Class	10	10	
		02	02	
6.	Exchange Cases	1	0	
7.	Exemption Cases	Application received	Certificate auth. Issued	* also included certificates in respect of applications received during previous year.
		718	586*	
<b>Under Metalliferous Mines Regulations, 1961</b>				
<b>I. Un Restricted</b>				
1.	First Class Manager's Certificate Examination held in October, 2012	187	18	
	First Class Manager's Certificate Examination held in September, 2013	179	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in October, 2012	168	22	
	Second Class Manager's Certificate Examination held in September, 2013	131	-	Result not yet declared
3.	Surveyor's Certificate Examination held in October, 2012	8	2	
	Surveyor's Certificate Examination held in September, 2013	15	-	Result not yet declared
4.	Foreman's Certificate Examination held in October, 2012	80	17	
	Foreman's Certificate Examination held	63	-	Result not yet

	in September, 2013			declared
	<b>II. Restricted to Opencast Workings only</b>			
1.	First Class Manager's Certificate Examination held in October, 2012	1377	156	
	First Class Manager's Certificate Examination held in September, 2013	1179	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in October, 2012	1059	148	
	Second Class Manager's Certificate Examination held in September, 2013	909	-	Result not yet declared
3.	Surveyor's Certificate Examination held in October, 2012	101	15	
	Surveyor's Certificate Examination held in September, 2013	74	-	Result not yet declared
4.	Foreman's Certificate Examination held in October, 2012	799	95	
	Foreman's Certificate Examination held in September, 2013	610	-	Result not yet declared
	<b>III. Medical Examinations</b>			
	(a) 5 yearly under Reg. 27(1)			
	(i) Foreman, Un-Restricted	05	05	
	(ii) Foreman, Restricted	02	02	
	(iii) Mining Mate, Un-Restricted	10	09	
	(iv) Mining Mate, Restricted	05	05	
	(v) Blaster, Un-Restricted	15	15	
	(vi) Blaster, Restricted	2	02	
	(vii) Winding Engine Driver 1 <sup>st</sup> Class	7	07	
	(viii) Winding Engine Driver 2 <sup>nd</sup> Class	1	01	
	(b) Senior Medical Board	12	11	
	(i) First Class Manager's	06	06	

	(ii) Second Class Manager's (iii) Surveyor's	03	03	
	(c) Junior Medical Board under	10	8	
	(i) Foreman	11	10	
	(ii) Mining Mate	1	1	
	(iii) Blaster			
	<b>IV. Exchange Cases</b>	1	0	
	<b>V. Exemption Cases</b>	Application received	Certificate auth. Issued	* also included certificates in respect of applications received during previous year.
		367	272*	

**DETAILS OF EXAMINATIONS CONDUCTED IN THE YEAR 2014 UPTO DECEMBER**

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
<b>Under Coal Mines Regulations, 1957</b>				
1.	First Class Manager's Certificate Examination held in December, 2013	2433	219	Result declared on 22.07.2014
	First Class Manager's Certificate Examination in 2014	-	-	No Examination
2.	Second Class Manager's Certificate Examination held in December, 2013	2494	234	Result declared on 22.07.2014
	Second Class Manager's Certificate Examination in 2014	-	-	No Examination
3.	Mine Surveyor's Certificate Examination held in December, 2013	333	41	Result declared on 22.07.2014
	Mine Surveyor's Certificate Examination in 2014	363	-	Result not yet declared
4.	Overman's Certificate Examination held in December, 2013	1316	196	Result declared on 22.07.2014
	Overman's Certificate Examination held in December, 2014	1110	-	Result not yet declared
5.	Medical Examinations			
	(a) 5 yearly under Reg. 27(1)			
	(i) Overman	199	197	
	(ii) Mining Sirdar			
	(iii) Shotfirer	219	215	
	(iv) Winding Engine Driver 1 <sup>st</sup> Class	1	1	
	(v) Winding Engine Driver 2 <sup>nd</sup> Class	43	40	
	(b) Senior Medical Board under Reg. 28	8	8	
	(i) First Class Manager's			
	(ii) Second Class manager's			
(iii) Surveyor's				
(c) Junior Medical Board under Reg. 28	111	108		
(i) Overman	41	40		
(ii) Mining Sirdar				

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
	(iii) Shotfirer	11	10	
	(iv) Winding Engine Driver 1 <sup>st</sup> Class	11	10	
	(v) Winding Engine Driver 2 <sup>nd</sup> Class	14	14	
		0	0	
		0	0	
		0	0	
6.	Exchange cases	2	2	
		Application received	Certificate/ auth. issued	
7.	Exemption cases	1104	954	
<b>Under Metalliferous Mines Regulations, 1961</b>				
<b>I. Un-Restricted</b>				
1.	First Class manager's Certificate Examination held in September, 2013	201	13	Result declared on 10.03.2014
	First Class manager's Certificate Examination held in September, 2014	221	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in September, 2013	160	12	Result declared on 10.03.2014
	Second Class Manager's Certificate Examination held in September, 2014	174	-	Result not yet declared
3.	Surveyor's Certificate Examination held in September, 2013	19	1	Result declared on 10.03.2014
	Surveyor's Certificate Examination held in September, 2014	29	-	Result not yet declared
4.	Foreman's Certificate Examination held in September, 2013	74	6	Result declared on 10.03.2014



Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
	Foreman's Certificate Examination held in September, 2014	99	-	Result not yet declared
<b>II. Restricted to Opencast Workings only</b>				
1.	First Class Manager's Certificate Examination held in September, 2013	1304	153	Result declared on 10.03.2014
	First Class Manager's Certificate Examination held in September, 2014	1311	-	Result not yet declared
2.	Second Class Manager's Certificate Examination held in September, 2013	904	115	Result declared on 10.03.2014
	Second Class Manager's Certificate Examination held in September, 2014	907	-	Result not yet declared
3.	Surveyor's Certificate Examination held in September, 2013	87	13	Result declared on 10.03.2014
	Surveyor's Certificate Examination held in September, 2014	98	-	Result not yet declared
4.	Foreman's Certificate Examination held in September, 2013	817	146	Result declared on 10.03.2014
	Foreman's Certificate Examination held in September, 2014	877	-	Result not yet declared
<b>III. Medical Examinations</b>				
	(a) 5 yearly under Reg. 30(1)			
	(i) Foreman, Un-restricted	6	6	
	(ii) Foreman, Restricted			
	(iii) Mining Mate, Un-restricted	3	3	
	(iv) Mining Mate, Restricted			
	(v) Blaster, Un-restricted	12	10	
	(vi) Blaster, Restricted			
	(vii) Winding Engine Driver 1 <sup>st</sup> Class	7	7	
	(viii) Winding Engine Driver 2 <sup>nd</sup> Class	12	11	
	(b) Senior Medical Board			
	(i) First Class Manager's	5	5	
	(ii) Second Class manager's			

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
	(iii) Surveyor's	5	5	
	(c) Junior Medical Board			
	(i) Foreman	0	0	
	(ii) Mining Mate			
	(iii) Blaster			
		21	20	
		12	11	
		4	4	
		8	8	
		7	7	
		0	0	
IV.	Exchange cases	13	13	
V.	Exemption cases	Application received	Certificate/authorisation issued	
		421	344	

**DETAILS OF EXAMINATIONS CONDUCTED IN THE YEAR 2015 UPTO DECEMBER**

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
<b>Under Coal Mines Regulations, 1957</b>				
1.	First Class Manager's Certificate Examination held in December, 2014	-	-	No Examination
	First Class Manager's Certificate Examination in 2015	5526	708	Result declared on 21.12.2015
2.	Second Class Manager's Certificate Examination held in December, 2014	-	-	No Examination
	Second Class Manager's Certificate Examination in 2015	4325	490	Result declared on 21.12.2015
3.	Mine Surveyor's Certificate Examination held in December, 2014	363	55	Result declared on 16.7.2015
	Mine Surveyor's Certificate Examination in 2015	-	-	No Examination
4.	Overman's Certificate Examination held in December, 2014	1110	180	Result declared on 16.7.2015
	Overman's Certificate Examination held in December, 2015	-	-	No Examination
5.	Medical Examinations (a) 5 yearly under Reg. 27(1)  (vi) Overman (vii) Mining Sirdar (viii) Shotfirer (ix) Winding Engine Driver 1 <sup>st</sup> Class (x) Winding Engine Driver 2 <sup>nd</sup> Class (c) Senior Medical Board under Reg. 28 (iv) First Class Manager's (v) Second Class manager's (vi) Surveyor's (d) Junior Medical Board under Reg.28 (vi) Overman (vii) Mining Sirdar (viii) Shotfirer (ix) Winding Engine Driver 1 <sup>st</sup>	181     2 34 2  96 46 15	175     2 33 2  96 46 15	Medical Examinations information indicated here is of HQDhanbad only.

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
	Class (x) Winding Engine Driver 2 <sup>nd</sup> Class	7	7	
		11	11	
		1	1	
		6	5	
		1	1	
6.	Exchange cases	2	2	
		Application received	Certificate/ auth. issued	
7.	Exemption cases	1042	1771	
<b>Under Metalliferous Mines Regulations, 1961</b>				
<b>I. Un-Restricted</b>				
1.	First Class manager's Certificate Examination held in September, 2014	221	43	Result declared on 28.4.2015
	First Class manager's Certificate Examination held in September, 2015	-	-	No Examination
2.	Second Class Manager's Certificate Examination held in September, 2014	174	32	Result declared on 28.4.2015
	Second Class Manager's Certificate Examination held in September, 2015	-	-	No Examination
3.	Surveyor's Certificate Examination held in September, 2014	29	4	Result declared on 28.4.2015
	Surveyor's Certificate Examination held in September, 2015	-	-	No Examination
4.	Foreman's Certificate Examination held in September, 2014	99	12	Result declared on 28.4.2015

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
	Foreman's Certificate Examination held in September, 2015	-	-	No Examination
<b>II. Restricted to Opencast Workings only</b>				
1.	First Class Manager's Certificate Examination held in September, 2014	1311	158	Result declared on 28.4.2015
	First Class Manager's Certificate Examination held in September, 2015	-	-	No Examination
2.	Second Class Manager's Certificate Examination held in September, 2014	907	92	Result declared on 28.4.2015
	Second Class Manager's Certificate Examination held in September, 2014	-	-	No Examination
3.	Surveyor's Certificate Examination held in September, 2014	98	7	Result declared on 28.4.2015
	Surveyor's Certificate Examination held in September, 2015	-	-	No Examination
4.	Foreman's Certificate Examination held in September, 2014	877	136	Result declared on 28.4.2015
	Foreman's Certificate Examination held in September, 2015	-	-	No Examination
<b>III. Medical Examinations</b>				
	(a) 5 yearly under Reg. 30(1)			
	(ix) Foreman, Un-restricted	15	14	
	(x) Foreman, Restricted			
	(xi) Mining Mate, Un-restricted	10	10	
	(xii) Mining Mate, Restricted			
	(xiii) Blaster, Un-restricted	19	18	
	(xiv) Blaster, Restricted			
	(xv) Winding Engine Driver 1 <sup>st</sup> Class	7	7	
	(xvi) Winding Engine Driver 2 <sup>nd</sup> Class	3	3	
	(c) Senior Medical Board			
	(iv) First Class Manager's	2	2	
	(v) Second Class manager's			

Sl. No.	Type of Examination	No. of Candidates		Remarks
		Appeared	Successful	
	(vi) Surveyor's (d) Junior Medical Board (iv) Foreman (v) Mining Mate (vi) Blaster	1	1	
		0	0	
		0	0	
		0	0	
		0	0	
		10	10	
		7	7	
		4	4	
IV.	Exchange cases	13	13	
V.	Exemption cases	Application received	Certificate/ authorization issued	
		700	336	

**DETAILS OF JUNIOR EXAMINATION CONDUCTED IN ZONAL OFFICE DURING - 2011**

Name of Zone	Under CMR 1957						Under MMR 1961									
	Med exam (Jr/Sr)		Mining Sirdar		Gas Testing		Med exam (Jr/Sr)		Mining Mate		Gas Testing		Blaster		Winding engine Driver 1 <sup>st</sup> & 2 <sup>nd</sup> class	
	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.
Central Zone	182	174	125	39	462	148	0	0	0	0	0	0	0	0	45	29
Eastern Zone	0	0	0	0	0	0	182	178	0	0	0	0	0	0	0	0
Western Zone	60	55	227	52	784	314	0	0	237	65	0	0	131	32	32	19
Northern Zone	0	0	0	0	0	0	107	107	245	104	0	0	63	32	0	0
North Western Zone	0	0	0	0	0	0	0	0	135	90	74	38	53	30	0	0
Southern Zone	0	0	0	0	0	0	0	0	227	135	29	21	96	53	0	0
South Central Zone	0	0	27	17	156	85	186	185	384	225	116	77	44	34	0	0
South Eastern Zone	0	0	132	65	565	301	0	0	337	132	33	15	70	33	13	13
<b>TOTAL</b>	<b>242</b>	<b>229</b>	<b>511</b>	<b>173</b>	<b>1967</b>	<b>848</b>	<b>475</b>	<b>470</b>	<b>1565</b>	<b>751</b>	<b>252</b>	<b>151</b>	<b>457</b>	<b>214</b>	<b>90</b>	<b>61</b>

**DETAILS OF JUNIOR EXAMINATION CONDUCTED IN HQ/ZONAL OFFICE DURING  
- 2012**

	Under CMR 1957						Under MMR 1961						Winding engine Driver 1st & 2nd class			
	Med exam (Jr/Sr)		Mining Sirdar		Gas Testing		Med exam (Jr/Sr)		Mining Mate		Gas Testing				Blast er	
	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S
	p	u	p	u	p	u	p	u	p	u	p	u	p	u	p	u
	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
HQ/Central Zone, Dhanbad	0	0	9	22	7	3	0	0	0	0	0	0	0	0	1	7
Eastern Zone, Sitarampur	0	0	5	16	1	4	0	0	6	2	0	0	1	1	0	0
Western Zone, Nagpur	8	5	1	49	6	2	8	6	2	6	0	0	1	4	1	7
Northern Zone, Ghaziabad	0	0	0	0	0	0	1	1	9	3	3	2	9	3	9	3
North Western Zone, Udaipur	0	0	0	0	0	0	0	0	4	3	2	1	1	6	0	0
Southern Zone, Bangaluru	0	0	0	0	0	0	0	0	1	7	3	2	1	5	0	0
South Central Zone, Hyderabad	0	0	2	8	2	1	0	0	2	1	3	2	6	4	0	0
South	0	0	1	42	6	4	0	0	1	7	0	0	3	1	2	10



Eastern Zone, Ranchi			0 8		7 4	5 3			2 7	6			2 7	5 0	1	
<b>TOTAL</b>	<b>8</b>	<b>5</b>	<b>4 1 3</b>	<b>13 7</b>	<b>2 4 2 1 5</b>	<b>1 2 1 2</b>	<b>2 1 2</b>	<b>1 8 1</b>	<b>9 3 2</b>	<b>4 9 0</b>	<b>1 2 9</b>	<b>9 2 2</b>	<b>6 8 7</b>	<b>3 0 1</b>	<b>5 3</b>	<b>27</b>

### DETAILS OF JUNIOR EXAMINATION CONDUCTED DURING - 2013

Under CMR 1957						Under MMR 1961								Winding engine Driver 1 <sup>st</sup> & 2 <sup>nd</sup> class	
Med exam (Jr/Sr)		Mining Sirdar		Gas Testing		Med exam (Jr/Sr)		Mining Mate		Gas Testing		Blaster			
App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.
3	3	678	239	2700	1144	971	868	1145	457	843	417	406	200	146	77

### DETAILS OF JUNIOR EXAMINATION CONDUCTED DURING - 2014

Under CMR 1957						Under MMR 1961								Winding engine Driver 1 <sup>st</sup> & 2 <sup>nd</sup> class	
Med exam (Jr/Sr)		Mining Sirdar		Gas Testing		Med exam (Jr/Sr)		Mining Mate		Gas Testing		Blaster			
App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.
263	209	570	203	3954	1870	239	238	1156	544	657	336	386	194	52	39

**Table 7.3 - DETAILS OF JUNIOR EXAMINATION CONDUCTED DURING - 2015**

Under CMR 1957						Under MMR 1961								Winding engine Driver 1 <sup>st</sup> & 2 <sup>nd</sup> class	
Med exam (Jr/Sr)		Mining Sirdar		Gas Testing		Med exam (Jr/Sr)		Mining Mate		Gas Testing		Blaster			
App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.	App.	Succ.
592	581	1169	290	5250	1838	88	76	1712	413	729	251	931	163	69	48

**Annexure - XI****Table 18.1.1 - State-wise Status of Safety Officers (SO) under 40-B (1) in factories during 2011**

2011					
Sl.No.	States/Union Territories	Factories Requiring SO	Factories who Appointed SO	SO Required	SO Appointed
1.	Andaman & Nicobar Islands	0	0	0	0
2.	Andhra Pradesh	120	104	120	104
3.	Assam	4	0	4	58
4.	Bihar	20	18	26	23
5.	Chandigarh	4	4	4	4
6.	Chhattisgarh	79	87	124	122
7.	Daman & Diu & Dadra & Nagar Haveli	45	48	48	48
8.	Delhi	9	4	9	4
9.	Goa	56	49	57	50
10.	Gujarat	317	340	379	411
11.	Haryana	90	86	99	92
12.	Himachal Pradesh	14	14	14	14
13.	Jammu & Kashmir	14	6	14	6
14.	Jharkhand	49	45	152	145
15.	Karnataka	186	155	228	203
16.	Kerala	46	41	46	44
17.	Madhya Pradesh	96	89	114	104
18.	Maharashtra	1203	987	1203	1429
19.	Manipur	3	3	3	3
20.	Meghalaya	0	1	0	1
21.	Nagaland	0	0	0	0
22.	Odisha	82	75	249	228
23.	Puducherry	9	8	9	8
24.	Punjab	56	43	56	43
25.	Rajasthan	79	75	73	81
26.	Tamil Nadu	312	271	318	254
27.	Tripura	1	0	1	0
28.	Uttar Pradesh	..	..	..	..
29.	Uttarakhand	..	..	..	..
30.	West Bengal	252	108	278	108
	<b>Total</b>	<b>3146</b>	<b>2661</b>	<b>3628</b>	<b>3587</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim. (ii) P : Provisional (iii).. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 18.1.2 - State-wise Status of Safety Officers (SO) under 40-B (1) in factories during 2012**

2012					
Sl. No.	State/Union Territory	Factories Requiring SO	Factories who Appointed SO	SO Required	SO Appointed
1.	Andaman & Nicobar Islands	0	0	0	0
2.	Andhra Pradesh	123	100	123	100
3.	Assam	7	7	7	69
4.	Bihar	20	18	26	23
5.	Chandigarh	4	4	4	4
6.	Chhattisgarh	115	98	165	143
7.	Daman & Diu and Dadra & Nagar Haveli	23	26	34	34
8.	Delhi	9	4	9	4
9.	Goa	24	19	27	35
10.	Gujarat	335	342	394	424
11.	Haryana	97	94	106	100
12.	Himachal Pradesh	16	16	16	16
13.	Jammu & Kashmir	23	15	23	15
14.	Jharkhand	49	45	152	145
15.	Karnataka	167	141	205	181
16.	Kerala	50	48	51	48
17.	Madhya Pradesh	102	95	120	111
18.	Maharashtra	479	565	486	607
19.	Manipur	..	..	..	..
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	84	77	271	236
23.	Puducherry	9	8	9	8
24.	Punjab	51	40	51	40
25.	Rajasthan	82	79	77	87
26.	Tamil Nadu	297	248	309	249
27.	Tripura	1	0	1	0
28.	Uttar Pradesh	..	..	..	..
29.	Uttarakhand	47	47	47	47
30.	West Bengal	252	254	278	172
<b>Total</b>		<b>2466</b>	<b>2390</b>	<b>2991</b>	<b>2898</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim. (ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 18.1.3 - State-wise Status of Safety Officers (SO) under 40-B (1) in factories during 2013**

2013					
Sl. No.	State/Union Territory	Factories Requiring SO	Factories Appointed SO	SO Required	SO Appointed
1.	Andaman & Nicobar Islands	0	0	0	0
2.	Andhra Pradesh	123	112	172	138
3.	Assam	3	3	3	3
4.	Bihar	8	8	9	9
5.	Chandigarh	3	3	0	0
6.	Chhattisgarh	150	136	219	227
7.	Daman & Diu and Dadra & Nagar Haveli	24	27	34	34
8.	Delhi	9	4	9	4
9.	Goa	10	11	12	12
10.	Gujarat	352	269	429	358
11.	Haryana	65	63	68	66
12.	Himachal Pradesh	16	16	16	16
13.	Jammu & Kashmir	..	..	..	..
14.	Jharkhand	67	68	184	165
15.	Karnataka	157	143	191	175
16.	Kerala	46	43	48	45
17.	Madhya Pradesh	110	106	128	121
18.	Maharashtra	407	473	502	580
19.	Manipur	3	3	3	3
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	91	83	268	274
23.	Puducherry	9	8	9	8
24.	Punjab	54	47	54	47
25.	Rajasthan	85	79	81	89
26.	Tamil Nadu	283	194	294	256
27.	Tripura	1	0	1	0
28.	Uttar Pradesh	..	..	..	..
29.	Uttarakhand	47	40	47	40
30.	West Bengal	252	131	155	131
<b>Total</b>		<b>2375</b>	<b>2070</b>	<b>2936</b>	<b>2801</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim. (ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 18.1.4 - State-wise Status of Safety Officers (SO) under 40-B (1) in factories during 2014**

2014					
Sl. No.	State/Union Territory	Factories Requiring SO	Factories Appointed SO	SO Required	SO Appointed
1.	Andaman & Nicobar Islands	0	0	0	0
2.	Andhra Pradesh	54	48	65	51
3.	Assam	8	4	8	4
4.	Bihar	10	10	10	10
5.	Chandigarh	2	2	0	0
6.	Chhattisgarh	149	140	220	211
7.	Daman & Diu and Dadra & Nagar Haveli	24	27	34	34
8.	Delhi	9	5	9	5
9.	Goa	10	62	9	94
10.	Gujarat	448	534	566	743
11.	Haryana	117	108	134	122
12.	Himachal Pradesh	16	16	16	16
13.	Jammu & Kashmir	15	15	15	15
14.	Jharkhand	68	70	185	166
15.	Karnataka	222	208	259	245
16.	Kerala	39	38	40	39
17.	Madhya Pradesh	112	108	131	127
18.	Maharashtra	386	455	460	560
19.	Manipur	3	3	3	3
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	98	94	300	270
23.	Puducherry	9	8	9	8
24.	Punjab	44	40	44	40
25.	Rajasthan	87	82	84	92
26.	Tamil Nadu	245	228	252	240
27.	Telangana	0	46	60	51
28.	Tripura	1	0	1	0
29.	Uttar Pradesh	199	170	230	186
30.	Uttarakhand	18	18	18	18
31.	West Bengal	254	166	209	166
<b>Total</b>		<b>2647</b>	<b>2705</b>	<b>3371</b>	<b>3516</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 18.1.5 - State-wise Status of Safety Officers (SO) under 40-B (1) in factories during 2015**

2015					
Sl. No.	State/Union Territory	Factories Requiring SO	Factories which Appointed SO	SO Required	SO Appointed
1.	Andaman & Nicobar Islands	0	0	0	0
2.	Andhra Pradesh	66	58	87	72
3.	Assam	12	12	64	64
4.	Bihar	10	10	10	10
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	159	145	235	237
7.	Daman & Diu and Dadra & Nagar Haveli	25	28	36	36
8.	Delhi	9	5	9	5
9.	Goa	10	11	10	11
10.	Gujarat	743	718	968	993
11.	Haryana	133	137	150	149
12.	Himachal Pradesh	16	16	16	16
13.	Jammu & Kashmir	15	15	15	15
14.	Jharkhand	72	75	189	169
15.	Karnataka	249	232	280	266
16.	Kerala	39	39	42	42
17.	Madhya Pradesh	112	108	131	127
18.	Maharashtra	296	369	342	533
19.	Manipur	3	3	3	3
20.	Meghalaya	0	0	0	0
21.	Mizoram	0	0	0	0
22.	Nagaland	0	0	0	0
23.	Odisha	97	92	331	267
24.	Puducherry	9	8	9	8
25.	Punjab	51	43	51	43
26.	Rajasthan	83	79	89	87
27.	Tamil Nadu	284	266	292	279
28.	Telangana	19	19	18	18
29.	Tripura	0	5	0	5
30.	Uttar Pradesh	197	172	235	193
31.	Uttarakhand	52	42	52	42
32.	West Bengal	254	127	209	127
<b>Total</b>		<b>3015</b>	<b>2834</b>	<b>3873</b>	<b>3817</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 18.1.6 - State-wise Status of Safety Officers (SO) under 40-B (1) in factories during 2016**

Sl. No.	State/Union Territory	Factories Requiring SO	Factories who Appointed SO	SO Required	SO Appointed
1.	Andaman & Nicobar Islands	0	0	0	0
2.	Andhra Pradesh	74	63	82	73
3.	Assam	8	8	132	132
4.	Bihar	33	33	51	50
5.	Chandigarh	3	3	3	3
6.	Chhattisgarh	146	142	231	232
7.	Daman & Diu and Dadra &	26	29	37	37
8.	Delhi	9	5	9	5
9.	Goa	58	58	90	62
10.	Gujarat	645	684	896	994
11.	Haryana	NA	NA	NA	NA
12.	Himachal Pradesh	17	17	17	17
13.	Jammu & Kashmir	15	15	15	15
14.	Jharkhand	79	74	179	162
15.	Karnataka	249	252	315	292
16.	Kerala	46	44	45	45
17.	Madhya Pradesh	NA	NA	NA	NA
18.	Maharashtra	270	367	306	518
19.	Manipur	4	4	4	4
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	106	101	305	308
23.	Puducherry	9	8	9	8
24.	Punjab	43	38	43	38
25.	Rajasthan	49	49	48	47
26.	Tamil Nadu	294	275	302	290
27.	Telangana	70	0	70	69
28.	Tripura	0	7	0	7
29.	Uttar Pradesh	NA	NA	NA	NA
30.	Uttarakhand	140	125	140	125
31.	West Bengal	NA	NA	NA	NA
<b>Total</b>		<b>2393</b>	<b>2401</b>	<b>3329</b>	<b>3533</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.



**Table 18.2.1 - State-wise Medical Facilities in factories during 2011**

2011									
Sl. No.	States/Union Territories	Full time MO		Retainership or part-time MO		Factories having Ambulance Van		Factories having Ambulance Rooms	
		Req.	App.	Req.	App.	Req.	App.	Req.	App.
1.	Andaman & Nicobar Islands	1	0	0	0	2	2	2	2
2.	Andhra Pradesh`	275	251	0	0	0	0	232	196
3.	Assam	0	0	0	0	0	0	10	55
4.	Bihar	15	14	0	0	15	15	15	15
5.	Chandigarh	1	1	0	0	1	1	1	1
6.	Chhattisgarh	135	85	365	266	176	144	162	147
7.	Daman & Diu and Dadra & Nagar Haveli	1	1	0	60	0	20	0	25
8.	Delhi	9	9	263	61	25	19	25	19
9.	Goa	41	33	141	79	182	77	25	18
10.	Gujarat	259	189	1937	1805	224	198	235	230
11.	Haryana	63	65	74	71	100	90	93	85
12.	Himachal Pradesh	254	254	1721	1721	178	178	178	178
13.	Jammu & Kashmir	9	12	0	0	9	12	9	10
14.	Jharkhand	87	82	38	31	58	58	47	45
15.	Karnataka	379	301	208	189	423	325	409	393
16.	Kerala	46	40	62	58	46	61	67	63
17.	Madhya Pradesh	124	116	265	258	104	99	117	114
18.	Maharashtra	425	278	334	243	156	248	156	248
19.	Manipur	1	6	0	0	2	1	2	2
20.	Meghalaya	5	4	18	15	17	7	1	1
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	88	78	65	64	88	88	88	88
23.	Puducherry	10	8	28	22	9	9	9	9
24.	Punjab	0	0	0	0	0	0	105	88
25.	Rajasthan	78	68	43	43	109	91	126	121
26.	Tamil Nadu	134	98	233	176	284	190	336	252
27.	Tripura	1	1	1	1	0	0	1	1
28.	Uttar Pradesh	..	..	..	..	..	..	..	..
29.	Uttarakhand	..	..	..	..	..	..	..	..
30.	West Bengal	292	292	15	15	303	287	303	295
	<b>Total</b>	<b>2733</b>	<b>2286</b>	<b>5811</b>	<b>5178</b>	<b>2511</b>	<b>2220</b>	<b>2754</b>	<b>2701</b>

**Note:** There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim. P : Provisional... : Not Available **Req:** Required **App:** Appointed

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 18.2.2 - State-wise Medical Facilities in factories during 2012**

2012									
Sl. No.	State/Union Territory	Full time MO		Retainership or part-time MO		Factories having Ambulance Van		Factories having Ambulance Rooms	
		Req.	App.	Req.	App.	Req.	App.	Req.	App.
1.	Andaman & Nicobar Islands	1	0	0	0	2	2	2	2
2.	Andhra Pradesh`	244	206	0	0	0	0	201	171
3.	Assam	0	0	0	0	0	0	53	0
4.	Bihar	15	14	0	0	15	15	15	15
5.	Chandigarh	1	1	0	0	1	1	1	1
6.	Chhattisgarh	147	107	257	170	200	162	140	104
7.	Daman & Diu and Dadra & Nagar Haveli	1	1	0	60	0	20	0	25
8.	Delhi	14	14	304	201	64	31	26	20
9.	Goa	28	31	34	62	9	43	9	26
10.	Gujarat	291	188	3394	2918	513	391	505	426
11.	Haryana	75	62	87	83	111	101	104	94
12.	Himachal Pradesh	282	282	1971	1971	188	188	188	188
13.	Jammu & Kashmir	9	12	0	0	9	12	9	10
14.	Jharkhand	87	82	38	31	58	58	47	45
15.	Karnataka	313	265	185	166	316	262	336	333
16.	Kerala	46	40	60	64	46	61	67	60
17.	Madhya Pradesh	134	129	281	277	114	109	137	132
18.	Maharashtra	458	421	661	542	402	368	408	375
19.	Manipur	..	..	..	..	..	..	..	..
20.	Meghalaya	11	4	135	27	16	2	1	1
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	93	83	70	69	90	90	90	90
23.	Puducherry	10	8	28	22	9	9	9	9
24.	Punjab	0	0	0	0	0	0	116	94
25.	Rajasthan	81	73	49	50	116	95	132	123
26.	Tamil Nadu	109	95	150	128	166	157	295	294
27.	Tripura	1	1	1	1	0	0	1	1
28.	Uttar Pradesh	..	..	..	..	..	..	..	..
29.	Uttarakhand	48	43	168	168	29	32	49	37
30.	West Bengal	292	91	15	15	303	68	303	153
<b>Total</b>		<b>2791</b>	<b>2253</b>	<b>7888</b>	<b>7025</b>	<b>2777</b>	<b>2277</b>	<b>3244</b>	<b>2829</b>

**Note:** There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim

P : Provisional.                      .. : Not Available

**Req. :** Required      **App. :** Appointed

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 18.2.3 - State-wise Medical Facilities in factories during 2013**

2013									
Sl. No.	State/Union Territory	Full time MO		Retainership or part-time MO		Factories having Ambulance Van		Factories having Ambulance Rooms	
		Req.	App.	Req.	App.	Req.	App.	Req.	App.
1.	Andaman & Nicobar Islands	1	0	0	0	2	2	2	2
2.	Andhra Pradesh	244	206	0	0	0	0	201	171
3.	Assam	0	0	0	0	0	0	5	5
4.	Bihar	15	14	0	0	26	26	26	26
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	111	104	309	170	126	100	110	95
7.	Daman & Diu and Dadra & Nagar Haveli	1	1	0	75	0	25	0	30
8.	Delhi	14	14	336	241	181	92	26	20
9.	Goa	38	41	54	75	81	80	28	27
10.	Gujarat	328	272	3204	3169	485	478	319	271
11.	Haryana	49	43	92	102	78	81	75	76
12.	Himachal Pradesh	301	301	2178	2178	190	190	190	190
13.	Jammu & Kashmir	..	..	..	..	..	..	..	..
14.	Jharkhand	84	78	56	62	54	61	72	72
15.	Karnataka	307	250	141	139	337	274	329	318
16.	Kerala	34	31	64	65	23	23	43	39
17.	Madhya Pradesh	139	135	284	279	118	113	144	141
18.	Maharashtra	672	425	1420	1085	389	288	556	506
19.	Manipur	1	6	0	0	2	1	2	2
20.	Meghalaya	11	4	138	27	16	2	1	1
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	102	91	95	231	107	89	105	96
23.	Puducherry	10	8	28	22	9	9	9	9
24.	Punjab	0	0	0	0	0	0	116	107
25.	Rajasthan	82	76	51	51	121	112	137	134
26.	Tamil Nadu	198	172	211	164	242	207	354	320
27.	Tripura	1	1	1	1	0	0	1	1
28.	Uttar Pradesh	..	..	..	..	..	..	..	..
29.	Uttarakhand	9	4	60	60	148	151	49	37
30.	West Bengal	292	91	15	15	303	68	303	82
<b>Total</b>		<b>3044</b>	<b>2368</b>	<b>8737</b>	<b>8211</b>	<b>3038</b>	<b>2472</b>	<b>3203</b>	<b>2778</b>

**Note:** There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim

P : Provisional. .. : Not Available

**Req. :** Required **App. :** Appointed

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 18.2.4 - State-wise Medical Facilities in factories during 2014**

2014									
Sl. No.	State/Union Territory	Full time MO		Retainership or part-time MO		Factories having Ambulance Van		Factories having Ambulance Rooms	
		Req.	App.	Req.	App.	Req.	App.	Req.	App.
1.	Andaman & Nicobar Islands	1	0	0	0	2	2	2	2
2.	Andhra Pradesh`	256	190	0	0	0	0	135	121
3.	Assam	0	0	727	216	0	0	300	150
4.	Bihar	5	5	..	..	5	5	5	5
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	110	105	304	170	129	101	110	101
7.	Daman & Diu and Dadra & Nagar Haveli	1	1	0	75	0	25	0	30
8.	Delhi	26	16	410	258	312	156	30	22
9.	Goa	20	50	45	75	90	70	25	30
10.	Gujarat	312	275	3223	2715	290	294	372	382
11.	Haryana	85	68	131	129	126	111	121	110
12.	Himachal Pradesh	311	311	2281	2281	193	193	193	193
13.	Jammu & Kashmir	4	4	4	4	4	4	4	4
14.	Jharkhand	84	80	72	74	54	59	72	72
15.	Karnataka	403	334	224	223	421	364	435	419
16.	Kerala	31	27	57	64	22	22	42	38
17.	Madhya Pradesh	141	136	296	287	120	115	146	143
18.	Maharashtra	466	346	1247	1048	506	409	579	501
19.	Manipur	1	6	0	0	2	1	2	2
20.	Meghalaya	11	4	138	27	16	2	1	1
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	127	113	79	52	206	155	108	98
23.	Puducherry	10	8	28	22	9	9	9	9
24.	Punjab	0	0	0	0	0	0	91	72
25.	Rajasthan	83	81	55	55	125	118	147	143
26.	Tamil Nadu	180	162	227	197	222	203	267	247
27.	Telangana	147	140	0	0	0	0	150	140
28.	Tripura	1	1	1	1	0	0	1	1
29.	Uttar Pradesh	220	184	1836	959	451	166	436	196
30.	Uttarakhand	9	7	60	60	148	148	49	37
31.	West Bengal	292	91	15	15	303	68	303	82
<b>Total</b>		<b>3337</b>	<b>2745</b>	<b>11460</b>	<b>9007</b>	<b>3756</b>	<b>2800</b>	<b>4135</b>	<b>3351</b>

**Note:** There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim

P : Provisional. .. : Not Available

**Req.:** Required **App.:** Appointed

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 18.2.5 - State-wise Medical Facilities in factories during 2015**

2015									
Sl. No	State/Union Territory	Full time MO		Retainer ship or part-time MO		Factories having Ambulance Van		Factories having Ambulance Rooms	
		Req.	App.	Req.	App.	Req.	App.	Req.	App.
1.	Andaman & Nicobar Islands	1	0	0	0	2	2	2	2
2.	Andhra Pradesh	221	163	0	0	0	0	124	110
3.	Assam	55	55	219	0	55	55	55	99
4.	Bihar	9	9	9	9	9	9	9	9
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	141	126	313	186	145	126	115	120
7.	Daman & Diu and Dadra & Nagar Haveli	3	3	0	80	0	27	0	32
8.	Delhi	26	18	436	275	312	156	30	22
9.	Goa	35	30	72	52	70	50	31	20
10.	Gujarat	313	286	2369	2269	1390	953	376	379
11.	Haryana	85	78	112	119	129	126	127	125
12.	Himachal Pradesh	322	322	2335	2335	196	196	196	196
13.	Jammu & Kashmir	4	4	4	4	4	4	4	4
14.	Jharkhand	87	84	66	67	58	63	77	77
15.	Karnataka	415	349	170	168	435	370	421	409
16.	Kerala	36	32	44	44	22	22	44	40
17.	Madhya Pradesh	146	141	307	298	124	119	149	145
18.	Maharashtra	555	372	1514	839	529	452	486	490
19.	Manipur	1	6	0	0	2	1	2	2
20.	Meghalaya	11	4	138	27	16	2	1	1
21.	Mizoram	0	0	0	0	0	0	0	0
22.	Nagaland	0	0	0	0	0	0	0	0
23.	Odisha	158	84	76	75	208	157	111	99
24.	Puducherry	10	8	28	22	9	9	9	9
25.	Punjab	0	0	0	0	0	0	117	98
26.	Rajasthan	83	84	54	52	125	118	147	143
27.	Tamil Nadu	198	166	342	287	305	282	343	310
28.	Telangana	32	32	0	0	0	0	32	32
29.	Tripura	1	4	0	2	1	2	1	2
30.	Uttar Pradesh	712	290	2046	1328	641	311	449	204
31.	Uttarakhand	9	7	61	61	160	157	50	47
32.	West Bengal	292	79	15	15	303	54	303	77
<b>Total</b>		<b>396</b>	<b>283</b>	<b>10730</b>	<b>8614</b>	<b>5250</b>	<b>3823</b>	<b>381</b>	<b>330</b>
		<b>1</b>	<b>6</b>					<b>1</b>	<b>3</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim

(ii) P : Provisional (iii) .. : Not Available

(iv) Req. : Required (v) App. : Appointed

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 18.2.6 - State-wise Medical Facilities in factories during 2016**

Sl. N	State/Union Territory	Full time MO		Retainer ship		Factories		Factories	
		Req.	App.	Req.	App.	Req.	App.	Req.	App.
1.	Andaman & Nicobar Islands	1	0	0	0	2	2	2	2
2.	Andhra Pradesh`	249	201	0	0	0	0143	130	
3.	Assam	0	0	0	0	40	40	40	99
4.	Bihar	16	16	16	16	16	16	16	16
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	152	137	295	196	138	125	112	118
7.	Daman & Diu and Dadra &	3	3	0	85	0	32	0	34
8.	Delhi	26	18	442	281	312	156	32	34
9.	Goa	46	30	79	70	79	70	46	30
10.	Gujarat	356	342	2298	2209	317	326	404	411
11.	Haryana	NA	NA	NA	NA	NA	NA	NA	NA
12.	Himachal Pradesh	325	325	2351	2351	198	198	198	198
13.	Jammu & Kashmir	4	4	4	4	4	4	4	4
14.	Jharkhand	90	92	95	92	62	67	79	79
15.	Karnataka	459	356	231	179	454	389	469	460
16.	Kerala	27	23	45	51	22	22	44	41
17.	Madhya Pradesh	NA	NA	NA	NA	NA	NA	NA	NA
18.	Maharashtra	658	476	1549	933	514	455	494	494
19.	Manipur	1	6	0	0	2	1	2	2
20.	Meghalaya	11	4	138	27	16	2	1	1
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	136	120	71	73	208	157	114	102
23.	Puducherry	15	15	32	30	9	9	9	9
24.	Punjab	0	0	0	0	0	0	113	95
25.	Rajasthan	49	16	25	22`	74	64	82	78
26.	Tamil Nadu	218	181	324	267	338	320	363	322
27.	Telangana	166	165	0	0	0	0	242	236
28.	Tripura	5	3	1	1	5	3	5	3
29.	Uttar Pradesh	NA	NA	NA	NA	NA	NA	NA	NA
30.	Uttarakhand	250	55	200	105	200	65	250	200
31.	West Bengal	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total</b>		<b>3263</b>	<b>2588</b>	<b>8196</b>	<b>6970</b>	<b>3010</b>	<b>2666</b>	<b>3068</b>	<b>3263</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 18.3.1 -State-wise Specialist Inspectors of Factories for the year 2011**

2011									
Sl. NO	States/ Union Territories	Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	3	1	1	0	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	0	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	1	0	0	0	0	0	0	0
7.	Daman & Diu & Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	1	1	0	0	11	5
11.	Haryana	5	3	5	5	0	0	0	0
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	4	2	4	4	0	0	2	2
17.	Madhya Pradesh	1	0	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	1	1	0	0	0	0	0	0
23.	Puducherry	1	1	1	0	0	0	1	0
24.	Punjab	0	0	3	2	0	0	0	0
25.	Rajasthan	1	1	2	2	1	1	2	1
26.	Tamil Nadu	0	0	0	0	0	0	0	0
27.	Tripura	0	0	0	0	0	0	0	0
28.	Uttar Pradesh	..	..	..	..	..	..	..	..
29.	Uttarakhand	..	..	..	..	..	..	..	..
30.	West Bengal	9	4	12	5	0	0	0	0
	<b>Total</b>	<b>39</b>	<b>19</b>	<b>33</b>	<b>19</b>	<b>1</b>	<b>1</b>	<b>17</b>	<b>9</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii).. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 18.3.2 -State-wise Specialist Inspectors of Factories for the year 2012**

Sl. No.	State/ Union Territory	2012							
		Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	3	1	1	0	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	0	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	1	0	0	0	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	1	1	0	0	41	35
11.	Haryana	5	2	5	5	0	0	0	0
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	5	1	5	5	0	0	0	0
17.	Madhya Pradesh	1	0	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	..	..	..	..	..	..	..	..
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	1	1	0	0	0	0	0	0
23.	Puducherry	1	1	1	0	0	0	1	1
24.	Punjab	3	2	2	2	0	0	0	0
25.	Rajasthan	1	1	3	2	1	1	2	0
26.	Tamil Nadu	1	0	0	0	0	0	0	0
27.	Tripura	0	0	0	0	0	0	0	0
28.	Uttar Pradesh	..	..	..	..	..	..	..	..
29.	Uttarakhand	0	0	0	0	0	0	0	0
30.	West Bengal	9	4	12	4	0	0	0	0
<b>Total</b>		<b>44</b>	<b>19</b>	<b>34</b>	<b>19</b>	<b>1</b>	<b>1</b>	<b>45</b>	<b>37</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States / UTs.



**Table 18.3.3 -State-wise Specialist Inspectors of Factories for the year 2013**

2013									
Sl. No.	State/ Union Territory	Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	3	1	1	1	0	0	6	6
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	1	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	1	0	0	0	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	1	1	0	0	4	1
11.	Haryana	5	3	5	5	0	0	3	3
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	..	..	..	..	..	..	..	..
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	4	4	5	5	0	0	2	2
17.	Madhya Pradesh	1	0	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	1	1	0	0	0	0	0	0
23.	Puducherry	1	1	1	1	0	0	1	1
24.	Punjab	3	3	0	0	0	0	0	0
25.	Rajasthan	1	1	3	2	1	1	2	0
26.	Tamil Nadu	1	1	0	0	0	0	0	0
27.	Tripura	0	0	0	0	0	0	0	0
28.	Uttar Pradesh	..	..	..	..	..	..	..	..
29.	Uttarakhand	0	0	0	0	0	0	0	0
30.	West Bengal	9	4	12	9	0	0	0	0
<b>Total</b>		<b>43</b>	<b>25</b>	<b>32</b>	<b>25</b>	<b>1</b>	<b>1</b>	<b>19</b>	<b>14</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States / UTs.

**Table 18.3.4 -State-wise Specialist Inspectors of Factories for the year 2014**

2014									
Sl. No.	State/ Union Territory	Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	2	0	1	1	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	1	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	1	0	0	0	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	4	1	4	0	4	1
11.	Haryana	5	4	5	5	0	0	3	3
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	4	1	5	5	0	0	2	2
17.	Madhya Pradesh	1	0	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	1	1	0	0	0	0	0	0
23.	Puducherry	1	1	1	1	0	0	1	1
24.	Punjab	3	2	..	..	..	..	..	..
25.	Rajasthan	1	1	3	1	1	1	2	0
26.	Tamil Nadu	0	0	0	0	0	0	0	0
27.	Telangana	0	0	0	0	0	0	0	0
28.	Tripura	0	0	0	0	0	0	0	0
29.	Uttar Pradesh	0	0	0	0	0	0	0	0
30.	Uttarakhand	0	0	0	0	0	0	0	0
31.	West Bengal	9	3	12	8	0	0	0	0
<b>Total</b>		41	19	35	23	5	1	13	8

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States / UTs.

**Table 18.3.5 -State-wise Specialist Inspectors of Factories for the year 2015**

2015									
Sl. No.	State/ Union Territory	Medical Inspectors		Chemical Inspector		Hygiene Inspector		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar Islands	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	0	0	1	1	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	1	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	2	2	0	0	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	2	4	1	4	0	2	0
11.	Haryana	5	5	5	5	0	0	3	2
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	0	0	1	1
16.	Kerala	4	0	5	5	1	1	3	2
17.	Madhya Pradesh	1	1	0	0	0	0	0	0
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Mizoram	0	0	0	0	0	0	0	0
22.	Nagaland	0	0	0	0	0	0	0	0
23.	Odisha	1	1	0	0	0	0	0	0
24.	Puducherry	1	1	1	1	0	0	1	1
25.	Punjab	3	2	0	0	0	0	0	0
26.	Rajasthan	1	1	3	1	0	0	1	0
27.	Tamil Nadu	0	0	0	0	0	0	0	0
28.	Telangana	1	0	0	0	0	0	0	0
29.	Tripura	0	0	0	0	0	0	0	0
30.	Uttar Pradesh	0	0	0	0	0	0	0	0
31.	Uttarakhand	0	0	0	0	0	0	0	0
32.	West Bengal	9	2	12	8	0	0	0	0
<b>Total</b>		<b>41</b>	<b>21</b>	<b>35</b>	<b>23</b>	<b>5</b>	<b>1</b>	<b>11</b>	<b>6</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States / UTs.

**Table 18.3.6 -State-wise Specialist Inspectors of Factories for the year 2016**

2016									
Sl. No.	State/ Union Territory	Medical		Chemical		Hygiene		Others	
		Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-Position	Sanctioned	In-position
1.	Andaman & Nicobar	0	0	0	0	0	0	0	0
2.	Andhra Pradesh	2	0	1	1	0	0	0	0
3.	Assam	1	0	0	0	0	0	0	0
4.	Bihar	2	1	2	1	0	0	0	0
5.	Chandigarh	0	0	0	0	0	0	0	0
6.	Chhattisgarh	2	2	0	0	0	0	0	0
7.	Daman & Diu and Dadra	0	0	0	0	0	0	0	0
8.	Delhi	1	1	1	0	0	0	0	0
9.	Goa	1	1	0	0	0	0	0	0
10.	Gujarat	5	1	4	1	4	0	2	0
11.	Haryana	NA	NA	NA	NA	NA	NA	NA	NA
12.	Himachal Pradesh	0	0	1	0	0	0	0	0
13.	Jammu & Kashmir	0	0	0	0	0	0	0	0
14.	Jharkhand	0	0	0	0	0	0	0	0
15.	Karnataka	1	1	0	0	1	1	0	0
16.	Kerala	4	0	7	7	1	1	1	0
17.	Madhya Pradesh	NA	NA	NA	NA	NA	NA	NA	NA
18.	Maharashtra	2	0	0	0	0	0	0	0
19.	Manipur	0	0	0	0	0	0	0	0
20.	Meghalaya	0	0	0	0	0	0	0	0
21.	Nagaland	0	0	0	0	0	0	0	0
22.	Odisha	1	1	0	0	0	0	0	0
23.	Puducherry	1	1	1	1	0	0	1	1
24.	Punjab	3	2	0	0	0	0	0	0
25.	Rajasthan	1	0	2	0	4	1	0	0
26.	Tamil Nadu	0	0	0	0	0	0	0	0
27.	Telangana	1	0	0	0	0	0	0	0
28.	Tripura	0	0	0	0	0	0	0	0
29.	Uttar Pradesh	NA	NA	NA	NA	NA	NA	NA	NA
30.	Uttarakhand	0	0	0	0	0	0	0	0
31.	West Bengal	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total</b>		<b>11</b>	<b>19</b>	<b>11</b>	<b>10</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>11</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional (iii) .. : Not Available **Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 18.4.1 - State-wise Certifying Surgeons of Factories during 2011**

2011					
Sl. No.	States/UTs	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	3	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu & Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	0	0
9.	Goa	0	0	1	0
10.	Gujarat	21	9	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	2	0	562
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	58
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Nagaland	8	0	0	0
22.	Odisha	0	0	0	0
23.	Puducherry	1	1	0	0
24.	Punjab	0	0	0	0
25.	Rajasthan	1	1	0	0
26.	Tamil Nadu	8	6	0	0
27.	Tripura	0	0	13	13
28.	Uttar Pradesh	..	..	..	..
29.	Uttarakhand	..	..	..	..
30.	West Bengal	0	0	0	0
	<b>Total</b>	<b>44</b>	<b>21</b>	<b>18</b>	<b>650</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii).. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/UTs.

**Table 18.4.2 - State-wise Certifying Surgeons of Factories during 2012**

2012					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	3	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	0	0
9.	Goa	0	0	0	0
10.	Gujarat	21	8	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	0
19.	Manipur	..	..	..	..
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	0	0	0	0
23.	Puducherry	1	1	0	0
24.	Punjab	3	2	0	0
25.	Rajasthan	1	1	0	0
26.	Tamil Nadu	8	6	8	6
27.	Tripura	0	0	13	13
28.	Uttar Pradesh	..	..	..	..
29.	Uttarakhand	0	0	0	0
30.	West Bengal	9	4	0	0
<b>Total</b>		<b>48</b>	<b>24</b>	<b>25</b>	<b>36</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 18.4.3 - State-wise Certifying Surgeons of Factories during 2013**

2013					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	4	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	1	1
9.	Goa	0	0	0	0
10.	Gujarat	21	9	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	..	..	..	..
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	0
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	0	0	21	21
23.	Puducherry	1	1	0	0
24.	Punjab	0	0	0	0
25.	Rajasthan	1	1	0	0
26.	Tamil Nadu	8	7	8	7
27.	Tripura	0	0	20	20
28.	Uttar Pradesh	..	..	..	..
29.	Uttarakhand	0	0	0	0
30.	West Bengal	9	4	0	0
<b>Total</b>		<b>46</b>	<b>24</b>	<b>54</b>	<b>66</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim. (ii) P : Provisional (iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 18.4.4 - State-wise Certifying Surgeons of Factories during 2014**

2014					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	3	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	1	1
9.	Goa	0	0	0	0
10.	Gujarat	21	8	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	0
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	0	0	21	21
23.	Puducherry	1	1	0	0
24.	Punjab	3	2	3	2
25.	Rajasthan	0	0	1	1
26.	Tamil Nadu	9	8	9	9
27.	Telangana	0	0	0	0
28.	Tripura	0	0	20	20
29.	Uttar Pradesh	0	0	0	0
30.	Uttarakhand	0	0	0	0
31.	West Bengal	9	3	0	0
<b>Total</b>		<b>48</b>	<b>24</b>	<b>59</b>	<b>71</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep, Mizoram and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.



**Table 18.4.5 - State-wise Certifying Surgeons of Factories during 2015**

2015					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	2	0	0	0
3.	Assam	3	0	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and Dadra & Nagar Haveli	0	0	0	1
8.	Delhi	1	1	*	*
9.	Goa	0	0	0	0
10.	Gujarat	21	8	0	0
11.	Haryana	0	0	0	0
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	0	0	0	0
18.	Maharashtra	1	1	0	0
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Mizoram	0	0	0	0
22.	Nagaland	0	0	0	0
23.	Odisha	0	0	21	21
24.	Puducherry	1	1	0	0
25.	Punjab	0	0	0	0
26.	Rajasthan	0	0	0	0
27.	Tamil Nadu	9	8	9	8
28.	Telangana	0	0	0	0
29.	Tripura	0	0	20	20
30.	Uttar Pradesh	0	0	0	0
31.	Uttarakhand	0	0	0	0
32.	West Bengal	9	2	0	0
<b>Total</b>		<b>47</b>	<b>21</b>	<b>54</b>	<b>66</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Table 18.4.6 - State-wise Certifying Surgeons of Factories during 2016**

2016					
Sl. No.	State/ Union Territory	Employed		Notified	
		Sanctioned	In position	Sanctioned	In position
1.	Andaman & Nicobar Islands	0	0	4	4
2.	Andhra Pradesh	0	0	0	0
3.	Assam	3	2	0	0
4.	Bihar	0	0	0	0
5.	Chandigarh	0	0	0	0
6.	Chhattisgarh	0	0	0	0
7.	Daman & Diu and Dadra &	0	0	0	1
8.	Delhi	1	1	*	*
9.	Goa	0	0	0	0
10.	Gujarat	21	9	0	0
11.	Haryana	NA	NA	NA	NA
12.	Himachal Pradesh	0	0	0	12
13.	Jammu & Kashmir	0	0	0	0
14.	Jharkhand	0	0	0	0
15.	Karnataka	0	0	0	0
16.	Kerala	0	0	0	0
17.	Madhya Pradesh	NA	NA	NA	NA
18.	Maharashtra	1	0	0	0
19.	Manipur	0	0	0	0
20.	Meghalaya	0	0	0	0
21.	Nagaland	0	0	0	0
22.	Odisha	0	0	0	0
23.	Puducherry	1	1	0	0
24.	Punjab	3	3	3	3
25.	Rajasthan	0	0	0	0
26.	Tamil Nadu	9	8	9	8
27.	Telangana	0	0	0	0
28.	Tripura	0	0	20	20
29.	Uttar Pradesh	NA	NA	NA	NA
30.	Uttarakhand	0	0	0	0
31.	West Bengal	NA	NA	NA	NA
<b>Total</b>		<b>39</b>	<b>24</b>	<b>36</b>	<b>48</b>

**Note:** (i) There are no registered factories in Arunachal Pradesh, Lakshadweep and Sikkim.

(ii) P : Provisional

(iii) .. : Not Available

**Source:** Data collected by DGFASLI through correspondence with Chief Inspector of Factories of States/ UTs.

**Annexure - XII**

**Table 18.5.1 - Safety Facilities in Major Ports during the year 2011**

Sl. No.	Port	Safety Facilities		
		No. of Safety Officers	No. of Visits to Safety Exhibition Centers	No. of Competent persons
1.	Mumbai	04	--	33
2.	JNPT	09	--	04
3.	Kandla	01	--	05
4.	Mormugao	01	--	02
5.	Kolkata	03	--	21
6.	Paradip	01	--	04
7.	Visakhapatnam	01	--	14
8.	Chennai	01	--	07
9.	Kochi	01	--	02
10.	New Mangalore	01	--	05
11.	Tuticorin	03	--	04
<b>Total</b>		<b>26</b>	<b>--</b>	<b>101</b>

**Table 18.5.2 - Safety Facilities in Major Ports during the year 2012**

Sl. No.	Port	Safety Facilities		
		No. of Safety Officers	No. of Visits to Safety Exhibition Centers	No. of Competent persons
1	Mumbai	04	Nil	37
2	JNPT	09	Nil	06
3	Kandla	01	Nil	08
4	Mormugao	01	Nil	03
5	Kolkata	02	Nil	21
6	Paradip	01	Nil	04
7	Visakhapatnam	01	Nil	13
8	Chennai	01	Nil	07
9	Kochi	01	Nil	04
10	New Mangalore	01	Nil	04
11	Tuticorin	02	Nil	04
<b>Total</b>		<b>24</b>	<b>Nil</b>	<b>111</b>

**Table 18.5.3 - Safety Facilities in Major Ports during the year 2013**

Sl. No.	Port	Safety Facilities		
		No. of Safety Officers	No. of Visits to Safety Exhibition Centers	No. of Competent persons
1.	Mumbai	03	Nil	39
2.	JNPT	10	01	12
3.	Kandla	01	Nil	06
4.	Mormugao	01	Nil	03
5.	Kolkata	02	Nil	22
6.	Paradip	01	Nil	04
7.	Visakhapatnam	01	Nil	13
8.	Chennai	01	Nil	08
9.	Kochi	01	Nil	04
10.	New Mangalore	01	Nil	04
11.	Tuticorin	02	Nil	07
<b>Total</b>		<b>24</b>	<b>01</b>	<b>122</b>

**Table 18.5.4 - Safety Facilities in Major Ports during the year 2014**

Sl. No.	Port	Safety Facilities		
		No. of Safety Officers	No. of Visits to Safety Exhibition Centers	No. of Competent persons
1.	Mumbai	03	00	39
2.	JNPT	13	07	02
3.	Kandla	01	00	06
4.	Mormugao	01	00	03
5.	Kolkata	02	00	24
6.	Paradip	01	00	04
7.	Visakhapatnam	01	00	13
8.	Chennai	01	00	06
9.	Kochi	01	00	02
10.	New Mangalore	01	01	04
11.	Tuticorin	02	00	08
<b>Total</b>		<b>27</b>	<b>08</b>	<b>111</b>

**Table 18.5.5 - Safety Facilities in Major Ports during the year 2015**

Sl. No.	Port	Safety Facilities		
		No. of Safety Officers	No. of Visits to Safety Exhibition Centers	No. of Competent persons
1.	Mumbai	03	00	30
2.	JNPT	12	05	04
3.	Kandla	01	00	06
4.	Mormugao	01	01	02
5.	Kolkata	02	00	17
6.	Paradip	01	00	05
7.	Visakhapatnam	01	00	13
8.	Chennai	01	00	09
9.	Kochi	01	00	01
10.	New Mangalore	01	01	06
11.	Tuticorin	01	00	08
<b>Total</b>		<b>25</b>	<b>07</b>	<b>101</b>

**Table 18.5.6 - Safety Facilities in Major Ports during the year 2016**

Sl. No.	Port	Safety Facilities		
		No. of Safety Officers	No. of Visits to Safety Exhibition Centers	No. of Competent persons
1.	Mumbai	03	00	25
2.	JNPT	01	00	03
3.	Kandla	01	00	06
4.	Mormugao	01	01	02
5.	Kolkata	05	00	17
6.	Paradip	01	00	05
7.	Vishakhapatnam	01	00	11
8.	Chennai	02	01	07
9.	Kochi	03	00	01
10.	New Mangalore	01	01	04
11.	Tuticorin	02	00	07
<b>Total</b>		<b>21</b>	<b>03</b>	<b>88</b>

**Table 18.6.1 - Health Facilities in Major Ports during the year 2011**

Sl. No.	Port	Health Facilities			
		OSH Centers	Ambulance Rooms	First Aid Centers	Empanelled Doctors
1.	Mumbai	01	07	104	03
2.	JNPT	03	02	30	03
3.	Kandla	--	03	01	00
4.	Mormugao	01	01	01	01
5.	Kolkata	02	04	16	01
6.	Paradip	01	02	03	00
7.	Visakhapatnam	03	03	04	03
8.	Chennai	01	05	05	01
9.	Kochi	01	01	04	02
10.	New Mangalore	01	00	05	01
11.	Tuticorin	01	04	03	00
<b>Total</b>		<b>15</b>	<b>32</b>	<b>176</b>	<b>15</b>

**Table 18.6.2 - Health Facilities in Major Ports during the year 2012**

Sl. No.	Port	Health Facilities			
		OSH Centers	Ambulance Rooms	First Aid Centers	Empanelled Doctors
1	Mumbai	01	02	102	04
2	JNPT	02	02	035	03
3	Kandla	00	04	001	01
4	Mormugao	01	01	010	01
5	Kolkata	02	04	016	01
6	Paradip	01	02	003	00
7	Visakhapatnam	00	01	001	03
8	Chennai	01	02	005	01
9	Kochi	01	01	004	04
10	New Mangalore	01	02	003	02
11	Tuticorin	01	03	003	00
<b>Total</b>		<b>11</b>	<b>24</b>	<b>174</b>	<b>20</b>

**Table 18.6.3 - Health Facilities in Major Ports during the year 2013**

Sl. No.	Port	Health Facilities			
		OSH Centers	Ambulance Rooms	First Aid Centers	Empanelled Doctors
1.	Mumbai	01	02	102	05
2.	JNPT	02	02	36	12
3.	Kandla	Nil	04	01	25
4.	Mormugao	01	01	01	01
5.	Kolkata	02	04	16	01
6.	Paradip	01	02	03	Nil
7.	Visakhapatnam	Nil	01	01	03
8.	Chennai	01	02	05	01
9.	Kochi	01	01	04	02
10.	New Mangalore	01	01	03	02
11.	Tuticorin	Nil	03	03	Nil
<b>Total</b>		<b>10</b>	<b>23</b>	<b>175</b>	<b>52</b>

**Table 18.6.4 - Health Facilities in Major Ports during the year 2014**

Sl. No.	Port	Health Facilities			
		OSH Centers	Ambulance Rooms	First Aid Centers	Empanelled Doctors
1.	Mumbai	01	02	92	05
2.	JNPT	03	02	36	12
3.	Kandla	00	04	01	25
4.	Mormugao	01	01	01	01
5.	Kolkata	02	04	16	01
6.	Paradip	01	02	03	00
7.	Visakhapatnam	00	01	01	03
8.	Chennai	01	01	05	00
9.	Kochi	01	01	04	01
10.	New Mangalore	01	03	03	02
11.	Tuticorin	01	03	03	00
<b>Total</b>		<b>12</b>	<b>24</b>	<b>165</b>	<b>50</b>

**Table 18.6.5 - Health Facilities in Major Ports during the year 2015**

Sl. No.	Port	Health Facilities			
		OSH Centers	Ambulance Rooms	First Aid Centers	Empanelled Doctors
1.	Mumbai	01	04	01	11
2.	JNPT	03	03	35	05
3.	Kandla	00	04	01	00
4.	Mormugao	01	01	01	01
5.	Kolkata	02	04	16	01
6.	Paradip	01	02	03	00
7.	Visakhapatnam	00	01	01	03
8.	Chennai	01	01	02	00
9.	Kochi	01	01	04	01
10.	New Mangalore	01	03	03	01
11.	Tuticorin	01	03	03	00
<b>Total</b>		<b>12</b>	<b>27</b>	<b>70</b>	<b>23</b>

**Table 18.6.6 - Health Facilities in Major Ports during the year 2016**

Sl. No.	Port	Health Facilities			
		OSH	Ambulance	First Aid	Empanelled
1.	Mumbai	01	02	100	05
2.	JNPT	01	01	18	19
3.	Kandla	00	04	01	00
4.	Mormugao	01	01	01	02
5.	Kolkata	02	04	16	01
6.	Paradip	01	02	03	00
7.	Vishakhapatnam	00	01	05	02
8.	Chennai	01	02	02	01
9.	Kochi	01	02	05	01
10.	New Mangalore	01	03	01	00
11.	Tuticorin	01	03	03	00
<b>Total</b>		<b>10</b>	<b>25</b>	<b>155</b>	<b>31</b>



**Annexure - XIII****Table 19.1 - State-Wise Total Number of Industrial Injuries in Factories**

Sl. No.	State / Union Territory	2009	2010	2011	2012	2013
1.	Andaman & Nicobar	40(-)	NA	77(-)	40(-)	NA
2.	Andhra Pradesh	1200(139)	1707(191)	1075 (164)	1336 (153)	714 (152)
3.	Arunachal Pradesh	NA	NA	NA	NA	NA
4.	Assam	52(5)	52(6)	77 (8)	78 (8)	105 (4)
5.	Bihar	156(27)	215(-)	95 (4)	135 (9)	160 (4)
6.	Chandigarh	8(-)	2(-)	15 (8)	3 (1)	2(-)
7.	Chhattisgarh	NA	306(84)	320 (98)	158 (106)	156 (97)
8.	Daman & Diu	NA	NA	50 (12)	44 (13)	NA
9.	Delhi	NA	NA	NA	NA	NA
10.	Goa	144(10)	109(12)	103 (11)	103 (7)	55 (10)
11.	Gujarat	NA	2992(221)	3263 (249)	NA	NA
12.	Haryana	118(31)	65(18)	59 (32)	43 (15)	78 (41)
13.	Himachal Pradesh	NA	NA	242 (10)	NA	NA
14.	Jammu & Kashmir	NA	NA	NA	NA	NA
15.	Jharkhand	NA	98(33)	113 (19)	NA	130 (37)
16.	Karnataka	NA	NA	NA	NA	NA
17.	Kerala	NA	NA	5 (-)	NA	NA
18.	Lakshadweep	NA	NA	NA	NA	NA
19.	Madhya Pradesh	NA	NA	NA	NA	NA
20.	Maharashtra	3249(217)	2933(222)	2601 (183)	2608 (216)	NA
21.	Manipur	-	-	NA	NA	NA
22.	Meghalaya	28(-)	-	-	NA	15 (-)
23.	Mizoram	NA	NA	NA	NA	NA
24.	Nagaland	NA	-	-	-	NA
25.	Odisha	548(122)	580(102)	550 (60)	NA	NA
26.	Puducherry	NA	56(10)	56 (10)	38 (8)	28 (3)
27.	Punjab	283(35)	241(22)	217 (34)	NA	NA
28.	Rajasthan	755(56)	856(67)	746 (63)	733 (34)	761 (55)
29.	Sikkim	NA	NA	NA	NA	NA
30.	Tamil Nadu	NA	957(75)	774 (118)	443 (110)	NA
31.	Telangana	--	--	--	--	234 (89)
32.	Tripura	6(2)	6(1)	3 (-)	7(2)	7 (2)
33.	Uttar Pradesh	NA	NA	NA	NA	NA
34.	Uttarakhand	64(24)	NA	NA	NA	NA
35.	West Bengal	NA	-	-	NA	NA
<b>Total</b>		<b>6651(668)</b>	<b>11175(1064)</b>	<b>1044(1083)</b>	<b>5769(682)</b>	<b>2445(494)</b>

**Note:** (i) NA = Not Available (ii) - = Nil

(iii) Figures in brackets pertain to "Fatalities" and are included in the total.

(iv) Data for the year 2013 and beyond is yet to be updated by the Labour Bureau.

**Source:** Data received from Labour Bureau through correspondence.

**Table 19.2 - State-wise Frequency Rates of Industrial Injuries in Factories**

S. No.	State/ Union Territory	2009	2010	2011	2012	2013
1.	Andaman & Nicobar	3.45(-)	NA	5.93 (-)	2.89 (-)	NA
2.	Andhra Pradesh	0.80(0.09)	0.70(0.80)	0.55 (0.08)	0.72 (0.08)	0.76 (0.16)
3.	Arunachal Pradesh	NA	NA	NA	NA	NA
4.	Assam	1.83(0.18)	0.45(0.05)	0.63 (0.07)	0.74 (0.08)	0.98 (0.04)
5.	Bihar	6.15(1.06)	5.83(-)	3.06 (0.13)	4.89 (0.33)	3.39 (0.08)
6.	Chandigarh	0.34(-)	0.09(-)	0.58 (0.31)	0.13 (0.04)	0.09 (-)
7.	Chhattisgarh	NA	0.13(0.04)	3.21 (0.98)	0.5 (0.33)	0.49 (0.31)
8.	Daman & Diu	NA	NA	0.36 (0.09)	898.69 (265.52)	NA
9.	Delhi	NA	NA	NA	NA	NA
10.	Goa	0.67(0.05)	0.60(0.07)	0.57 (0.06)	0.51 (0.03)	0.27(0.05)
11.	Gujarat	NA	2.79(0.21)	2.97 (0.23)	NA	NA
12.	Haryana	0.20(0.05)	0.14(0.04)	0.13 (0.07)	0.06 (0.02)	0.02(0.01)
13.	Himachal Pradesh	NA	NA	0.65 (0.03)	NA	NA
14.	Jammu & Kashmir	NA	NA	NA	NA	NA
15.	Jharkhand	NA	0.09(0.03)	0.47 (0.08)	NA	1.05(0.3)
16.	Karnataka	NA	NA	NA	NA	NA
17.	Kerala	NA	-	0.01 (-)	NA	NA
18.	Lakshadweep	NA	NA	NA	NA	NA
19.	Madhya Pradesh	NA	NA	NA	NA	NA
20.	Maharashtra	1.11(0.07)	0.87(0.07)	0.72 (0.05)	0.72 (0.06)	NA
21.	Manipur	-(-)	-(-)	NA	NA	NA
22.	Meghalaya	5.96(-)	-(-)	-	NA	1.68(-)
23.	Mizoram	NA	NA	NA	NA	NA
24.	Nagaland	NA	-(-)	-	-	NA
25.	Odisha	1.00(0.22)	0.87(0.15)	0.84 (0.09)	NA	NA
26.	Puducherry	NA	0.50(0.09)	0.86 (0.15)	0.51 (0.11)	0.34 (0.04)
27.	Punjab	1.01(0.12)	0.87(0.08)	0.92 (0.14)	NA	NA
28.	Rajasthan	1.53(0.11)	1.48(0.12)	1.42	1.23 (0.06)	1.52 (0.11)
29.	Sikkim	NA	NA	NA	NA	NA
30.	Tamil Nadu	NA	0.23(0.02)	0.19 (0.03)	11.61 (2.88)	NA
31.	Telangana	--	--	--	--	0.3(0.12)
32.	Tripura	0.19(0.06)	0.20(0.03)	0.1 (-)	0.2 (0.06)	0.23 (0.07)
33.	Uttar Pradesh	NA	NA	NA	NA	NA
34.	Uttarakhand	0.22(0.08)	NA	NA	NA	NA
35.	West Bengal	NA	-(-)	-	NA	NA
<b>Total</b>		<b>0.85(0.09)</b>	<b>0.64(0.06)</b>	<b>0.72(0.07)</b>	<b>0.75 (0.09)</b>	<b>0.37(0.08)</b>

**Note:** (i) F.R. = Frequency Rate per lakh man-days worked (ii) NA = Not Available, (iii) (-) = Nil or Negligible (iv) Figures in bracket pertain to "Fatalities" and are included in the total (v) Data for the year 2013 and beyond is yet to be updated by the Labour Bureau.

**Table 19.3 - State-wise Incidence Rates of Industrial Injuries in Factories**

Sl. No.	State/ Union Territory	2009	2010	2011	2012	2013
1.	Andaman & Nicobar	7.33(-)	NA	13.87 (-)	7.05 (-)	NA
2.	Andhra Pradesh	1.26(0.15)	1.67(0.19)	1.04(0.16)	1.15 (0.13)	1.18(0.25)
3.	Arunachal Pradesh	NA	NA	NA	NA	NA
4.	Assam	0.38(0.04)	0.35(0.04)	0.49(0.05)	0.45 (0.05)	0.53(0.02)
5.	Bihar	1.27(0.22)	1.55(-)	0.64(0.03)	0.8 (0.05)	0.85(0.02)
6.	Chandigarh	0.72(-)	0.16(-)	1.28(0.68)	0.24 (0.08)	0.16(-)
7.	Chhattisgarh	NA	1.16(0.32)	1.14(0.35)	0.67 (0.45)	0.59(0.37)
8.	Daman & Diu	NA	NA	0.34(0.08)	0.25 (0.07)	NA
9.	Delhi	NA	NA	NA	NA	NA
10.	Goa	2.23(0.15)	1.60(0.18)	1.55(0.17)	1.46 (0.1)	0.77(0.14)
11.	Gujarat	NA	2.31(0.17)	2.35(0.18)	NA	NA
12.	Haryana	0.16(0.04)	0.08(0.02)	0.07(0.04)	0.05 (0.02)	0.09(0.05)
13.	Himachal Pradesh	NA	NA	0.89(0.04)	NA	NA
14.	Jammu & Kashmir	NA	NA	NA	NA	NA
15.	Jharkhand	NA	0.25(0.08)	0.27(0.05)	NA	0.51(0.14)
16.	Karnataka	NA	NA	NA	NA	NA
17.	Kerala	NA	NA	0.01 (-)	NA	NA
18.	Lakshadweep	NA	NA	NA	NA	NA
19.	Madhya Pradesh	NA	NA	NA	NA	NA
20.	Maharashtra	2.12(0.14)	1.74(0.13)	1.41 (0.1)	1.25 (0.1)	NA
21.	Manipur	-(-)	-	NA	NA	NA
22.	Meghalaya	4.64(-)	-	-	NA	1.44(-)
23.	Mizoram	NA	NA	NA	NA	NA
24.	Nagaland	NA	-	-	-	NA
25.	Odisha	2.51(0.56)	2.19(0.39)	1.97(0.21)	NA	NA
26.	Puducherry	NA	0.72(0.13)	0.7 (0.13)	0.46 (0.1)	0.35(0.04)
27.	Punjab	0.48(0.06)	0.39(0.04)	0.34(0.05)	NA	NA
28.	Rajasthan	1.25(0.09)	1.50(0.12)	1.22 (0.1)	1.06 (0.05)	1.53(0.11)
29.	Sikkim	NA	NA	NA	NA	NA
30.	Tamil Nadu	NA	0.64(0.05)	0.52(0.08)	0.28 (0.07)	NA
31.	Telangana	--	--	--	--	0.4(0.15)
32.	Tripura	0.12(0.04)	0.10(0.02)	0.05 (-)	0.12 (0.03)	0.12(0.04)
33.	Uttar Pradesh	NA	-	NA	NA	NA
34.	Uttarakhand	0.39(0.15)	NA	NA	NA	NA
35.	West Bengal	NA	NA	-	-	NA
<b>Total</b>		<b>1.03(0.10)</b>	<b>1.03(0.10)</b>	<b>0.9 (0.09)</b>	<b>0.79 (0.09)</b>	<b>0.67(0.14)</b>

**Note:** (i) I.R. = Incidence Rate per 1000 workers employed.  
(ii) NA = Not Available, (iii) (-) = Nil  
(iv) Figures in bracket pertain to "Fatalities" and are included in the total,  
(vi) Data for the year 2013 and beyond is yet to be updated by the Labour Bureau.

**Source:** Data received from Labour Bureau through correspondence.

**Annexure - XIV**

**Table 19.4 .1- Reportable Accidents & Dangerous Occurrences in major Ports during the Year 2011**

<b>Sl. No.</b>	<b>Port</b>	<b>Fatal</b>	<b>Total</b>	<b>Dangerous Occurrences</b>
1.	Mumbai	02	31	04
2.	JNPT	01	07	01
3.	Kandla	07	09	01
4.	Mormugao	01	04	00
5.	Kolkata	07	16	00
6.	Paradip	01	02	00
7.	Vishakhapatnam	00	03	00
8.	Chennai	02	08	00
9.	Cochin	00	08	00
10.	New Mangalore	00	01	00
11.	Tuticorin	02	05	00
<b>Total</b>		<b>23</b>	<b>94</b>	<b>06</b>

**Table 19.4 .2- Reportable Accidents & Dangerous Occurrences in major Ports during the Year 2012**

<b>Sl. No.</b>	<b>Port</b>	<b>Fatal</b>	<b>Total</b>	<b>Dangerous Occurrences</b>
1	Mumbai	02	31	02
2	JNPT	01	03	00
3	Kandla	04	07	03
4	Mormugao	01	02	01
5	Kolkata	01	18	02
6	Paradip	01	06	00
7	Visakhapatnam	00	03	00
8	Chennai	02	07	00
9	Kochi	01	07	00
10	New Mangalore	00	02	00
11	Tuticorin	01	05	00
<b>Total</b>		<b>14</b>	<b>91</b>	<b>09</b>

**Table 19.4 .3- Reportable Accidents & Dangerous Occurrences in major Ports during the Year 2013**

<b>Sl. No.</b>	<b>Port</b>	<b>Fatal</b>	<b>Total</b>	<b>Dangerous Occurrences</b>
1.	Mumbai	2	20	1
2.	JNPT	Nil	8	3
3.	Kandla	2	2	Nil
4.	Mormugao	Nil	2	2
5.	Kolkata	5	19	1
6.	Paradip	1	2	Nil
7.	Visakhapatnam	2	2	Nil
8.	Chennai	2	4	Nil
9.	Kochi	1	6	Nil
10.	New Mangalore	1	2	Nil
11.	Tuticorin	2*	4	Nil
<b>Total</b>		<b>18</b>	<b>71</b>	<b>7</b>

**Table 19.4 .4- Reportable Accidents & Dangerous Occurrences in major Ports during the Year 2014**

<b>Sl. No.</b>	<b>Port</b>	<b>Fatal</b>	<b>Total</b>	<b>Dangerous Occurrences</b>
1.	Mumbai	02	30	00
2.	JNPT	00	10	05
3.	Kandla	02	13	05
4.	Mormugao	00	02	00
5.	Kolkata	01	09	00
6.	Paradip	00	02	00
7.	Visakhapatnam	00	02	00
8.	Chennai	00	01	00
9.	Kochi	00	06	00
10.	New Mangalore	00	00	00
11.	Tuticorin	00	01	00
<b>Total</b>		<b>05</b>	<b>76</b>	<b>10</b>

**Table 19.4.5 - Reportable Accidents & Dangerous Occurrences in major Ports during the Year 2015**

<b>Sl. No.</b>	<b>Port</b>	<b>Fatal</b>	<b>Total</b>	<b>Dangerous Occurrences</b>
1.	Mumbai	03	36	00
2.	JNPT	00	00	01
3.	Kandla	02	03	05
4.	Mormugao	01	05	01
5.	Kolkata	00	11	00
6.	Paradip	00	02	00
7.	Vishakhapatnam	00	03	03
8.	Chennai	02	04	00
9.	Cochin	00	02	00
10.	New Mangalore	00	00	00
11.	Tuticorin	00	03	01
<b>Total</b>		<b>08</b>	<b>69</b>	<b>11</b>

**Table 19.4 .6- Reportable Accidents & Dangerous Occurrences in major Ports during the Year 2016**

<b>Sl. No.</b>	<b>Port</b>	<b>Fatal</b>	<b>Total</b>	<b>Dangerous Occurrences</b>
1.	Mumbai	01	19	01
2.	JNPT	00	00	00
3.	Kandla	04	08	03
4.	Mormugao	01	01	02
5.	Kolkata	02	07	00
6.	Paradip	00	01	00
7.	Vishakhapatnam	00	00	00
8.	Chennai	01	03	00
9.	Kochi	00	01	00
10.	New Mangalore	00	02	00
11.	Tuticorin	02	05	00
<b>Total</b>		<b>11</b>	<b>47</b>	<b>06</b>



**Table 19.5.1 - Average Daily Employment & Rates of Reportable Accidents in major Ports during the year 2011**

Sl. No.	Port	Avg. Daily Employment	*Frequency Rate		*Incidence Rate of injuries per Thousand	
			Fatal	Total	Fatal	Total
1.	Mumbai	2548	0.31	4.87	0.78	12.17
2.	JNPT	5974	0.059	0.41	0.17	0.17
3.	Kandla	2918	0.83	1.06	2.39	3.08
4.	Mormugao	934	0.98	3.95	1.07	4.28
5.	Kolkata	10174	0.237	0.543	0.688	1.573
6.	Paradip	350	0.98	1.96	2.86	5.71
7.	Visakhapatnam	2215	00	5.92	00	1.35
8.	Chennai	455	0.5	2.0	0.004	0.01
9.	Kochi	444	00	6.22	00	18.01
10.	New Mangalore	64	00	1.86	00	0.0019
11.	Tuticorin	739	1.21	3.02	2.71	6.77

\* Formula (As per IS: 3786 of 1983)

Frequency Rate = No. of Reportable Accidents X 1,000,000/Man-hours Worked#.

Incidence Rate = No. of Reportable Accidents X 1000/ Avg. No. of Persons Employed.

# Man-hours worked are calculated on the basis of 362 working days in a year

**Table 19.5.2 - Average Daily Employment & Rates of Reportable Accidents in major Ports during the year 2012**

Sl. No.	Port	Avg. Daily Employment	*Frequency Rate		*Incidence Rate of injuries per Thousand	
			Fatal	Total	Fatal	Total
1	Mumbai	4458	0.160	2.400	0.450	6.950
2	JNPT	5863	0.073	0.218	0.171	0.512
3	Kandla	3970	0.350	0.610	1.010	1.760
4	Mormugao	0975	1.030	2.070	1.020	2.050
5	Kolkata	8636	0.399	0.719	0.116	2.084
6	Paradip	0333	1.040	6.210	3.003	18.010
7	Visakhapatnam	2197	0.000	5.810	0.000	1.290
8	Chennai	1268	0.540	1.900	0.004	0.015
9	Kochi	0253	1.360	9.550	3.950	26.670
10	New Mangalore	0058	0.000	4.240	0.000	0.034
11	Tuticorin	0789	0.560	1.690	1.270	3.800
<b>Total</b>		<b>28800</b>	<b>5.512</b>	<b>35.417</b>	<b>10.994</b>	<b>63.175</b>

\* Formula (As per IS: 3786 of 1983)

Frequency Rate = No. of Reportable Accidents X 1,000,000/Man-hours Worked#.

Incidence Rate = No. of Reportable Accidents X 1000/ Avg. No. of Persons Employed.

# Man-hours worked are calculated on the basis of 362 working days in a year

**Table 19.5.3 - Average Daily Employment & Rates of Reportable Accidents in major Ports during the year 2013**

Sl. No.	Port	Avg. Daily Employment	*Frequency Rate		*Incidence Rate of injuries per Thousand	
			Fatal	Total	Fatal	Total
1.	Mumbai	1452	0.56	5.64	1.38	13.77
2.	JNPT	6099	0.00	0.45	0.00	1.31
3.	Kandla	4030	0.17	0.17	0.49	0.49
4.	Mormugao	578	0.00	2.24	0.00	3.46
5.	Kolkata	8418	0.21	0.78	0.59	2.26
6.	Paradip	321	1.08	2.15	3.12	6.23
7.	Visakhapatnam	2165	2.55	2.55	0.92	0.92
8.	Chennai	1100	0.63	1.25	1.82	3.63
9.	Kochi	285	1.20	7.20	3.50	21.04
10.	New Mangalore	64	1.00	3.68	1.00	0.03
11.	Tuticorin	384	1.80	3.60	5.20	10.40

\* Formula (As per IS: 3786 of 1983)

Frequency Rate = No. of Reportable Accidents X 1,000,000/Man-hours Worked#.

Incidence Rate = No. of Reportable Accidents X 1000/ Avg. No. of Persons Employed.

# Man-hours worked are calculated on the basis of 362 working days in a year

**Table 19.5.4 - Average Daily Employment & Rates of Reportable Accidents in major Ports during the year 2014**

Sl. No.	Port	Avg. Daily Employment	*Frequency Rate		*Incidence Rate of injuries per Thousand	
			Fatal	Total	Fatal	Total
1.	Mumbai	1368	0.90	13.54	1.46	21.93
2.	JNPT	6635	0.00	0.20	0.00	1.50
3.	Kandla	4106	0.17	1.09	0.49	3.17
4.	Mormugao	1024	0.00	2.44	0.00	1.95
5.	Kolkata	7065	0.45	0.44	0.14	1.27
6.	Paradip	279	0.00	2.47	0.00	7.17
7.	Visakhapatnam	2057	0.00	5.01	0.00	1.02
8.	Chennai	1020	0.00	0.34	0.00	0.98
9.	Kochi	297	0.00	6.97	0.00	20.18
10.	New Mangalore	154	0.00	0.00	0.00	0.00
11.	Tuticorin	291	0.00	1.19	0.00	3.44

\* Formula (As per IS: 3786 of 1983)

Frequency Rate = No. of Reportable Accidents X 1,000,000/Man-hours Worked#.

Incidence Rate = No. of Reportable Accidents X 1000/ Avg. No. of Persons Employed.

# Man-hours worked are calculated on the basis of 362 working days in a year

**Table 19.5.5 - Average Daily Employment & Rates of Reportable Accidents in major Ports during the year 2015**

Sl. No.	Port	Avg. Daily Employment	*Frequency Rate		*Incidence Rate of injuries per Thousand	
			Fatal	Total	Fatal	Total
1.	Mumbai	1618	0.72	8.71	1.85	22.25
2.	JNPT	5620	0.00	0.00	0.00	0.00
3.	Kandla	4106	0.17	0.25	0.49	0.73
4.	Mormugao	2154	0.16	0.29	0.46	2.32
5.	Kolkata	7774	0.00	0.49	0.00	1.42
6.	Paradip	0246	0.00	2.80	0.00	8.13
7.	Visakhapatnam	1987	0.00	4.12	0.00	1.51
8.	Chennai	1350	0.51	1.03	1.48	2.96
9.	Kochi	0309	0.00	2.23	0.00	6.46
10.	New Mangalore	0103	0.00	0.00	0.00	0.00
11.	Tuticorin	386	0.00	2.68	0.00	7.77

\* Formula (As per IS: 3786 of 1983)

Frequency Rate = No. of Reportable Accidents X 1,000,000/Man-hours Worked#.

Incidence Rate = No. of Reportable Accidents X 1000/ Avg. No. of Persons Employed.

# Man-hours worked are calculated on the basis of 362 working days in a year

**Table 19.5.6 - Average Daily Employment & Rates of Reportable Accidents in major Ports during the year 2016**

Sl. No.	Port	Avg. Daily Employment	*Frequency Rate		*Incidence Rate of injuries per Thousand	
			Fatal	Total	Fatal	Total
1.	Mumbai	665.09	0.433	9.1	0.70	14.7
2.	JNPT	3600	0.00	0.00	0.00	0.00
3.	Kandla	4106	0.34	0.67	0.97	1.95
4.	Mormugao	2738	0.13	NA	0.37	NA
5.	Kolkata	7700	0.7175	2.511	0.2597	0.909
6.	Paradip	220	00	1.56	0.00	4.55
7.	Vishakhapatnam	4158	0.00	0.00	0.00	0.00
8.	Chennai	1050	0.35	1.06	0.95	2.85
9.	Kochi	358	0.00	2.15	0.00	2.79
10.	New Mangalore	118	0.00	5.8	0.00	16.9
11.	Tuticorin	354	1.95	4.88	5.65	14.12

\* Formula (As per IS: 3786 of 1983)

Frequency Rate = No. of Reportable Accidents X 1,000,000/Man-hours Worked#.

Incidence Rate = No. of Reportable Accidents X 1000/ Avg. No. of Persons Employed.

# Man-hours worked are calculated on the basis of 362 working days in a year