



# Standard Reference Note

## 2006



**DIRECTORATE GENERAL FACTORY ADVICE SERVICE  
& LABOUR INSTITUTES (DGFASLI)**

**Ministry of Labour and Employment**

Government of India

N.S. MANKIKAR MARG, SION, MUMBAI-400

## PREFACE

DGFASLI is the technical arm of the Ministry of Labour in matters related to Occupational Safety and Health in Factories, Ports and Docks. The organisation assists the Central Government in formulating policies in the administration of the Factories Act, 1948, enforcement of the Dock Workers (Safety, Health and Welfare) Act, 1986 and liaisoning with State Governments, Union Territories, Port authorities and Industries for effective implementation of these statutes.

The Standard Reference Note 2005 provides comprehensive information on the objectives, functions, important activities and budget of the organisation. It contains details about the support services provided to Ministry, training programmes, research, surveys/audits, promotional and other activities carried out by DGFASLI in its effort to prevent the accidents and occupational diseases in Factories, Ports and Docks. This Standard Reference Note also contains information on targets and achievement of the Plan schemes.

To recognize safety efforts in Factories, Ports and Docks, DGFASLI, on behalf of Ministry of Labour, Government of India, gave the Vishwakarma Rashtriya Puraskar and National Safety Awards for the year 2004. The Vishwakarma Rashtriya Puraskar & National Safety Awards were presented to 93 and 105 awardees respectively by Shri K. M. Sahani, IAS, Secretary to Ministry of Labour & Employment.

In addition to presenting the information on industrial injuries collected and analysed by Labour Bureau, this Standard Reference Note further contains the state-wise information relating to occupational safety and health in factories based on the information collected by DGFASLI from the Chief Inspectors of Factories. It also contains information on Safety and Health matters in 12 major ports. This compilation of data and its analysis reflects the trends, causes and areas of concern to avoid accidents and enhance better working environment in factories and ports.

Mumbai  
April 2006

(S. K. Saxena)  
Director General

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# 1 General Information

## 1.1 DGFASLI

The Directorate General of Factory Advice Service & Labour Institutes (DGFASLI), formerly known as Chief Adviser 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, 1948 and liaising with factories inspection services in the States. The office was subsequently shifted to Mumbai in 1966.

DGFASLI achieved significant importance as an attached office of the Ministry of Labour and Employment, Government of India serving as a technical arm to assist the Ministry in formulation of National policies on Occupational Safety and Health in Factories and Docks.

The Dock Workers (Safety, Health and Welfare) Act 1986 and the Regulations 1990 provide for Safety, Health and Welfare of dock workers. These are enforced by the DGFASLI through the Inspectorates of Dock Safety set up in all the major ports in India.

## 1.2 Functions:

- Rendering advice and carrying out support research activities for the administration of the Factories Act, 1948 and the Dock Workers (Safety, Health and Welfare) Act, 1986.
- Co-ordinating technical and legal activities to facilitate uniform standards of enforcement of safety and health in manufacturing and port sectors.
- Administration of the Dock Workers (Safety, Health & Welfare) Act, 1986 and Regulations framed there under and enforcing these in the major ports of the country.
- Educating and training employers and employees on matters relating to safety and health.
- Conducting promotional activities by operating schemes for (i) recognition of good suggestions under Vishwakarma Rashtriya Puraskar and good (ii) worker's outstanding contribution in organizations, under Prime Minister's Shram Awards; and (iii) safety performance under National Safety Awards (on behalf of the Ministry).

- Co-operating with International agencies like ILO, WHO, UNDP and advising Central Government in the adoption of international standards concerning safety and health.
- Training of foreign nationals and rendering expert advice to developing countries.
- Building Competence of enforcement agencies.
- Issuing approval to flameproof electrical enclosures.
- Collecting and disseminating information and material relating to safety and health.

### **1.3 Organisation**

DGFASLI organisation comprises of the headquarters, the 5 Labour Institutes and 11 Inspectorates of Dock Safety.

- Headquarter situated in Mumbai
- Central Labour Institute in Mumbai
- Regional Labour Institutes in Kolkata, Chennai, Kanpur and Faridabad
- Inspectorates of Dock Safety at Mumbai, Kolkata, Chennai, Kandla, Mormugao, Tuticorin, New Mangalore, Cochin, Visakhapatnam, Paradip and Jawaharlal Nehru Port. The Inspectorate of Dock Safety at Ennore is being setup.

In 1959, the Central Labour Institute, Mumbai was established under UNDP Project as a socio-economic laboratory and as a national institute dealing with scientific study of all human aspects of industrial development. Subsequently, Regional Labour Institutes were established at Kolkata, Kanpur and Chennai to serve as Regional Centres. The Regional Labour Institute at Faridabad is under construction. It is being operated from a rented premise. The detailed organisation structure is given in **Appendix I**

The Labour Institutes are fully equipped with necessary laboratory facilities for conducting studies and surveys in the field of safety and health. The Institutes are also having conference facilities fully supported with modern audio-visual equipment. Industrial Safety, Health and Welfare Centres are also established at these Labour Institutes. Apart from this Mobile Safety Exhibition Vans are also available for taking the message of Safety and Health to the doorsteps of factories. Training Centres and Safety Exhibition Centres are also established in some of the inspectorates of dock safety.

### 1.4 Human Resource

The human-resource in the organization comprises of engineers, medical doctors, industrial hygienists, industrial physiologists, industrial psychologists, statisticians, audio-visual experts, artists etc.

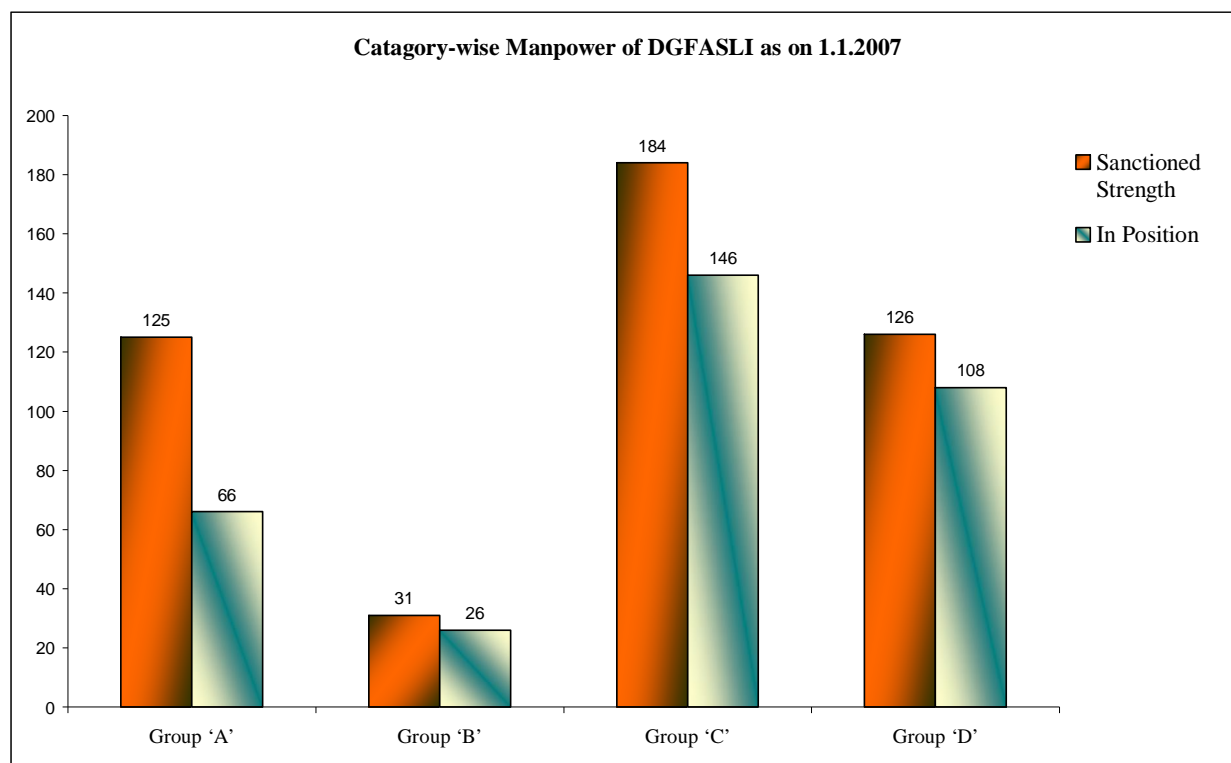
The manpower strength of the organization is given in table 1.1

**Table 1.1: Manpower strength of the organization as on 1.1.2007**

Units	Technical		Administrative		Total	
	Sanct- ioned	In- Position	Sanct- ioned	In- Position	Sanct- ioned	In- Position
Headquarters	14	8	47	39	61	47
CLI.Mumbai	98	66	93	74	191	140
4 RLIs*	80	53	80	65	160	118
Dock-Safety Inspectorates	22	13	32	28	54	41
<b>Total:</b>	<b>214</b>	<b>140</b>	<b>252</b>	<b>206</b>	<b>466</b>	<b>346</b>

\* The posts at RLI, Faridabad are yet to be created

Chart 1.1



## 2 Budget

The allocation of funds for the various constituents and plan schemes of the organisation for 2006-2007 and 2007-2008 of X<sup>th</sup> and XI<sup>th</sup> Five year plan respectively is given below:

(in '000 Rs)

Sl.No.	SCHEMES	Revised Estimates 2006- 2007	Budget Estimates 2007- 2008
<b>A. NON-PLAN</b>			
1	Administration	30850	36410
2	Research& Training (CLI & RLIs)	74350	76690
	<b>Total: (NON-PLAN)</b>	<b>105200</b>	<b>113100</b>
<b>B. PLAN</b>			
1	Establishment of Regional Labour Institute at Faridabad (including Civil Works)	99020	30000
2	Strengthening of DGFASLI and OSH in Factories, Ports & Docks  (This is a new scheme comprising of the six Plan Schemes of the 10th Five Year Plan i.e. Data Bank, Safety and Health of Dock Workers, Chemical Safety, Ergonomics, Productivity in Factories, Docks and Small and Medium Scale Enterprises; and Reorganisation and Strengthening of the DGFASLI and Establishment of Special Cells)	12730	10985
3	Setting up of National Accreditation Board on Occupational Safety & Health	50	-
	<b>Total: (PLAN)</b>	<b>111800</b>	<b>40985</b>
<b>GRAND TOTAL:</b>		<b>217000</b>	<b>154085</b>

### 3 Plan Schemes

#### Tenth Five Year Plan

During 2006-2007, six Plan Schemes under the Xth Five Year Plan are taken up by DGFASLI for implementation. Out of these three are old schemes and three are continued from the IXth Five Year Plan.

#### Old schemes:

#### **Plan Scheme I: Application of Ergonomics and Improvement in Working Conditions and Productivity in Factories, Docks and Small and Medium Scale Enterprises.**

Objectives:

##### *Ergonomics*

- To carry out Research study / Consultancy to make the best adjustment between man and machine in Factories, Docks and Construction works.
- To evolve standards of thermal limits for day-to-day industrial tasks.
- To determine work-rest Regimens of different combinations of work load.

##### *Small and Medium Scale Enterprises*

- To bring about improvements in working conditions leading to higher productivity, employee comfort and satisfaction through training of owner/managers and workers of small and medium scale enterprises.

**Table 3.1: Achievements (January to December 2006)**

Sl.No	Major Component & Activities	Targets	Achievements
1	Appreciation programme of ½ day duration	20	22
2	Programme of 1-2 days duration	4	2
3	Programme of longer duration (above 2 days)	2	3
4	Technical advice rendered	15	29
5	Talks delivered	5	2
6	Study/survey carried out	2	16
7	National studies	-	1
8	Special booklet	1	1



## **Plan Scheme II: Establishment of a System of Chemical Safety and Monitoring of Occupational Health Status of Workers Employed in Hazardous Industries**

Objectives:

The Plan Scheme is having three components namely, Chemical Safety, Occupational Health and Testing & Certification of Personal Protective Equipment (TCPPE). The objectives of the Plan Scheme are given below:

- Undertaking national level research projects in priority hazardous chemical processes.
- Provide health and safety training on chemical safety, prevention of major industrial accidents and occupational health to strengthen the capabilities of management, workers and their representatives, including Associate Fellow of Industrial Health (AFIH) course for Medical Officers.
- Conducting Quality assurance programme for Personal Protective Equipment

**Table 3.2: Achievements (January to December 2006)**

<b>Major Component &amp; Activities</b>		<b>Targets</b>	<b>Achievements</b>
<b>A. Chemical Safety</b>	1. Trg.Programme	10	10
	2. Seminar/Workshop	2	2
	3. Studies & Surveys	10	12
<b>B. Occupational Health</b>	1. AFIH Course	2	2
	2. Refresher course on Occupational Health	4	3
	3. Advance Training Programme on Occupational Health	2	3
	4. Trg. Prg. For Nurses	1	1
	5. OSH studies	8	6
<b>C. TCPPE</b>	1. Testing of NRPPE	150	353
	2. Testing of RPPE	150	119
	3. PPE workshop	2	1

*Note: Most of the activities are being carried out by non-plan officers.*

### **Plan Scheme III: Reorganisation and Strengthening of the DGFASLI and Establishment of Special Cells**

Objectives:

Substantial expansion of the facilities in the DGFASLI organization by creating special cells to meet the specific requirements under the Factories (Amendment) Act 1987 and to meet the Safety and Health Standards in the Factories more effectively.

**Table 3.3: Achievements (January to December 2006)**

<b>S.N.</b>	<b>Major Components and Activities</b>	<b>Targets</b>	<b>Achievements</b>
1.	Production of video films	2	-
2.	Preparation of slides/posters on OSH	2	2
3.	Preparation of training Manual/guidelines/Booklets	1	-

*Note: No Plan Post is available for carrying out the activities.*

**Continuing schemes:**

### **Plan Scheme-IV: Improvement and Strengthening of Enforcement and implementation System for Safety and Health of Dock Workers in Major Ports**

Objectives:

To fulfill the statutory obligations of DGFASLI as the Chief Inspector of Dock Safety under the Environment (Protection) Act, 1986 and to fulfill the statutory obligations of the Central Government through DGFASLI, under the Dock Workers (Safety, Health and Welfare) Act, 1986 and Rules and Regulations framed there under and the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 in respect of major ports.

**Table 3.4: Achievements (January to December 2006)**

<b>Major Component and Activities</b>	<b>Targets</b>	<b>Achievements</b>
A) Specialised training programmes/ seminars/ workshops	10	4
B) Enforcement activities	1500	1375

## Plan Scheme V: Development of Safety & Health Information System Data Bank

### Objectives:

Development of national inventory on occupational safety and health and connectivity between State Factory Inspectorate and DGFASLI. The inventory will cover information pertaining to manufacturing activities covered under the Factories Act 1948, occupational injuries and diseases in the sector, management of OSH at unit and state level.

**Table 3.5: Achievements (January to December 2006)**

Activities		Targets	Achievement
i)	National Inventory of OSH Information	4	3 States
ii)	Development of Application programs	#	3
iii)	DGFASLI world wide website updation	#	26
iv)	Material Safety Data Sheets (MSDS)	#	104
v)	Abstract of OSH literature	#	15
vi)	INDOSHNEWS Newsletter publication	4	3

*# Output is creation & dissemination of information. Can't be quantified.*

## Plan Scheme VI: Establishment of Regional Labour Institute at Faridabad

### Objectives:

The objective of the Scheme is to cater to the needs of the northern area in relation to Safety and health which at present, due to heavy workload on Regional Labour Institute, Kanpur is not effectively met. The Institute will specialise in assisting small-scale industrial units. It will also help Policy Planning Division of DGFASLI to better liaise with the Ministry and other Government departments in Delhi.

**Table 3.6: Achievements (January to December 2006)**

S.N.	Activities	Targets	Achievement
1	Building construction activity	Not Quantifiable	85% of the construction is completed
2	Training Programme, Seminar/ Workshop	29	-
3	Small scale programme	4	2
4	No. of study/ survey/ Audit	6	3
6	No. of factories covered under MSE Van	2	12

*Note: The posts have not been created.*

## 4 Safety and Health Improvement in Factories, Docks and Construction

### 4.1 Co-ordination in the Administration of the Factories Act, 1948

The Factories Act, 1948 is the principal and comprehensive Act of the Parliament which provides for the requirements concerning safety, health and welfare amenities needed by workers employed in factories. The provisions of the Act are applicable to the factories as defined under Section 2m(i), 2m(ii) or notified under Section 85 of the Act by the State Governments.

The Ministry of Labour and Employment at the Centre is accountable to the Parliament for proper enforcement of the Act. Uniformity in the application of the provisions of the Act in various States/Union Territories is achieved by circulating the Model Rules prepared by DGFASLI, which are incorporated by them in their State Factories Rules with necessary modifications to suit local needs. In the task of framing the Model Rules and achieving uniformity in the standards of enforcement, the DGFASLI, on behalf of the Ministry of Labour and Employment, enlists the cooperation and involvement of the State Governments by convening annually a Conference of Chief Inspectors of Factories. The Conference discusses all matters relating to the administration of the Act as well as proposed amendments. Besides, the Conference also serves as a forum for discussion of the progress made in the techniques and methods of prevention of accidents and ill-health in factories.

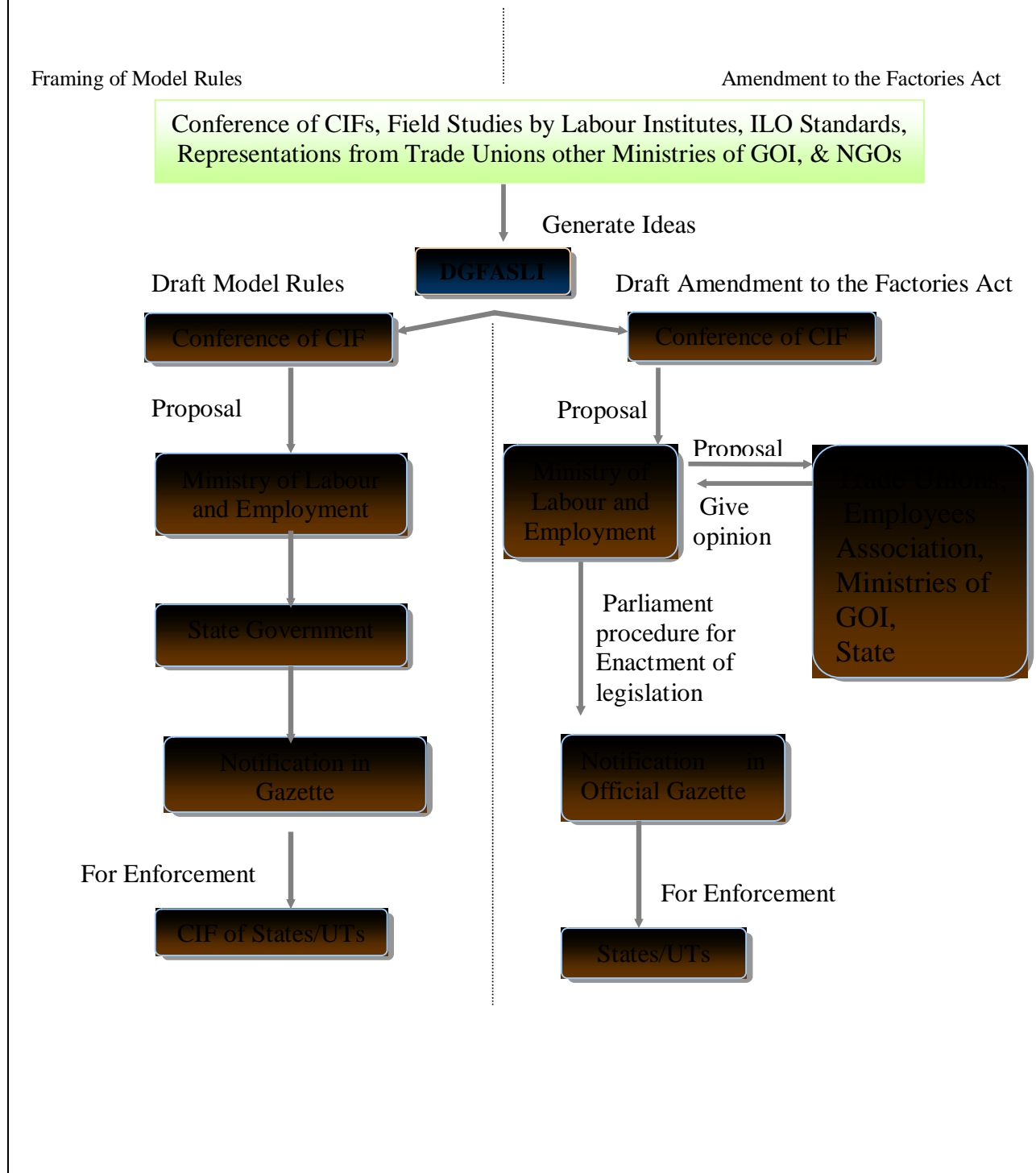
**During the year the following major activities were carried out:**

#### 4.1.1 International/ILO instruments on Safety and Health:

Prepared comments/reports on the ILO instruments.

- ILO Convention NO. 90 regarding night work of Young Persons.
- ILO Report on “Making Decent Work an Asian Goal”.
- Labour Inspection Convention No. 81 Report Form and Observations 2004
- ILO Convention No. 174 concerning Prevention of Major Industrial accidents.
- ILO Convention No. 162 concerning Safety in the use of Asbestos and Recommendation No. 172
- Report of the Director General, ILO regarding development in relation to possible collaboration between ILO and ISO on Occupational Safety and Health Management System (OSHMS)
- Report IV2 (B) on Promotional Framework for Occupational Safety & Health.

## Flowchart showing the System of Technical Standards Development



#### 4.1.2 CIF Conference

The 47th Conference of Chief Inspectors of Factories was held in Mumbai on 6-8 February, 2006. The Conference was inaugurated by Shri J.P.Dange, IAS, Principal Secretary Industries, Energy and Labour, Government of Maharashtra and presided over by Shri C.A.Bhaskaran, Director, Ministry of Labour and Employment, Government of India. The conference was attended by CIFs of 24 States/Uts The various issues relating to provisions under the Factories Act & Rules made thereunder were discussed and decisions taken .Some of the important decisions taken during the conference are as under:

- To prepare Model Rule for Safety in Plastic Injection Moulding Machines
- To prepare guidelines on procedures for testing and examination of lifts and hoists
- To prepare Model Rule on furnaces
- To prepare guidelines / Model Rules on Inspection, Investigation etc.



Shri J.P.Dange, IAS, Principal Secretary Industries, Energy and Labour, Government of Maharashtra inaugurating the 47th Conference of Chief Inspectors of Factories held in Central Labour Institute, Mumbai on 6-8 February, 2006.

### 4.1.3 Comments/clarifications etc. on the provisions of the Factories Act, 1948 and other related issues

Comments on statutes related instruments, reports, clarifications on the statutory provisions and other related issues were prepared.

Sl.No.	Particulars	Nos.
1	Statutes and Amendments	8
2	Reports of the Task Force / Committees	7
3	Non statutory Standards, Guidelines	3

The statutes examined include Bills on Special Economic Zones, Industrial Employment Standing Orders, State Municipal Corporation Bills, Factories Amendment Bill etc.

The various Reports examined include those relating to Petroleum Chemicals Petro-chemicals Investment Regions, International covenant on Economic Social and Cultural Rights, Industrial Tripartite sub-committee on Road Transport, etc.

### 4.1.4 Parliament Questions/Assurances

Prepared draft replies to 19 Parliament Questions and sent to Ministry of Labour and Employment concerning:

- Safety and Health; and Equality and dignity of Work Force
- Increase in working hours
- Work place hazard for females
- Accident in Industrial Factories.
- Protection to Labour .
- Asbestos
- National Policy for employees of Private/ Public Sector.
- Comprehensive National Legislation.
- Amendment to the Child Labour (Prohibition and Regulation of Employment) Act 1986 and the Factories Act 1948
- I.T. Companies neglecting health and environment norms
- Labour Reforms in the country
- Hazardous factories in Madhya Pradesh.
- Incidence of fire in a leather tannery in Kolkata.
- Rise in Silicosis cases in the country

#### **4.1.5 Others:**

- Prepared “59th year of Independence – Kaleidoscopic View of Labour Activities”
- Demand for grants of Ministry of Labour and Employment 2006-2007.
- Joint inspections of pesticides units for granting manufacturing license.
- Participation in meetings of committees constituted by BIS/ AERB.

#### **4.1.6 Ship Breaking**

With a view to improve Occupational Safety and Health in the Ship Breaking Yards DGFASLI carried out the following activities :

- DGFASLI has proposed special provisions for ship breaking industry to be included under Rule 75 of the existing Model Rules framed under Section 41 of the Factories Act 1948 regarding safe handling and disposal of hazardous wastes, measures to be taken to prevent any explosion; including “gas free certificate for hot work” from the Chief Controller of Explosives.
- In pursuance to the Supreme Court order dated 28<sup>th</sup> October,2003 in the Writ Petition NO. 657 of 1995, the Inter Ministerial Committee (IMC) was constituted. The IMC, in its 5<sup>th</sup> meeting held on 1-2-2006 had asked DGFASLI to identify Personal Protective Equipments (PPEs) suitable to workers working in specific conditions of ship breaking. DGFASLI has identified PPEs for different operations carried out in the ship breaking yards. Gujarat Maritime Board (GMB) has agreed to enforce the use of PPEs in the ship breaking yards and use the penal provisions available in the “Gujarat Maritime Board Ship Recycling Regulation 2003.
- DGFASLI has also carried out a survey to assess the use of PPE in the ship breaking yard at Alang. It has been observed, the PPEs such as helmet and shoes are being provided by the owners of the ship breaking yards and the same are also being used by the workers. However, PPEs such as organic vapor respirators, ear muffs, ear plugs, leather aprons, leg guards are not provided to the workers.



## **4.2 Administration of the Dock Workers (Safety, Health and Welfare) Act, 1986 and the Regulations framed there under and the Environment (Protection) Act, 1986 and the Rules framed there under:**

The Dock Workers (Safety, Health and Welfare) Act, 1986 and the Regulations, 1990 framed there under cover safety, health and welfare aspects of all the workers engaged in dock-work, whether in loading or unloading of cargo on board ship, alongside it or in transit sheds, warehouses or yard etc., within the port premises including those engaged in chipping and painting of ships. These statutes are in line with ILO Convention No.152 on Occupational Safety and Health (Dock Work).

Administration of the Act and the Regulations in major ports is carried out by the Ministry of Labour and Employment, through DGFASLI, Mumbai. The Director General is the Chief Inspector of Dock Safety appointed under the Act. The Chief Inspector of Dock Safety is also an authority for enforcement of the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 framed under the Environment (Protection) Act, 1986, in the major ports.

The above statutes are enforced by the Inspectors posted at Inspectorate Dock Safety at all the major ports viz. Mumbai, Kolkata, Chennai, Kandla, Mormugao, New Mangalore, Cochin, Tuticorin, Visakhapatnam, Paradip and Jawaharlal Nehru Port except Ennore where the Inspectorate is yet to be set up. Presently, the enforcement in this Port is carried out by the Inspectors posted at Inspectorate Dock Safety, Chennai. Inspectors also enforce the Marking of Heavy Packages Act, 1951 and Rules framed there under in the major ports.

The main function of the inspectorates is to ensure the compliance with the provisions under the statutes. The statutory responsibilities of inspector include inspection of ships, tankers, loose-gears, container-handling equipment, docks, container-yard and terminal, hazardous installations and isolated storages, tanks, carrying out the investigation of accidents (fatal and serious) and dangerous occurrences, prosecution of employers, attending to complaints, providing advisory services and conducting safety promotional activities like training programmes, workshops, celebration of safety week etc.

The Inspectorates also prosecute the agency responsible for serious violation of any provision of the Act and Regulations framed there under.

#### 4.2.1 During the year DGFASLI has carried out the following activities:

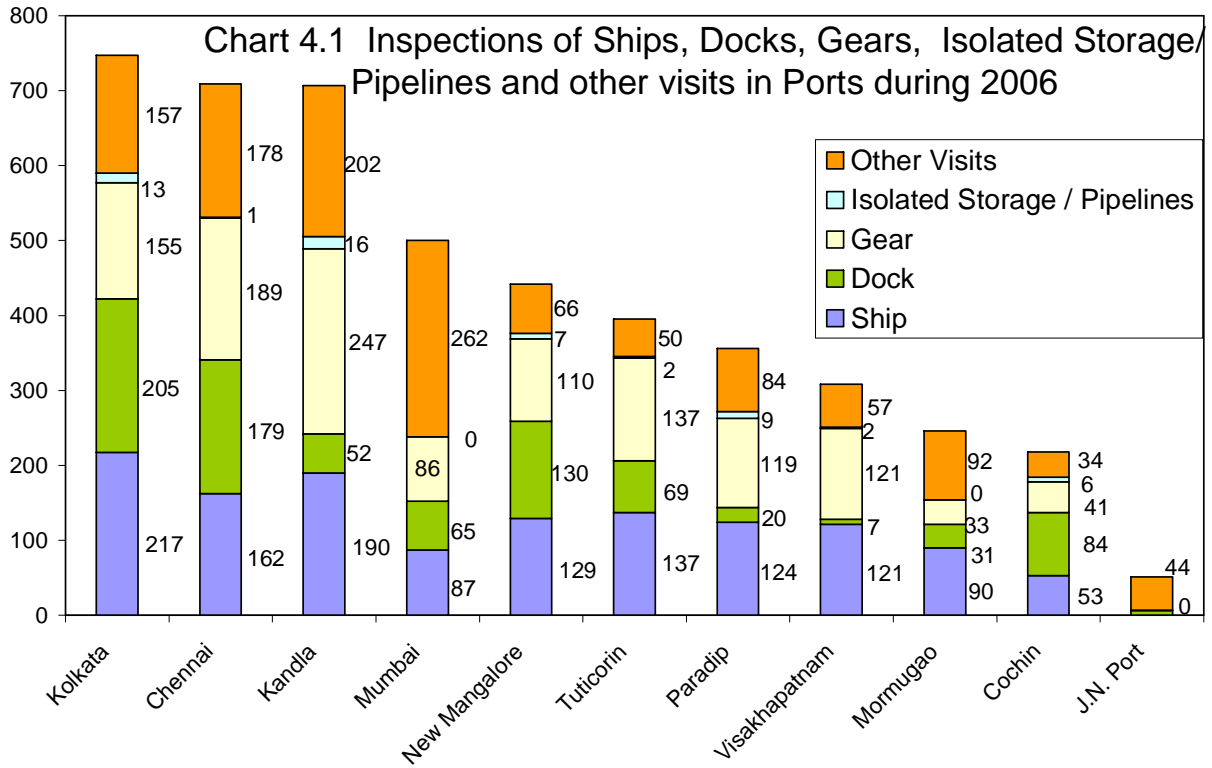
The 8<sup>th</sup> Meeting of the Advisory Committee constituted under Section 9 of the Dock Workers (Safety, Health & Welfare) Act, 1986 was held at Chennai Port on 22<sup>nd</sup> & 23<sup>rd</sup> December 2006. Shri S.K.Saxena, Director General, FASLI and Chairman of the Advisory Committee and Shri G.J.Rao, Dy. Chairman of the Chennai Port Trust addressed the members and invitees. Some of the important issues like amendment to the Dock Workers (Safety, Health & Welfare) Regulations, 1990, status of welfare and health facilities, control of accidents, use of quality personal protective equipment to dock workers, etc., were discussed in the meeting.

**Table 4.1: Details of Inspections and other visits in Ports during 2006.**

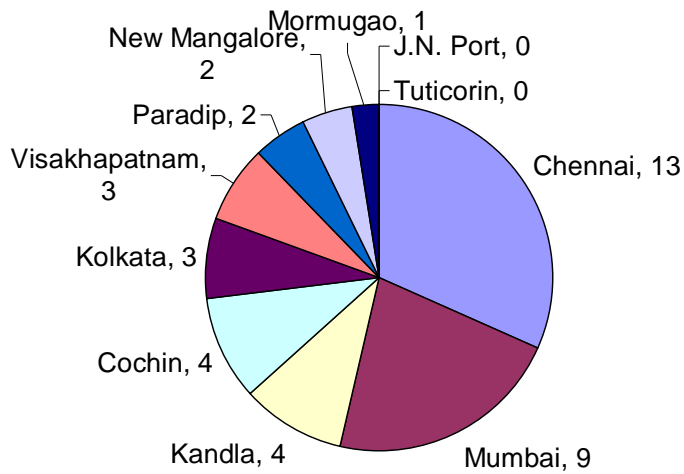
Sl. No.	Ports	Ship	Dock	Gear	Isolated Storage / Pipelines	Other Visits
1.	Mumbai	87	65	86	00	262
2.	J.N. Port	00	06	01	00	44
3.	Kandla	190	52	247	16	202
4.	Mormugao	90	31	33	00	92
5.	Kolkata	217	205	155	13	157
6.	Paradip	124	20	119	09	84
7.	Visakhapatnam	121	07	121	02	57
8.	Chennai	162	179	189	01	178
9.	Cochin	53	84	41	06	34
10.	New Mangalore	129	130	110	07	66
11.	Tuticorin	137	69	137	02	50
<b>Total</b>		<b>1310</b>	<b>848</b>	<b>1239</b>	<b>56</b>	<b>1226</b>

**Table 4.2 : Details of Prosecution in Ports during 2006**

Sl. No.	Ports	Pending from previous year	Launched during the year	Decided during the year	Convicted
1.	Mumbai	05	01	0	00
2.	J.N. Port	02	00	00	00
3.	Kandla	08	02	00	00
4.	Mormugao	00	00	00	00
5.	Kolkata	05	01	04	04
6.	Paradip	01	00	00	00
7.	Visakhapatnam	03	00	00	00
8.	Chennai	05	01	02	02
9.	Cochin	00	00	00	00
10.	New Mangalore	01	00	00	00
11.	Tuticorin	01	01	01	01
<b>Total</b>		<b>31</b>	<b>06</b>	<b>07</b>	<b>07</b>



**Chart 4.2 Investigations into Reportable Fatal Accidents/ Dangerous Occurrences Initiated during the year 2006**



**Table 4.3: Details of Investigations into Reportable Fatal Accidents/ Dangerous Occurrences 2006**

Sl.No.	Ports	Pending from previous year	Initiated during the year	Concluded during the year
1.	Mumbai	2	09	06
2.	J.N. Port	4	00	02
3.	Kandla	6	04	07
4.	Mormugao	1	01	01
5.	Kolkata	4	03	06
6.	Paradip	1	02	01
7.	Visakhapatnam	1	03	01
8.	Chennai	6	13	10
9.	Cochin	0	04	02
10.	New Mangalore	2	02	02
11.	Tuticorin	4	00	03
<b>Total</b>		<b>31</b>	<b>41</b>	<b>41</b>

**Table 4.4: Dock Safety Committee meetings conducted/Safety Weeks celebrated during 2005**

Sl.No.	Ports	Committee Meetings	Safety Weeks
1.	Mumbai	5	0
2.	J.N. Port	4	0
3.	Kandla	2	0
4.	Mormugao	4	0
5.	Kolkata	7	2
6.	Paradip	5	0
7.	Visakhapatnam	3	1
8.	Chennai	1	3
9.	Cochin	4	1
10.	New Mangalore	3	1
11.	Tuticorin	3	1
<b>Total</b>		<b>41</b>	<b>09</b>

### **4.3 Safety and Health in Construction Sector:**

The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act was enacted in 1996. The Central Government is the appropriate government for notifying the rules and regulations under the Act as well as the enforcement of the provisions under the said Rules, in respect of establishments in relation to which Central Government is the appropriate government under the Industrial Disputes Act, 1947. In respect of other establishments, the State Government is the appropriate government for notifying the Rules and enforcing the provisions. **It is pertinent to state that DGFASLI had done the entire work of drafting the above said Act 1996 as well as framing of the Central Rules of 1998 made thereunder.**

DGFASLI is involved in policy matters related to the administration of the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996. The Director General, FASLI is a member on the Central Advisory Committee constituted under Rule 10 of the Central Rules of 1998.

DGFASLI was entrusted with the task of processing applications in respect of approval of Competent Persons under Rule 2(j) of the Central Rules, 1998. So far DGFASLI has processed about 46 applications for granting competency under the said Rules for the purpose of testing, examination or annealing and certification of lifting appliances, lifting gears, wire ropes or pressure plants and equipment.



Shri K. M. Sahni, Secretary, Ministry of Labour and Employment inaugurating the National Seminar on Safety Health & Welfare in Construction Industry at Central Labour Institute on 27<sup>th</sup> January 2006



Director General, DGFASLI, interacting with the participants at the Seminar on Hazards of Asbestos and Silica in Construction Industry at Central Labour Institute Mumbai on 17<sup>th</sup> March 2006

#### 4.4 (a) National Studies and Surveys

In its efforts towards helping the Central Government in formulation of standards for inclusion in statutes on Safety and Health in Factories and Ports, DGFASLI undertakes national studies and surveys, to ascertain the status of working conditions, safety and health in factories and docks.

**Table 4.5 : National Studies and Surveys undertaken during 2006**

Sl. No.	Title	Status
1.	Assessment of Capability and Management of Occupational Safety & Health in the States of India. During the year, reports of Karnataka and Jharkhand were completed; and reports of Bihar, Tripura and Uttaranchal were under progress.	Under Progress
2.	Safety, Health & Ergonomics study of child labour (ILO Project)	Under Progress

(b) **State level Studies and Surveys** are under taken in the State in certain priority areas to ascertain status of Safety Health and Environment at work place.

**Table 4.6: State level Studies and Surveys undertaken during 2006**

Sl.	Title	Status
1	Industrial Hygiene survey in Pesticide Formulation Units of Rajasthan	Completed
2	Study on hazards of Herbicide at M/s Monsanto Chemicals India Ltd., Silvassa, Daman & Diu	Completed
3	Investigation of accident in Sodium Chlorate storage area of Shree Shyam Board & Paper Mills Ltd., Kashipur Uttaranchal	Under Progress
4	Use of PPE in ship-breaking units in the state of Gujarat	Under Progress

#### 4.5 Unit Level Consultancy Studies

Unit level consultancy studies are carried out at the request of the management and reports are submitted for implementation of the recommendations for further improvement in factories concerned. The institute-wise details of these studies are given in **Annexure I**.

**Table 4.7 Unit level consultancy studies undertaken during 2006**

Sl. No.	Area	No. of Consultancy Studies	
		Completed	Under Progress
1	Safety Audit	19	9
2	Occupational Health	1	1
3	Airborne Contaminants	17	2
4	Noise Level	3	2
5	Ventilation study	2	1
6	HAZOP	3	2
7	Safety Audit-MAHC	1	3
8	Ergonomic Evaluation	17	7
9	Heat Stress	6	0
10	Risk Assessment	1	0
11	Industrial hygiene	5	1
12	Environmental conditions	8	0
13	Dispersion Modeling	1	0
	<b>Total:</b>	<b>84</b>	<b>28</b>

## 4.6 Education and Training

DGFASLI organises workshops, seminars, training programmes etc. for the benefit of industries, ports, enforcement officials etc.

### 4.6.1 Seminars:

Seminars are organized on the basis of findings and recommendations of various national studies; unit level studies and surveys; and issues and priorities of national concern. These seminars provide platform for discussing various issues related to safety and health; and recommend national level/ State level/ Unit level action plan in respective area of concern.



**Table 4.8: Seminars conducted during 2006**

Sl. No.	Title	Venue	Date	Participants	Organisations
1.	Role & Responsibility of Occupiers & Managers under EHS legislation	RLI, Chennai	18/02/2006	100	14
2.	Hazards of Asbestos and Silica in Construction Industry	CLI, Mumbai	17/03/2006	23	10
3.	National seminar on Safety Health & Welfare in Construction Industry for State Labour Secretaries and Enforcement officials	CLI, Mumbai	27/01/2006	20	11
4.	Setting up of National Board on Accreditation & Certification of Institutions, Professionals & Services in Occupational Safety and Health	CLI Mumbai	26/10/2006	83	71
<b>Total</b>				<b>226</b>	<b>106</b>



Shri Girdhar I. Gyani, Chairperson QCI; Ms. Ingrid Christensen, S&H expert ILO, New Delhi; Shri. S.K.Saxena, Director General FASLI and Shri C.A.Bhaskaran, Director, Ministry of Labour and Employment at the inaugural function of Seminar on Setting up of National Board for Accreditation & Certification of Institutions, Professionals & Services in Occupational Safety and Health at Central Labour Institute, Mumbai on 26<sup>th</sup> Oct.2006.

#### 4.6.2 Workshops:

The workshops are organized to enhance the skills of the participants in dealing with matters connected to safety, health, productivity and environment etc.

**Table 4.9 : Workshops conducted during 2006**

Sl. No.	Title	Programmes	Participants	Organisations
1.	Improvement in working conditions and Productivity in Small & Medium Scale Industries for Entrepreneurs/Managers	6	130	93
2.	Improvement in working conditions and Productivity in Small & Medium Scale Industries for workers	5	92	70
3.	Inspection of testing establishments in connection with the approval of Competent Persons under the BOCW(RECS) Central Rules, 1998	1	13	5
4.	Safety Audit	2	32	16
5.	Industrial Noise Control	2	27	11
6.	Industrial Ventilation	1	8	6
7.	Selection and Quality Assurance for Effective use of PPE.	1	7	5
8.	Safety Engineering and Management	1	10	6
9.	Hazards and Operability Study	2	28	15
	<b>Total</b>	<b>21</b>	<b>347</b>	<b>227</b>

#### 4.6.3 Professional Programmes:

To fulfill the need of qualified Safety officers, and Factory Medical Officers in the industry, the organisation conducts one year Post Diploma Course in Industrial Safety and three months Associate Fellow of Industrial Health 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 and health was started at CLI Mumbai as well as RLI Kolkata, Kanpur and Chennai.

**Table 4.10: Professional Programmes- 2006**

<b>Sl.</b>	<b>Participants and Area</b>	<b>Programmes</b>	<b>Participants</b>	<b>Organisations</b>
1	Advance Diploma in Industrial Safety for Safety Officers	4	146	86
2	AFIH – certificate course in occupational health for Factory Medical Officers	2	62	61
3	One-month Certificate Course for Supervisory Personnel in hazardous processes factories	1	5	4
	<b>Total:</b>	<b>7</b>	<b>213</b>	<b>151</b>

#### **4.6.4 Longer Duration Training Programmes**

Specialised training programmes are conducted for identified target groups such as 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 as joint participation of management personnel and union representatives from industries are the special features of some programmes.

The institute-wise details of Longer Duration Training Programmes and Professional Programmes are given in **Annexure-II**

**Table 4.11: Longer Duration Training Programmes - 2006**

Sl.	Participants and Area	Programmes	Participants	Organisations
<b>A.</b>	<b>Inspectors of Factories</b>			
	Basic course	1	6	3
	Refresher course	2	29	5
	Chemical Safety	1	10	7
	MAHC	2	20	12
<b>B.</b>	<b>Safety Officers</b>			
	Refresher Course			
<b>C.</b>	<b>Factory Medical Officers</b>			
	Refresher Course	2	14	14
<b>D.</b>	<b>Management Personnel</b>			
	Industrial Safety	6	151	99
	Industrial Hygiene	6	65	43
	Occupational Health	2	33	28
	Industrial Physiology	6	27	17
	Ergonomics	1	2	2
	Staff Training	3	63	25
	Industrial Psychology	4	104	37
	MAHC	2	15	11
	Hazardous substances	1	12	10
	Risk assessment	1	24	16
	Environmental Pollution	2	40	19
<b>E.</b>	<b>Trade Union Leaders/Workers/Joint Participation</b>			
	Industrial Safety	4	122	21
	Staff Training	1	11	5
	Chemical Safety	2	57	25
	Indl. Psychology	1	18	9
	Ergonomics	1	16	6
	Dock Safety	4	119	5
	<b>Total:</b>	<b>55</b>	<b>958</b>	<b>419</b>

#### 4.6.5 Need Based In-Company Training Programmes:

On the request of managements, various disciplines of DGFASLI conduct in-company need based training programmes for the benefit of cross-section of personnel from respective units. Such programmes are designed after proper identification of needs of the defined target through preliminary discussions with

the managements. The institute-wise details of the Need based in - company Training Programmes are given in **Annexure - III**

**Table 4.12: Need based in - company Training Programmes conducted during 2006**

Sl.No.	Level of Participants	Programmes	Participants	Organisations
1.	Management Personnel	32	834	106
2.	Supervisors	5	233	8
3.	Trade Union Leader/Workers/Joint Participation	5	109	5
	<b>Total</b>	<b>42</b>	<b>1176</b>	<b>119</b>

#### 4.6.6 Short Duration Training Programmes:

DGFASLI also organises short duration (1 - 2 days) training programmes for the benefit of supervisors, workers, workers representatives from factories. Such programmes are organised in the field of Safety, Health, Hygiene, Psychology, etc. The institute-wise details of Short Duration Training Programmes are given in **Annexure IV**.

**Table 4.13: Short Duration Training Programmes in 2006**

Sl. No.	Level of Participants	Programmes	Participants	Organisations
1.	Supervisors	7	87	20
2.	Trade Union Leader/ Workers/ Joint Participation	4	118	8
3.	Management Personnel	5	66	21
4.	Students of Educational Institutions	14	108	44
	<b>Total:</b>	<b>30</b>	<b>379</b>	<b>93</b>

#### 4.6.7 Appreciation and Promotional Programmes:

Each of the Labour Institutes at Mumbai, Kolkata, Kanpur and Chennai has an Industrial Safety Health and Welfare Centre and "Mobile Safety Exhibition Van". The exhibition vans are equipped with daylight film/video projection system and other audio visual equipment. There are also half day appreciations programmes

conducted at various laboratories and divisions of the organization.

During the year 2006, 3930 beneficiaries visited the Industrial Safety, Health and Welfare Centres at CLI Mumbai and RLI Kolkata, Kanpur and Chennai.

**Table 4.14: Appreciation and Promotional Programmes in 2006**

Sl.No.	Institute	Visitors to	Programmes	Beneficiaries	Organisation
1.	CLI Mumbai	Appreciation Programmes	193	3724	194
		SHW Centre	120	2605	436
2.	RLI Kolkata	SHW Centre	23	393	139
3.	RLI Chennai	SHW Centre	32	1010	32
4.	RLI Kanpur	SHW Centre	2	44	31
5.	Dock Safety	Appreciation Programmes	3	40	31
		SHW Centre	9	208	43
	<b>Total</b>	<b>Appreciation Programmes</b>	<b>196</b>	<b>3764</b>	<b>225</b>
		<b>SHW Centre</b>	<b>186</b>	<b>4260</b>	<b>681</b>

#### 4.7 Technical Advice

Technical advice and guidance are provided to industries and port users on various aspects relating to control of hazards, prevention of accidents and occupational diseases, work environment, productivity etc.

**Table 4.15: Technical Advice rendered in 2006**

Sl.No.	Institute	No. of Units
1.	Dock Safety Inspectorates	39
2.	Central Labour Institute, Mumbai	27
3.	Regional Labour Institute, Kolkata	3
4.	Regional Labour Institute, Chennai	12
5.	Regional Labour Institute, Kanpur	0
6.	Regional Labour Institute, Faridabad	0
	<b>Total:</b>	<b>81</b>

#### 4.8 Testing of Personal Protective Equipment

The respiratory and non-respiratory protective equipment testing laboratories at the Central Labour Institute, Mumbai undertake performance tests of canisters, masks, helmets, safety shoes, safety goggles, safety belts, welding glasses etc.

**Table 4.16: Personnel Protective Equipment tested in 2006**

Sl.No.	Type of Personal Protective Equipment	Personal Protective Equipments tested
1.	Non-Respiratory Equipment	358
2.	Respiratory Equipment	141
	<b>Total:</b>	<b>499</b>

#### 4.9 Approval of Flameproof Electrical Enclosures

Use of flame/explosion - proof electrical enclosures is mandatory in hazardous units where flammable environment exists. The control on quality of such flameproof electrical enclosures is assured through test methods as stipulated in IS: 2148-1981. DGFASLI is the approving agency for these enclosures for the purposes of the Factories Act. The approvals are issued on the basis of inspection of units manufacturing these equipments and the test reports of recognized Testing Laboratories such as CPRI and CMRI.

**Table 4.17: Approval of Flameproof Electrical Enclosures during the year 2006**

<b>Applications received</b>	12
<b>Approvals issued</b>	9 manufacturers for 29 flame-proof electrical enclosures
<b>Inspection visits</b>	1 Manufacturing units.

#### 4.10 Talks

The officers of the organisation deliver talks on special topics in programme organized by outside agencies to disseminate latest technical information with specific reference to national studies, unit level studies, surveys conducted. They are also publishing papers and articles and presenting them in important symposia, workshops and seminars

**Table 4.18: Talks delivered during 2006**

Sl.No.	Institute	No. of Talks	Partici-pants	Organisations
1.	DGFASLI (HQ)*	35	596	77
2.	Central Labour Institute, Mumbai	30	1822	263
3.	Regional Labour Institute, Kolkata	5	93	7
4.	Regional Labour Institute, Chennai	8	415	9
5.	Regional Labour Institute, Kanpur	10	263	89
6.	Regional Labour Institute, Faridabad	0	0	0
<b>Total:</b>		<b>88</b>	<b>3189</b>	<b>445</b>

\* *Comprising of Factory Advice Service & Dock Safety Divisions.*

#### **4.11 Presentation of Papers/Articles/Reports Publication of Articles/Papers:**

The contribution of DGFASLI officers in preparation of papers and articles and presenting/publishing them in important symposia, workshops and seminars are highlighted as under.

**Table 4.19: Presentation of Papers in 2006**

Sl. No.	Title Paper/Article	Periodicals/Events	Date
1.	Occupational Health Strategies	Conference on Occupational safety, Health & Environment, Vigyan Bhavan, New Delhi	06/04/2006
2.	Dock Safety Statutes: Major Compliance Issues	National Conference on Safety, Health and Environment, N.S.C. at New Delhi.	07/04/2006
3.	Management of chemical emergencies	Indian Association of Occupational Health, BPCL, Navi Mumbai	07/05/2006
4.	"Occupational Lung Diseases, ILO radiography & Lung Function test"	Workshop on "Knowledge Integration Programme on Occupational Health", The Aditya Birla Institute of Management Learning, Navi Mumbai.	04/10/2006



5.	ILO-Radiographs on Pneumoconiosis	NAPCON' 06, Nagpur	01/11/2006
6.	Pneumoconiosis : An Overview	NAPCON' 06, Nagpur	03/11/2006

**Table 4.20: Publication of Papers/Articles - 2006**

Sl.No.	Title	Periodical/Events	Date
1.	Process Safety and Work Environment in the manipulation of emulsifiable concentrates of pesticides-a sample survey.	INDOSHNEWS VOL.10 NO.3	03/02/2006
2.	Activity in Mineral Grinding Environment and control in Industry	INDOSHNEWS VOL.10 NO.3	03/02/2006
3.	Dust Control in Quartz Grinding Mills	INDOSHNEWS VOL.10 NO.3	03/02/2006
4.	OSH in Ship breaking Industry- Indian Scenario	INDOSHNEWS VOL. 10 NO.4	13/07/2006
5.	How to check the effectiveness of a hearing protector	INDOSHNEWS VOL. 11 NO.4	13/07/2006
6.	Back pain and safe work practice at workplace	INDOSHNEWS VOL. 11 NO.1	07/08/2006
7.	MIS for Occupational Safety & Health	INDOSHNEWS VOL. 11 NO.1	07/08/2006

**4.12 CIS National Centre for India:**

As a CIS National Centre for India CLI provides information and services on:

- Microfiche reference
- Awareness on current events
- Information access through CD-ROMs of ILO, WHO, etc.
- MSDS
- DISPERSION MODELS

#### 4.13 INDOSHNEWS Newsletter:

In order to create Safety and Health awareness and to project the services offered by the organisation and its achievements DGFASLI brings out a Quarterly newsletter “INDOSHNEWS”. This quarterly newsletter is intended to reach to the people round the globe and bring about awareness in matters related to safety and health, highlight important issues, latest developments, current events in the area of safety and health. During 2006 **three** volumes of INDOSHNEWS were brought out.

#### 4.14 DGFASLI website homepage

The DGFASLI website [www.dgfasli.nic.in](http://www.dgfasli.nic.in) is a source of information on various safety and health related matters.



DGFASLI website [www.dgfasli.nic.in](http://www.dgfasli.nic.in)

#### 4.15 Observance of Safety Week, Fire Safety Week, etc:

##### Safety Week:

Safety week celebrations were held at the Ports of Kolkata, Visakhapatnam, Chennai, New Mangalore, Cochin and Tuticorin. During the celebrations, various safety promotional activities like safety poster competitions, safety quiz contest, first-aid and fire fighting demonstrations and appreciation programmes were organized for benefit of dock workers and their families.

## 5 Safety Awards

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.

### 5.1 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 orders of precedence, are: Shram Ratna, Shram Bhushan, Shram Vir/Veerangana and Shram Shri/Devi. The recognition consists of a Sanad and cash award of Rs. Two lakh (1 award), Rs. one lakh (4 awards), Rs. 60,000 (12 awards) and Rs. 40,000 (16 awards) respectively.

### 5.2 Vishwakarma Rashtriya Puraskar & National Safety Awards:

The DGFASLI on behalf of the Ministry of Labour and Employment has been implementing the Vishwakarma Rashtriya Puraskar (VRP) since 1985 (earlier known as Shram Vir National Awards) and the National Safety Awards scheme since 1965. These schemes were modified in 1970 and again in 1977. 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. It covers workers employed in factories

and docks. The prizes are grouped in three classes i.e. CLASS (A) - 3, CASH AWARD OF RS.50,000/- EACH, CLASS (B) - 5, CASH AWARD OF RS.25,000/- EACH AND CLASS(C) - 10, CASH AWARD OF RS.10,000/- EACH.

**(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 and Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996. Shields and Citation Certificates are awarded to Winners and Runners Up. Schemes I to VI are meant for factories and construction sites and Schemes VII and VIII are for Ports.

### **Achievement in 2006**

The Awards presentation function for Vishwakarma Rashtriya Puraskar and National Safety Awards for the year 2005 was held on 17.09.2006 at Vigyan Bhavan, New Delhi and the awards were presented to the awardees by the Hon'ble Minister of State for Labour & Employment Shri. Chandra Sekhar Sahu,. Total 320 applications were received for Vishwakarma Rashtriya Puraskar-2005, out of which 28 applications were adjudged for granting of awards. The ninety one workers have shared these 28 awards. Total 405 applications were received for National Safety Awards, out of which 109 applications have been adjudged for granting of awards. These awards were presented to 65 winners & 45 runners-up under both the schemes.

**Table 5.1: Details of number of applications received for Vishwakarma Rashtriya Puraskar and the number of awards given during the last 5 years :**

Awards Year	Vishwakarma Rashtriya Puraskar	
	Applications	Awards
2001	81	18
2002	118	18
2003	184	18
2004	246	28
2005	249	28



Shri. Chandra Sekhar Sahu, Minister of Labour & Employment inaugurating and distributing the Vishwakarma Rashtriya Puraskar and National Safety Awards 2005, at Vigyan Bhavan, New Delhi on 17<sup>th</sup> Sept., 2006

**Table 5.2: Details of the estimated annual savings in rupees resulting from the suggestion during the last 5 years :**

Awards Year	Savings in Indian Currency in Rupees		Savings in Foreign Currency in Rupees	
	Recurring	Non-Recurring	Recurring	Non-Recurring
2001	429466000	1073761000	52857000	49553000
2002	204693124	30965730	2940000	35871500
2003	990132800	310103000	28115000	57972000
2004	150,58,61,000	506,91,00,000	834,29,80,600	237,85,13,600
2005	230,28,74,300	12,24,04,900	172,22,59,700	6,15,71,100

**Table 5.3 : The details of National Safety Awards under different schemes for the period 2001 – 2005 are given below :**

Awards Year	National Safety Awards	SCHEMES									
		I	II	III	IV	V	VI	VII	VIII	IX	X
2001	Applications	118	94	49	49	19	23	4	5		
	Awards	25	18	8	12	4	4	--	2		
2002	Applications	120	97	55	57	17	26	4	4		
	Awards	25	17	9	11	4	5	1	2		
2003	Applications	127	101	76	68	45	37	4	3		
	Awards	23	16	12	13	11	10	--	2		
2004	Applications	135	107	26	24	24	19	31	30	4	1
	Awards	26	18	11	13	9	8	9	10	--	1
2005	Applications	112	42	28	27	29	25	27	29	3	3
	Awards	26	29	11	12	10	9	10	11	--	--

Chart 5.1

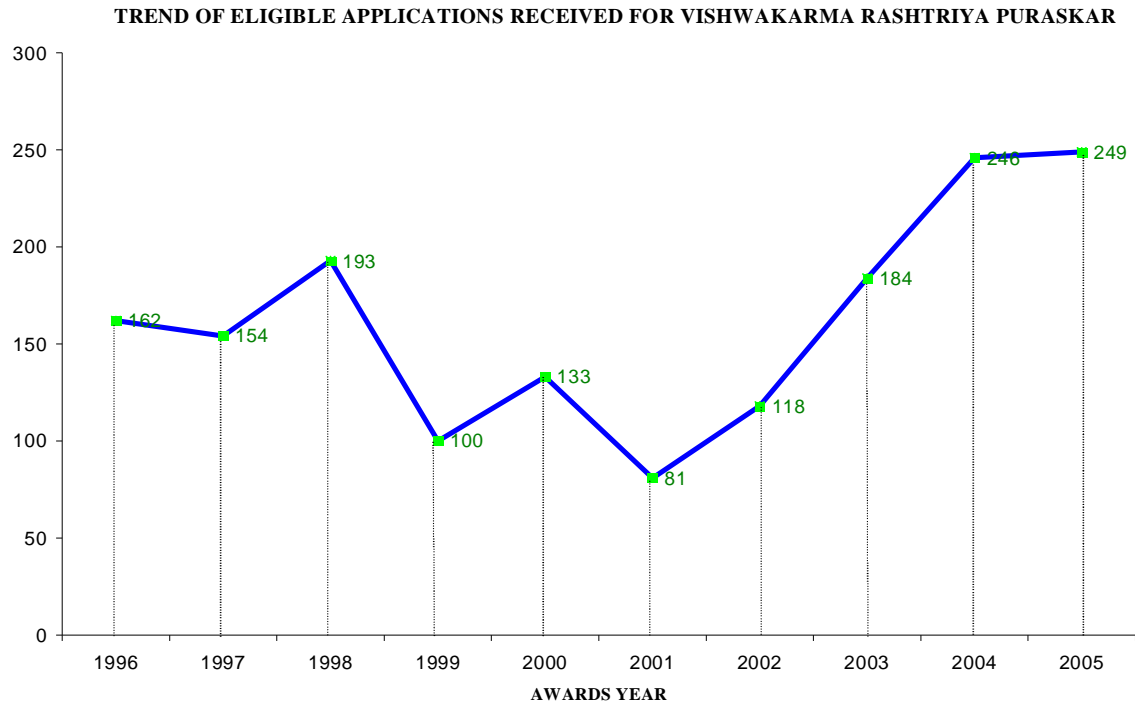
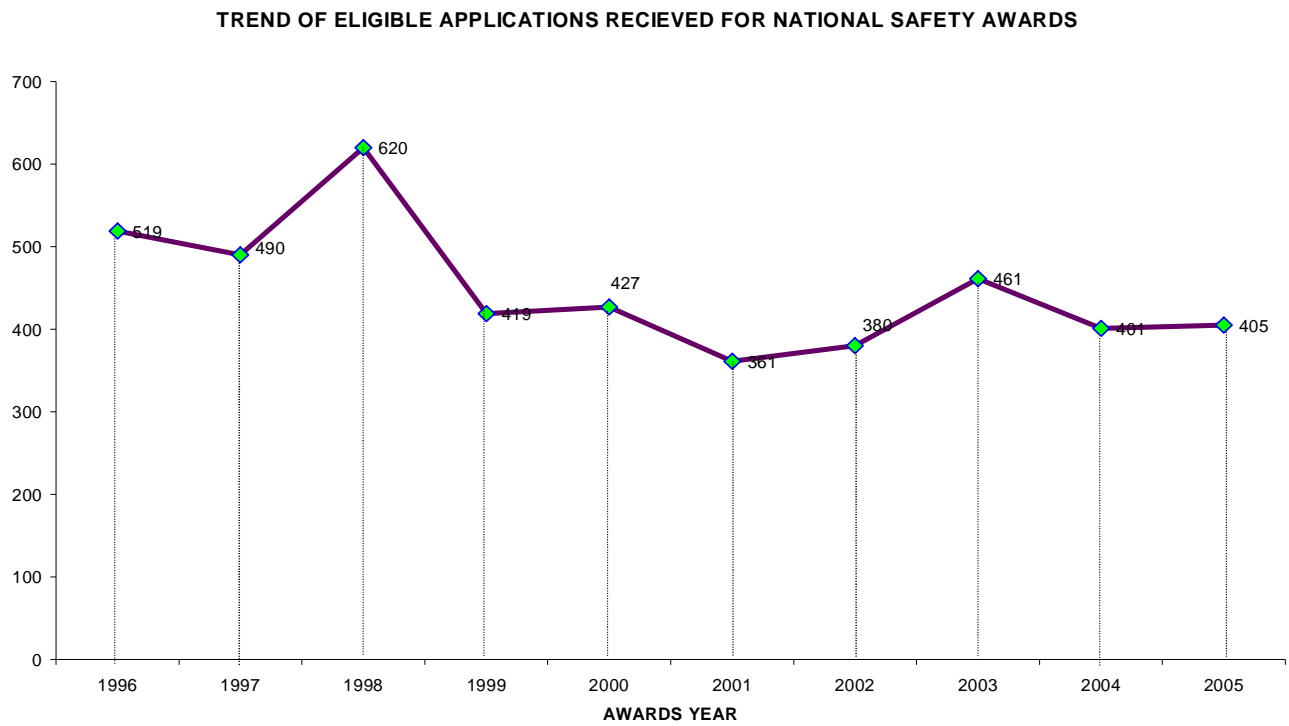


Chart 5.2



## 6 Human Resource Development

The officers of the Organisation are deputed to training programmes organised by various agencies within the country and abroad, for exposure to the latest technical developments that are taking place in the field of Industrial Safety and Health. The details of such participation during the year are given below:

**Table: 6.1 International**

Sl.No.	Area/Institute	Period	No. of officers trained
1	ILO/Korea Fellowship Training Programme on "OSH in small Construction" organized by Korean Occupation Safety & Health Agency (KOSHA), Seoul Republic of Korea.	7-18 Aug.	1

**Table: 6.2 National**

Sl.No.	Area/Institute	Period	No. of officers trained
1	International Conference on Asbestos at Maulana Azad Medical College, New Delhi	3 Dec.	2
2	13th National Seminar on Updates in industrial, and Environmental Health at Indian Society of Health Administrators, Bangalore	27~29 Nov.	2
3	Industrial Application of Environmental Monitoring Equipment at Vashi, Navi Mumbai	15 Nov.	1
4	Refresher Course for in-service ISS officers on "Management Development" at H.C.M. Rajasthan State Institute of Public Administration	9~13 Oct.	1
5	Gait and Motion Analysis, 2006 at Holy Family Hospital, Bandra	16~17 Sept.	1
6	Seminar on "Analytical Instruments used in air pollution Monitoring" Organised at Park Hotel, Kolkata	30 Aug.	1



7	7th ILO-DCMS National training Workshop on prevention of Pneumoconiosis in Mining Industries at Indian Habitat Centre, New Delhi	31 July-4Aug.	1
8	National Conference on Occupational Safety, Health & Environment at Vigyan Bhavan, New Delhi	6 April	2
9	Training Programme on "Health Aspects of Chemical Accidents" conducted by NIOH. Ahmedabad & ROCH(E), Kolkata at Salt Lake City, Kolkata	29~30 March	5
10	Ergonomics in industry for safety, health & productivity at SNTD Women's University, Juhu, Mumbai	10 March	8
11	Seminar on Awareness programme on Chemical Weapons Conventions at Hotel Radha Park Inn Chennai	20 Feb.	2
12	Bench Marking of HSE in Oil Industry at Marriat Restaurant, Goa	1~3 Feb.	1

## 7 Occupational Injuries in Factories & Ports

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/Union Territories. The information relating to occupational injuries in factories given in this chapter is based on the statistics provided by Labour Bureau up to the year 2003(P).

### **7.1 Profile of Industrial Injuries in Factories**

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 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. The Incidence Rate is the number of injuries per 1000 workers employed in the factories.

### **7.2 All India Industrial Injuries and Rates:**

The statistics of number of working factories, employment therein, number of fatal and non-fatal injuries and their rates for the years 1999-2003 (P) are given in table 7.1 to the extent available from Labour Bureau

As per the statistics given in table 7.1, the industrial injuries are consistently reducing during the period 1999-2003 and except for the year 2002, the frequency rate of injuries is also declining.

The incidence rate of injuries is decreased from 10.23 in the year 1999 to 4.22 in the year 2003 which is remarkable. The fatal injuries also reduced from 911 in 1999 to 518 in 2003. However the frequency rate and incidence rate of fatal injuries do not show any definite trend.

**Table:7.1 Statistics of Employment, Industrial Injuries, etc. in Factories**

Year	No. of Working Factories	Estimated Average daily Employment (in thousand)	Industrial Injuries		Frequency rate		Incidence Rate	
			Fatal	Total	Fatal	Total	Fatal	Total
1	2	3	4	5	6	7	8	9
1999	234608	8854	911	47389	0.02	2.9	0.17	10.23
2000	121604	4226	486	23976	0.07	3.6	0.22	10.93
2001	144800	5733	627	28364	0.07	3.24	0.19	8.67
2002(P)	141085	6330	540	20453	0.13	4.88	0.16	6.14
2003(P)	111895	4927	518	16028	0.05	3.17	0.07	4.22

Note: Data is based on the returns received under Factories Act. 1948 from States/UTs through Labour Bureau correspondence

(P) : Provisional

**Limitations of the data as stated by Labour Bureau Chandigarh:**

1. Figures for 1999 exclude Jammu & Kashmir, Manipur, Meghalaya, Uttar Pradesh, West Bengal, Andaman and Nicobar

2 Figures for 2000 excludes Bihar, Goa, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Manipur, Tamil Nadu, 7Uttar Pradesh, Andaman & Nicobar, West Bengal, Dadra & Nagar Haveli, Chattisgarh, Jharkhand..

3 Figures for 2001 excludes Bihar, Haryana, Chattisgarh, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Manipur, Meghalaya, U.P., West Bengal, Andaman & Nicobar, Dadra & Nagar Haveli and Jharkhand.

4 Figures for 2002 excludes Bihar, Chattisgarh, Himachal Pradesh, Jammu & Kashmir, Kerala, Delhi, Gujarat, Manipur, Meghalaya, Uttar Pradesh, West Bengal and Daman Diu Dadra & Nagar Haveli Jharkhand, Uttaranchal

5 Figures for 2003 excludes Bihar, Chattisgarh, Daman & Diu, Delhi, Gujarat, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Kerala, Meghalaya, Nagaland, Punjab, Tamil Nadu, Uttar Pradesh, Uttaranchal & West Bengal.

6 The Number of injuries has been given on the basis of notices of accidents whereas the rates have been worked out on the basis of Annual Returns

**Table 7.2: State-Wise Total Number of Industrial Injuries In Factories ( 1999 – 2003(P) )**

State/Union Territory	1999	2000	2001	2002(P)	2003(P)
Andaman & Nicobar	NA	NA	NA	37(-)	53(-)
Andhra Pradesh	3325(115)	3241(121)	3010(118)	2316(99)	1976(100)
Arunachal Pradesh	NA	NA	NA	NA	NA
Assam	133(7)	139(6)	149(15)	62(11)	65(6)
Bihar	606(21)	NA	NA	NA	NA
Chandigarh	NA	24(1)	4(-)	5(-)	81(11)
Chattisgarh	NA	NA	NA	NA	NA
Dadra Nagar Haveli	3(1)	NA	NA	NA	NA
Delhi	74(11)	43(9)	28(6)	NA	NA
Goa	190(5)	NA	142(4)	185(13)	145(3)
Gujarat	10724(211)	NA	6417(175)	NA	NA
Haryana	428(48)	NA	NA	245(34)	181(25)
Himachal Pradesh	234(48)	NA	NA	NA	NA
Jammu Kashmir	NA	NA	NA	NA	NA
Jharkhand	NA	NA	NA	NA	NA
Karnataka	1107(50)	1044(NA)	NA	2132(44)	2013(50)
Kerala	3849(25)	NA(15)	NA	NA	NA
Lakshadweep	NA	NA	NA	NA	NA
Madhya Pradesh	5115(66)	3321(51)	2232(32)	1947(49)	2065(48)
Maharashtra	14477(155)	11873(168)	9679(178)	7616(150)	6416(159)
Manipur	NA	NA	NA	NA	NA
Meghalaya	NA	47(2)	NA	NA	NA
Mizoram	NA	NA	NA	NA	NA
Nagland	NA	NA	NA	NA	NA
Orissa	1049(22)	1031(30)	812(20)	709(34)	700(49)
Pondicherry	862(2)	856(2)	592(4)	559(5)	581(8)
Punjab	262(23)	1049(35)	492(5)	466(8)	NA
Rajasthan	2245(59)	1300(44)	2555(33)	1997(57)	1748(58)
Sikkim	NA	NA	NA	NA	NA
Tamil Nadu	2702(41)	NA	2245(37)	2172(36)	NA
Tripura	4(1)	8(2)	7( NA)	5(-)	4(1)
Uttar Pradesh	NA	NA	NA	NA	NA
Uttaranchal	NA	NA	NA	NA	NA
West Bengal	NA	NA	NA	NA	NA
<b>Total:</b>	<b>47389(911)</b>	<b>23976(486)</b>	<b>28364(627)</b>	<b>20453(540)</b>	<b>16028(518)</b>

Note: (i) NA = Not Available, (ii) - = Nil, (iii) Figures in brackets pertain to "Fatalities" and are included in the total, (iv) P = Provisional. (v) **For limitations of data refer note of Table 7.1**

Source: Labour Bureau, Shimla & Chandigarh

The state-wise frequency rate of injuries and incidence rate of injuries are given in the table 7.3 and 7.4 respectively.

**Table:7.3 Frequency Rates of Industrial Injuries in Factories during 1999-2003(P)**

State/UTs	1999	2000	2001	2002(P)	2003(P)
Andaman & Nicobar	NA	NA	NA	1.70 (-)	4.17(-)
Andhra Pradesh	0.96 (0.03)	2.29 (0.09)	3.39 (0.13)	2.16 (0.09)	1.93 (0.10)
Arunachal Pradesh	NA	NA	NA	NA	NA
Assam	1.28 (0.04)	0.97 (0.04)	1.69 (0.17)	0.52 (0.09)	1.47 (0.05)
Bihar	0.71 (0.00)	NA	NA	NA	NA
Chandigarh	0.15 (0.10)	0.94 (0.04)	0.22 (-)	0.12 (-)	0.40 (-)
Chattisgarh	NA	NA	NA	NA	NA
Daman & Diu	NA	NA	NA	NA	NA
Delhi	0.39 (0.06)	0.24 (0.05)	0.17 (0.04)	NA	NA
Goa	2.08 (0.05)	NA	1.67 (0.05)	1.81 (0.13)	1.38 (0.03)
Gujarat	6.51 (0.13)	NA	7.73 (0.21)	NA	NA
Haryana	0.81 (0.09)	NA	NA	0.17 (0.02)	0.52 (0.07)
Himachal Pradesh	2.96 (0.61)	NA	NA	NA	NA
Jammu & Kashmir	NA	NA	NA	NA	NA
Jharkhand	NA	NA	NA	NA	NA
Karnataka	0.60 (0.00)	NA	NA	2.28 (0.05)	3.15 (0.01)
Kerala	3.95 (0.06)	3.09 (0.04)	NA	NA	NA
Lakshadweep	NA	NA	NA	NA	NA
Madhya Pradesh	7.98 (0.10)	7.51 (0.12)	7.71 (0.11)	4.86 (0.12)	3.92 (0.08)
Maharashtra	6.94 (0.05)	4.14 (0.06)	4.96 (0.09)	3.22 (0.06)	4.14 (0.02)
Manipur	NA	NA	NA	NA	NA
Meghalaya	- (NA)	5.80 (0.25)	NA	NA	NA
Mizoram	NA	NA	NA	NA	NA
Nagaland	NA	NA	NA	NA	NA
Orissa	2.67 (0.06)	3.20 (0.11)	2.24 (0.06)	2.06 (0.10)	2.16 (0.15)
Pondicherry	5.47 (0.03)	5.91 (0.01)	4.34 (0.03)	246.21 (2.20)	240.49 (2.20)
Punjab	1.74 (0.01)	2.74 (0.08)	3.12 (0.03)	1.21 (0.02)	1.14 (0.02)
Rajasthan	6.60 (0.14)	3.35 (0.11)	6.44 (0.08)	5.05 (0.14)	4.63 (0.15)
Sikkim	NA	NA	NA	NA	NA
Tamil Nadu	0.88 (0.02)	NA	0.67 (0.01)	0.65 (0.01)	NA
Tripura	0.42 (0.10)	1.48 (0.37)	1.29 (-)	0.95 (-)	0.58 (0.14)
Uttar Pradesh	NA	NA	NA	NA	NA
Uttaranchal	NA	NA	NA	NA	NA
West Bengal	NA	NA	NA	NA	NA
<b>Total:</b>	<b>2.90 (0.02)</b>	<b>3.60 (0.07)</b>	<b>3.24 (0.07)</b>	<b>0.93 (0.02)</b>	<b>3.17 (0.05)</b>

Note: (i) F.R. = Frequency Rate per lakh man-days worked (ii) NA = Not Available,(iii) (-) = Nil or Negligible, (v) Figures in bracket pertain to "Fatalities" and are included in the total, (vii) P = Provisional. **For limitations of the data as stated by Labour Bureau, Chandigarh. Please refer note under table 7.1**  
Source: Labour Bureau, Chandigarh & Shimla.

**Table:7.4 Incidence Rates of Industrial Injuries in Factories during 1999-2003(P)**

State/UTs	1999	2000	2001	2002(P)	2003(P)
Andaman & Nicobar	NA	NA	NA	5.11 (-)	10.14 (-)
Andhra Pradesh	7.22 (0.25)	7.30 (0.27)	6.97 (0.27)	5.90 (0.25)	2.76 (0.14)
Arunachal Pradesh	NA	NA	NA	NA	NA
Assam	4.05 (0.14)	2.90 (0.13)	3.47 (0.35)	1.58 (0.28)	1.67 (0.05)
Bihar	1.13 (0.04)	NA	NA	NA	NA
Chandigarh	0.43 (0.29)	2.60 (0.11)	0.49 (-)	0.56 (-)	1.04 (-)
Chattisgarh	NA	NA	NA	NA	NA
Daman & Diu	NA	NA	NA	NA	NA
Delhi	1.19 (0.18)	0.76 (0.16)	0.53 (0.11)	NA	NA
Goa	6.30 (0.17)	NA	4.41 (0.12)	5.58 (0.39)	3.22 (0.07)
Gujarat	19.65 (0.38)	NA	23.98 (6.65)	NA	NA
Haryana	2.57 (0.30)	NA	NA	2.83 (0.39)	0.50 (0.07)
Himachal Pradesh	10.80 (2.22)	NA	NA	NA	NA
Jammu & Kashmir	NA	NA	NA	NA	NA
Jharkhand	NA	NA	NA	NA	NA
Karnataka	1.72 (0.01)	NA	NA	6.70 (0.14)	3.00 (0.01)
Kerala	6.25 (0.10)	5.80 (0.08)	NA	NA	NA
Lakshadweep	NA	NA	NA	NA	NA
Madhya Pradesh	25.24 (0.33)	24.50 (0.38)	18.34 (0.25)	15.26 (0.38)	4.99 (0.10)
Maharashtra	21.87 (0.17)	12.50 (0.18)	12.02 (0.22)	9.77 (0.19)	7.95 (0.03)
Manipur	NA	NA	NA	NA	NA
Meghalaya	- (NA)	17.07 (0.73)	NA	NA	NA
Mizoram	NA	NA	NA	NA	NA
Nagaland	NA	NA	NA	NA	NA
Orissa	8.82 (0.19)	7.82 (0.27)	8.00 (0.20)	6.88 (0.33)	5.34 (0.37)
Pondicherry	16.84 (0.08)	46.63 (0.11)	20.84 (0.14)	19.70 (0.18)	9.88 (0.09)
Punjab	6.26 (0.03)	10.86 (0.31)	7.58 (0.05)	3.94 (0.07)	0.88 (0.02)
Rajasthan	14.64 (0.32)	10.82 (0.37)	20.01 (0.26)	16.05 (0.46)	4.68 (0.16)
Sikkim	NA	NA	NA	NA	NA
Tamil Nadu	2.49 (0.05)	NA	3.01 (0.26)	1.87 (0.03)	NA
Tripura	1.09 (0.27)	4.20 (1.05)	2.08 (-)	2.35 (-)	0.12 (0.03)
Uttar Pradesh	NA	NA	NA	NA	NA
Uttaranchal	NA	NA	NA	NA	NA
West Bengal	NA	NA	NA	NA	NA
<b>Total:</b>	<b>10.23 (0.17)</b>	<b>10.93 (0.22)</b>	<b>8.67 (0.19)</b>	<b>6.14 (0.16)</b>	<b>4.22 (0.02)</b>

Note: (i) I.R. = Incidence Rate per 1000 workers employed, (ii) NA = Not Available, (iii) (-) = Nil or Negligible, (v) Figures in bracket pertain to "Fatalities" and are included in the total, (vii) P = Provisional. **For limitations of the data as stated by Labour Bureau, Chandigarh. Please refer note under table 7.1** Source: Labour Bureau, Chandigarh & Shimla.

**Table 7.5: Industrial Injuries and their Incidence Rate per Thousand Workers Employed by Important Industries**

Sl. No.	Industry	NIC Code	1999		2000		2001		2002(P)		2003(P)	
			Total No. of Injuries	Rate per 1000 Worker	Total No. of Injuries	Rate per 1000 Worker	Total No. of Injuries	Rate per 1000 Worker	Total No. of Injuries	Rate per 1000 Worker	Total No. of Injuries	Rate per 1000 Worker
1	2	3	4	5	6	7	8	9	10	11	12	13
1.	All Textiles	17,18	19347 (110)	12.785 (0.555)	9077 (34)	15.645 (0.06)	1058 (64)	10.15 (0.06)	7276 (39)	10.59 (0.06)	5307 (38)	14.83 (0.11)
2.	Manufacture of Paper & paper products & printing, publishing & allied products	21,22	1634 (24)	7.015 (0.14)	1144 (19)	12.405 (0.21)	1153 (22)	7.23 (0.14)	1088 (25)	7.85 (0.18)	973 (23)	10.63 (0.25)
3.	Manufacture of Chemicals & Chemical products (Except products of Petroleum and coal)	24	3833 (115)	7.13 (0.15)	1358 (79)	6.38 (0.37)	1947 (125)	4.98 (0.32)	988 (78)	2.86 (0.23)	939 (78)	2.84 (0.11)
4.	Manufacture of Non-metallic mineral products	26	2196 (87)	5.55 (0.16)	1024 (42)	7.39 (0.30)	1274 (64)	8.32 (0.42)	992 (36)	6.55 (0.24)	7.99 (46)	2.65 (0.11)
5.	Basic metal and alloys Industries	27	3869 (118)	11.78 (0.26)	3432 (77)	20.00 (0.45)	2149 (57)	11.66 (0.31)	1449 (87)	7.58 (0.46)	1216 (76)	5.27 (0.14)
6.	Manufacture of metal products & Parts(except machinery & transport equipment)	28	2246 (53)	12.69 (0.23)	784 (15)	8.44 (0.16)	1149 (19)	7.94 (0.13)	876 (17)	5.05 (0.10)	634 (16)	4.61 (0.06)
7.	Manufacture of machinery, machine tools & parts (except electrical machinery)	29,30	1943 (16)	12.195 (0.38)	1424 (15)	34.37 (0.36)	1692 (19)	10.81 (0.12)	1141 (21)	5.64 (0.10)	969 (19)	7.24 (0.14)
8.	Manufacture of transport equipment and parts	34,35	2694 (52)	10.09 (0.14)	1572 (19)	8.065 (0.10)	1698 (10)	6.34 (0.04)	1703 (24)	6.43 (0.09)	1063 (12)	5.81 (0.07)
9.	Electricity, Gas and Steam	40	1031 (25)	10.55 (0.17)	199 (8)	5.37 (0.22)	662 (22)	10.59 (0.35)	333 (28)	5.53 (0.47)	268 (28)	2.60 (0.34)
Total of (Sl.No. 1 to 9 Industries) :			38793 (600)	9.97 (0.24)	20014 (308)	13.11 (0.20)	22310 (402)	8.66 (0.16)	15846 (3.55)	7.16 (0.16)	12168 (336)	8.76 (0.24)
* Total of All Industries :			47389 (911)	10.23 (4.632)	23937 (486)	10.93 (0.22)	28364 (627)	8.67 (0.19)	20453 (540)	6.14 (0.16)	16028 (518)	4.22 (0.07)

Note : (i) Figures in brackets indicate "Fatalities" and are included in the Total, (ii) P = Provisional  
(iii)\* The figures for All Industries include the figures of other industries apart from above Industries shown

**For Limitations of data refer footnote of table 7.1**

Source: Labour Bureau, Chandigarh by correspondence

Chart 7.1

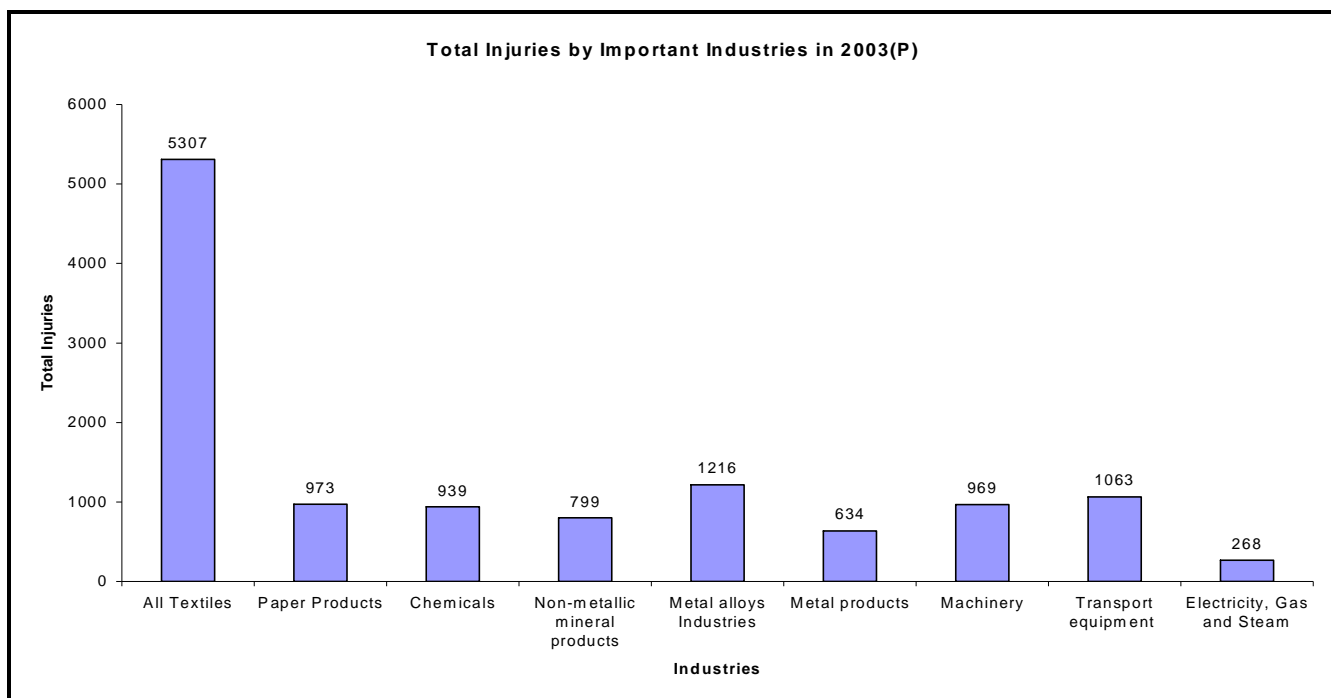
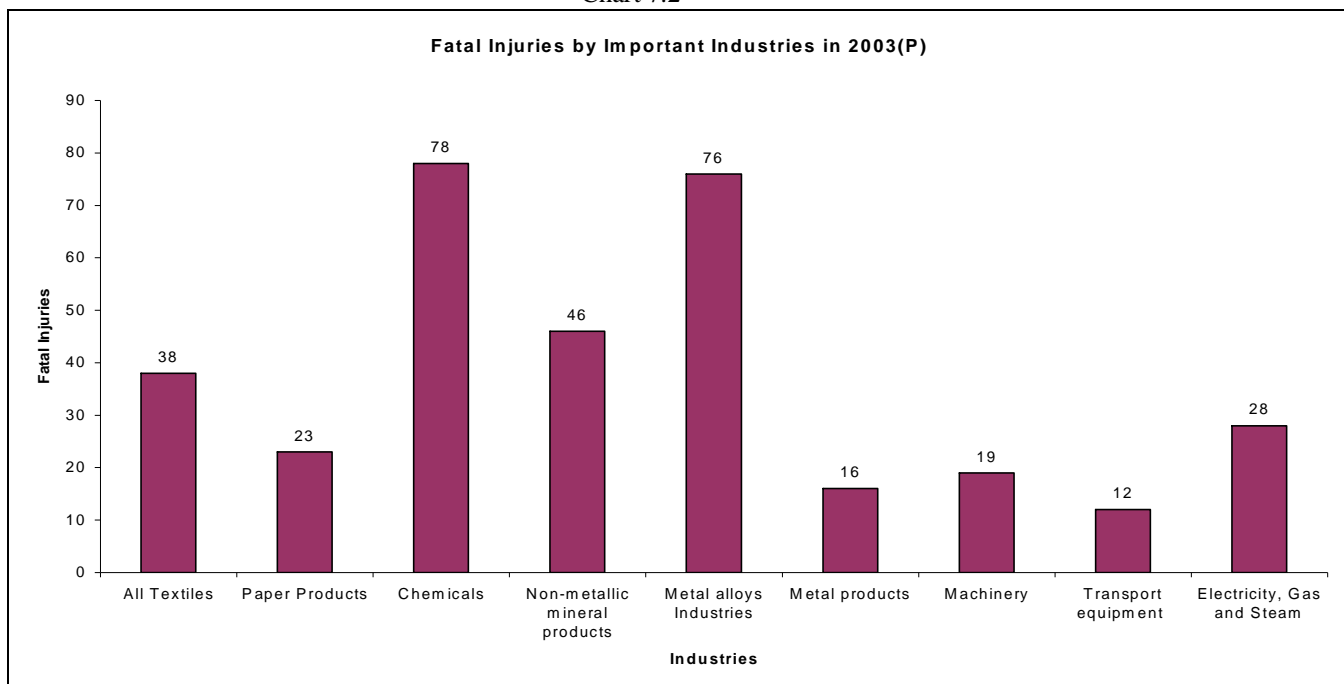


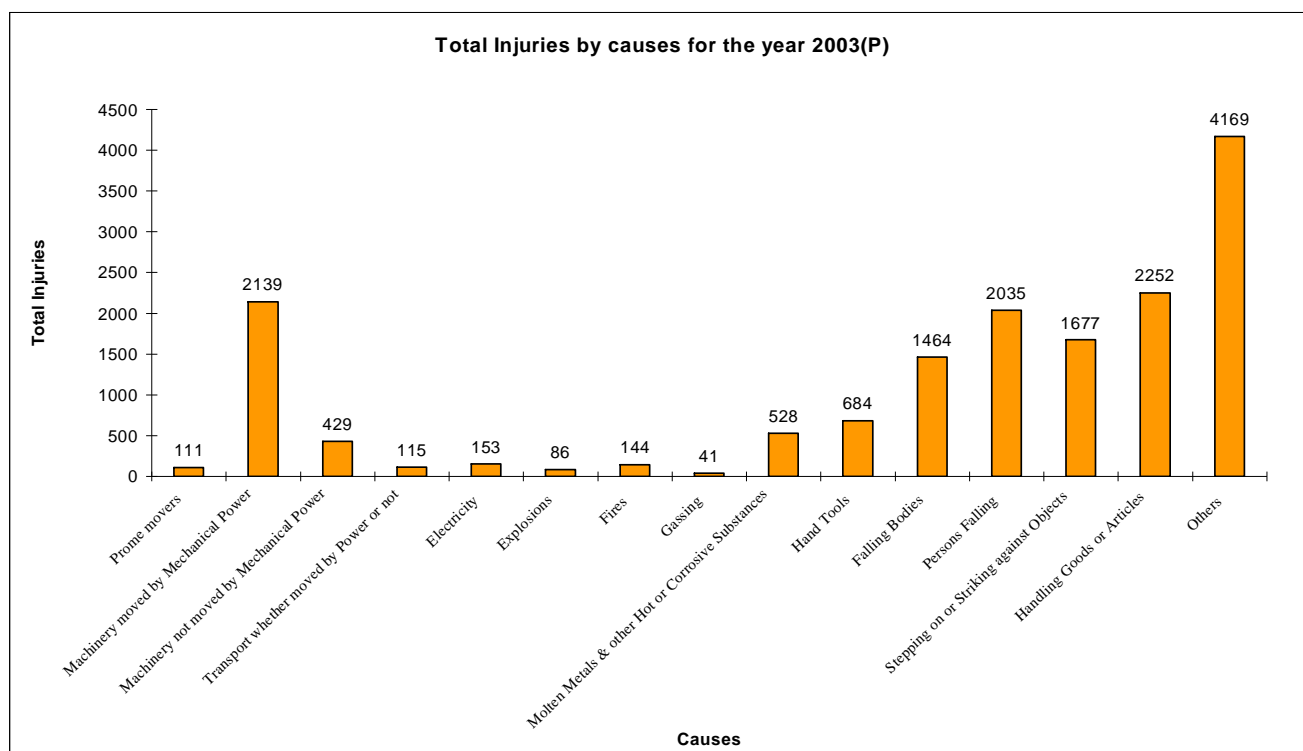
Chart 7.2



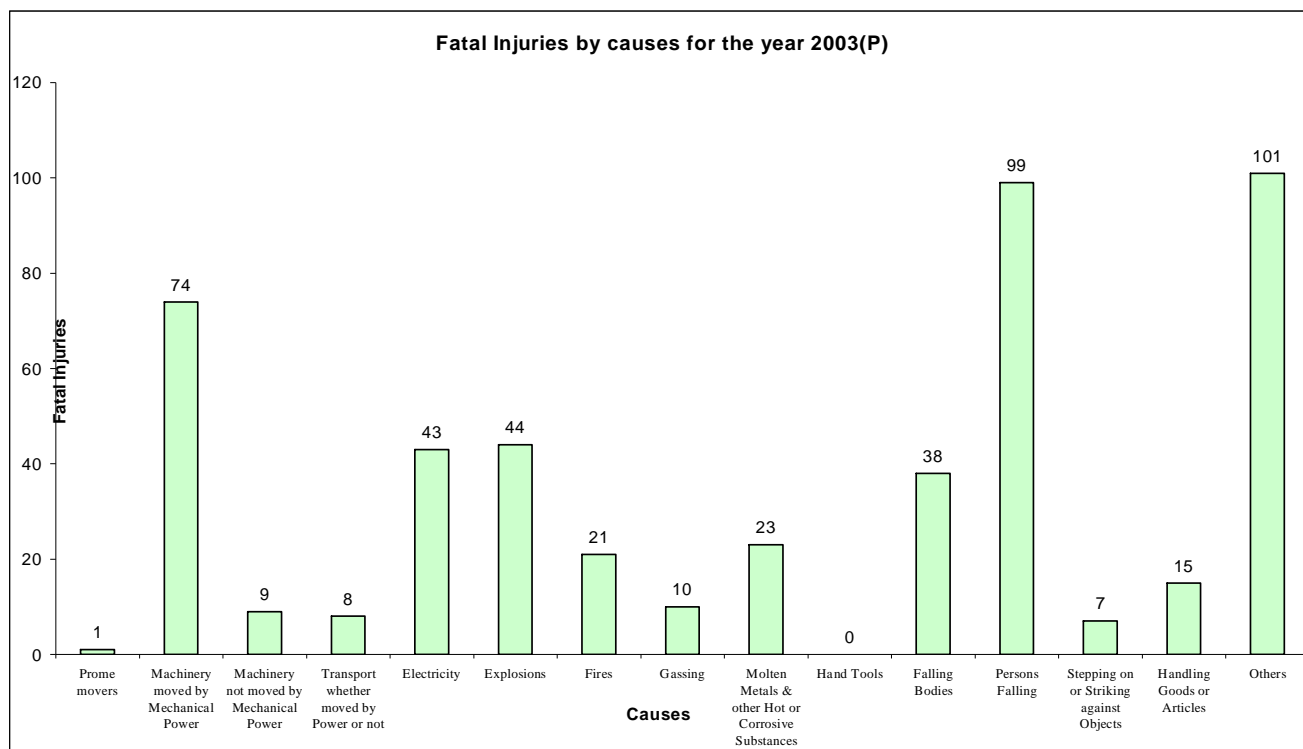
Note: i) Data is based on the returns received only. ii) P=Provisional  
 Source: Labour Bureau, Chandigarh. **For Limitations of data refer footnote of table 7.1**



**Chart 7.3**



**Chart 7.4**



Note: i) Data is based on the returns received only. ii) P=Provisional  
 Source : Labour Bureau Chandigarh For Limitations of data refer footnote of table 7.1

## 7.6 Accident Trend in Docks

Table 7.6 shows that among the ports Mumbai Port accounts for maximum injuries and Chennai port accounts for maximum dangerous occurrences. Kandla, Mumbai, Chennai Ports account for maximum fatal injuries. However with the efforts of the Inspectorates in creating safety awareness among all personnel connected with dock work, chart 7.5 shows that number of accidents have registered a decrease from 341 in 1996 to 193 in 2006. Among fatal injuries there is no significant changes.

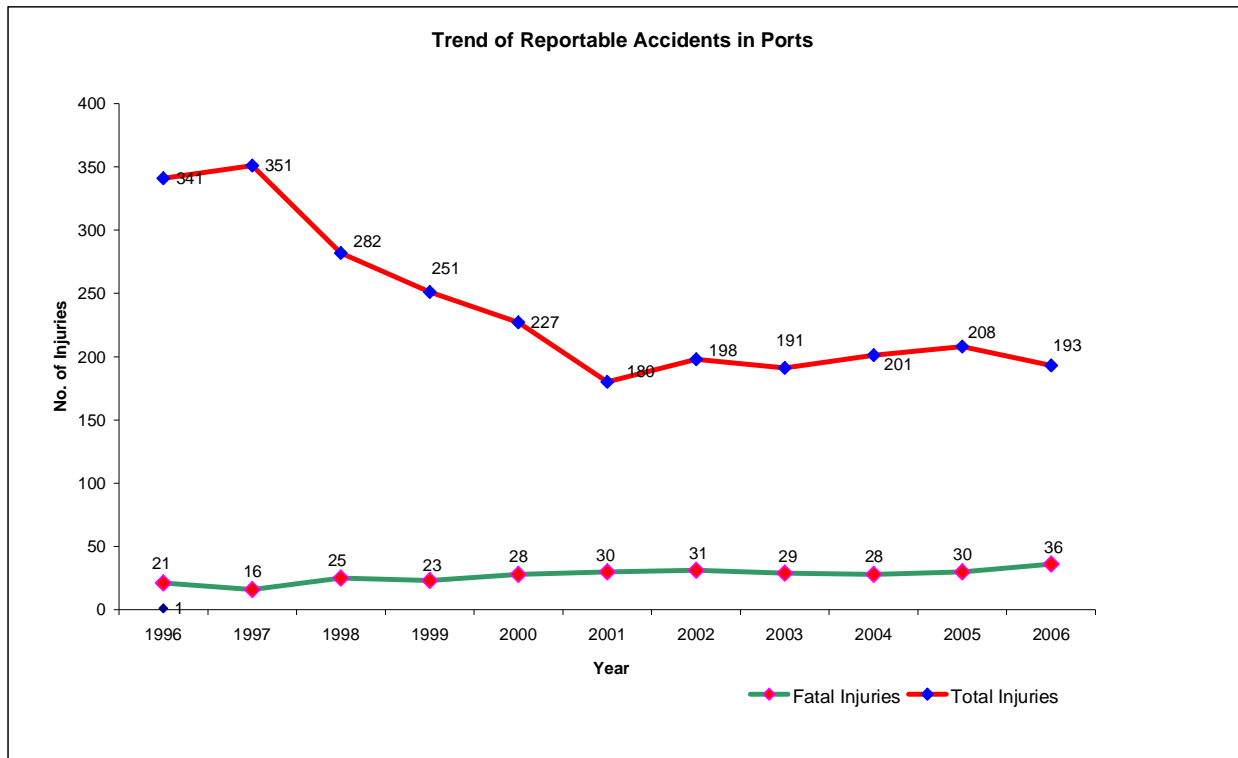
As per the analysis of reportable accidents depicted in chart 7.6 and chart 7.7, the agency, unitized and break-bulk cargo accounts for the maximum number of injuries whereas stepping on, striking against, struck by etc. are the major causes for these accidents during the year 2006.

**Table 7.6: Port-wise Dangerous Occurrences Fatal and Non-Fatal Injuries during 2006**

Sl. No.	Ports	2006	TOTAL	Dangerous Occurrences
		FATAL		
1.	Mumbai	7	57	2
2.	J.N. Port	00	07	7
3.	Kandla	7	12	0
4.	Mormugao	1	11	0
5.	Kolkata	1	37	0
6.	Paradip	2	11	0
7.	Visakhapatnam	3	07	0
8.	Chennai	11	16	11
9.	Cochin	2	17	3
10.	New Mangalore	2	09	01
11.	Tuticorin	0	09	0
<b>Total</b>		<b>36</b>	<b>193</b>	<b>24</b>

P=Provisional

**Chart 7.5**



**Chart 7.6**

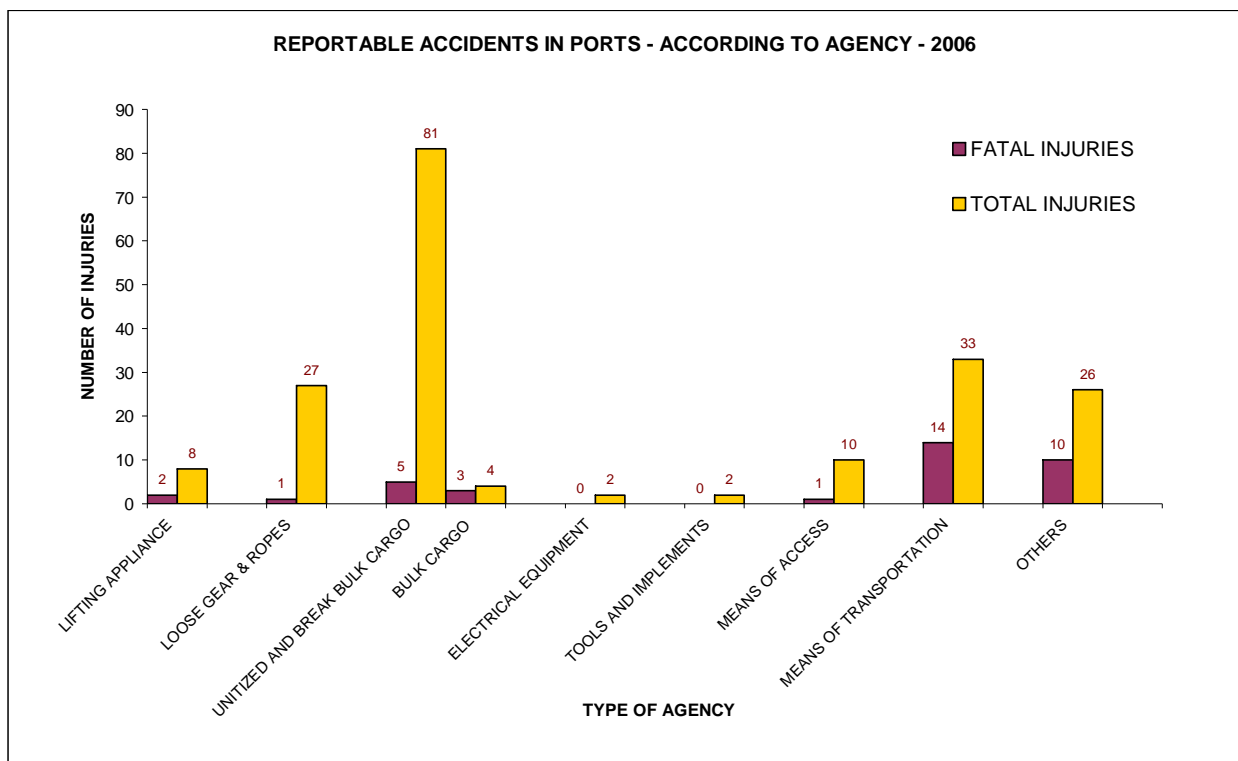
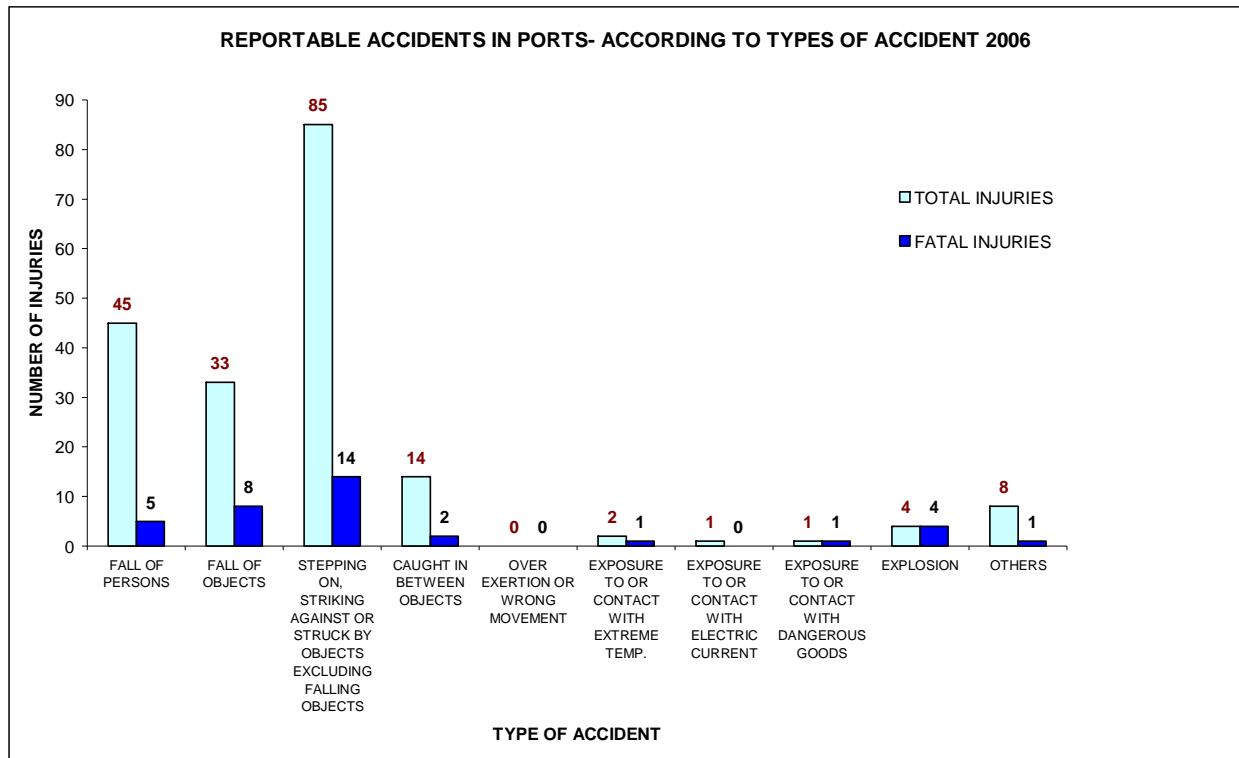


Chart 7.7



## 8 International Statistics on Occupational Injuries

The International Labour Organisation (ILO) publishes the country-wise Labour Statistics in its Year Book. These statistics contains information on:

- (i) Economically active population
- (ii) Employment
- (iii) Hours of work
- (iv) Wages
- (v) Labour cost
- (vi) Consumer price indices
- (vii) Occupational injuries
- (viii) Strikes and lock outs

In order to have a comparative analysis of the Indian situation with regard to occupational injuries in manufacturing sector, the effort is being made to use the information published in the ILO Year Book of Labour Statistics available in respect of some of the developed countries. In this context it is felt that, the information relating to total injuries alone would be in appropriate measure for comparison of the status. Therefore, the rate of injuries has been taken as a basis of comparison. The country-wise rate of reported fatal injuries and non-fatal injuries in manufacturing sector are given in table 8.1 & table 8.2 respectively, for the period 1993-2002. The incidence rate of fatal injuries per one lakh workers employed is highest in respect of India which varies from 38 in 1996 to 16 in 2002, The lowest rate is achieved in United Kingdom which varies from 1.6. to 1.1 during the period. However, it is to be noted that the rate of fatal injuries in India is consistently decreasing during the last 3 years (2000 – 2002).

In respect of rate of non-fatal injuries per one lakh workers employed, India has demonstrated much better performance compared to the countries like Canada, France, Italy and Denmark. Further, the rate is consistently decreasing during the period 1993-2002.

**Table 8.1: Country wise rate of reported fatal injuries in Manufacturing Sector per one lakh workers employed**

Sl.No	Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	Canada*	7	7.4	7.1	7.4	7.9	7.6	8.3	9.2	-	-
2	United States	4	4	3	3	4	3	4	3	3	-
3	Austria	5.3	4.8	4.3	5.1	5.7	4.2	4.2	4.2	3.9	-
4	France*	4.3	4.7	3.9	4	4	3.8	3.8	-	-	-
5	Italie*	7	6	6	6	6	7	6	5	-	-
6	United Kingdom	1.6	1.2	1.1	1.3	1.4	1.6	1.1	1.2	1.3	-
7	Australia*	7	6	7	5	4	4	2	3	1	3
8	Denmark	3	5	3	3	3	3	3	2	2	-
9	Hungary	-	4.17	5.29	5.76	3.24	2.96	3.12	2.88	2.61	2.71
10	Sweden	3.5	4.6	1.3	2.1	2.3	1.7	1.7	0.7	1.4	-
11	India**	20	20	20	38	19	16	18	22	19	16

\*Compensated injuries,

- Not available

Source : Year Book of Labour Statistics 2003, published by ILO Geneva

\*\* Reported injuries published by Labour Bureau, Shimla

**Table 82: Country wise rate of reported Nonfatal injuries in Manufacturing Sector per one lakh workers employed**

SLNo	Country	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
1	Canada*	629	648	593	5475	5314	5050	4887	5046	-	-
2	United States <sup>#</sup>	104	104	99	92	89	85	8	7.8	7	-
3	France	5397	5236	5202	5132	5107	5092	5155	-	-	-
4	Italy	5699	5654	5407	4804	4851	4786	4715	-	-	-
5	United Kingdom	1301	1323	1190	1186	1234	1166	1209	1191	1157	-
6	Australia	-	-	-	-	3224	3011	2912	2671	2486	2395
7	Denmark	3510	3964	4011	3762	3789	3571	3429	3404	3219	-
8	Hungary	-	1637	1661	1522	1464	1383	1307	1166	1249	1234
10	Sweden	1625	1544	1441	1383	1272	1364	1413	1488	1377	-
11	India**	2438	2151	1638	1650	1623	1113	1111	1071	848	598

Note: #Reported injuries per 20000 hours worked (private sector only),

\*Compensated injuries,

- Not available

Source: Year Book of Labour Statistics 2003, published by ILO Geneva

\*\* Reported injuries published by Labour Bureau, Shimla

## 9 Key Data in Manufacturing Sector (Data collected by DGFASLI)

9.1 The DGFASLI receives information relating to factories covered under the provisions of the Factories Act, 1948 from States and Union Territories from time to time. This information is mainly collected through FAS Forms as well as through correspondence as and when required. It is entered in the data bank specially created at DGFASLI for disseminating any specific information as and when necessary. However, due to non-receipt of statistics from all the States and Union Territories, there are limitations to the use of this data bank. Though this information can be used for knowing the state-wise status of safety and health as well as compliance level with statutory standards in factories, no national level statistics can be prepared for arriving at conclusive inferences. However, the information can definitely be used for estimation of various trends. It is emphasized here that the information given in the following pages/tables should be referred to with these limitations in mind and State Governments/Union Territory Administration concerned may be contacted/approached for ascertaining the correctness or the updated information

<u>Statistics of Factories at a Glance:</u>	<u>2005(Estimates)*</u>
Registered Factories	:
Working Factories	:
Employment - Men	:
- Women	:
Injuries - Total	:
- Fatal	:
Employment- Safety Officers	:
- Welfare Officers	:
- Factory Med. Officers	:
Safety Committees	:
MAH Factories	:
On-site Emergency Plans	:
Canteens	:
Creches	:

\*



**Table 9.1: State-wise Status of Employment in Factories during 2005(P)**

States	Registered Factories	Working Factories	Total Employment	Female Workers	Male Workers
Andaman & Nicobar Islands	35	35	4728	131	4597
Andhra Pradesh	38899	28422	767532	173626	593906
Arunachal Pradesh*	..	..	..	..	..
Assam	3103	1877	107382	1901	105481
Bihar	6016	5615	66205	18	66187
Chandigarh	768	434	12210	531	11679
Chattisgarh	..	..	..	..	..
Daman & Diu & Dadra & Nagar Hawelli	4614	3714	83052	25000	58052
Delhi	..	..	..	..	..
Goa	699	679	44392	6594	37798
Gujarat	30110	22155	978257	41154	937103
Haryana	9375	9375	574591	132220	442371
Himachal Pradesh	2471	2471	109658	3540	106118
Jammu & Kashmir	1132	666	26242	1529	24713
Jharkhand	10140	6594	232310	9118	223192
Karnataka	10485	10485	1073523	240112	833411
Kerala	17680	16012	445111	209450	235661
Lakshadweep*	..	..	..	..	..
Madhya Pradesh	12591	8352	391223	9525	381698
Maharashtra	35042	30737	1251859	45409	1206450
Manipur	..	..	..	..	..
Meghalaya	104	88	6424	597	5827
Mizoram*	..	..	..	..	..
Nagaland	..	..	..	..	..
Orissa	2941	2014	133465	5345	128120
Pondicherry	2475	1881	61531	12856	48675
Punjab	15633	15579	521337	2446	518891
Rajasthan	9884	9884	395274	7510	387764
Sikkim*	..	..	..	..	..
Tamil Nadu	36867	28326	1320613	443135	877478
Tripura	1575	1575	33175	8555	24620
Uttar Pradesh	13966	12212	1015000	18201	996799
Uttaranchal	1039	911	72135	13172	58963
West Bengal	13465	13029	893500	19807	873693
<b>Total</b>	<b>281109</b>	<b>233122</b>	<b>10620729</b>	<b>1431482</b>	<b>9189247</b>

Note: \* Factories Act, 1948 not yet introduced/ No registered factories

P : Provisional

.. Not Available

Source: Correspondence with Chief Inspector of Factories of States/UTs

**Table 9. 2: Hazardous Factories 2(cb) as on 2005 (P)**

States	No. of Hazardous Factories	No. of Workers
Andaman & Nicobar Islands	0	0
Andhra Pradesh	1128	..
Arunachal Pradesh*	..	..
Assam	13	7702
Bihar	94	2081
Chandigarh	6	104
Chattisgarh	..	..
Daman & Diu & Dadra & Nagar Hawelli	45	1400
Delhi	..	..
Goa	210	18778
Gujarat	4030	149744
Haryana	0	0
Himachal Pradesh	74	1248
Jammu & Kashmir	10	1847
Jharkhand	80	26619
Karnataka	964	163977
Kerala	732	31713
Lakshadweep*	..	..
Madhya Pradesh	723	76964
Maharashtra	6358	530895
Manipur	..	..
Mizoram*	..	..
Meghalaya	23	3100
Nagaland	..	..
Orissa	323	60426
Pondicherry	246	2740
Punjab	1227	117432
Rajasthan	863	91535
Sikkim*	..	..
Tamil Nadu	11163	323360
Tripura	30	340
Uttar Pradesh	2483	291283
Uttaranchal	381	21206
West Bengal	3032	206132
<b>Total</b>	<b>34238</b>	<b>2130626</b>

Note: \* Factories Act, 1948 not yet introduced/ No registered factories

Source: Correspondence with CIFs of states and UTs

.. Not Available

P : Provisional

**Table 9. 3: Inspectors of Factories and Certifying Surgeons for the year 2005 (P)**

State	Inspectors		Specialist Inspector		Certifying Surgeon		No. of Factories Inspected
	Sanct- ioned	In- position	Sanct- ioned	In- position	Sanct- ioned	In- position	
Andaman & Nicobar Islands	2	2	0	0	4	4	17
Andhra Pradesh	76	64	2	2	..	..	7911
Arunachal Pradesh*	..	..	..	..	..	..	..
Assam	30	23	1	1	3	0	517
Bihar	21	10	4	3	0	0	12732
Chandigarh	0	\$ 6	0	0	0	# 0	58
Chattisgarh	..	..	..	..	..	..	..
Daman & Diu & Dadra & Nagar Haveli	1	1	0	0	0	1	400
Delhi	..	..	..	..	..	..	..
Goa	8	6	2	2	0	0	137
Gujarat	96	68	10	6	4	4	11546
Haryana	31	31	9	9	2	2	1624
Himachal Pradesh	3	\$ 35	0	0	0	# 0	840
Jammu & Kashmir	5	4	0	0	0	0	891
Jharkhand	26	14	0	0	0	0	3468
Karnataka	46	43	2	2	0	0	7659
Kerala	51	48	11	7	0	0	6231
Lakshadweep*	..	..	..	..	..	..	..
Madhya Pradesh	41	34	1	1	0	0	4457
Maharashtra	131	80	2	0	1	1	18892
Manipur	..	..	..	..	..	..	..
Mizoram*	..	..	..	..	..	..	..
Meghalaya	2	2	0	0	0	0	51
Nagaland	..	..	..	..	..	..	..
Orissa	26	22	2	1	1	# 1	2029
Pondicherry	8	8	3	3	1	1	1814
Punjab	27	15	5	5	0	0	3239
Rajasthan	39	32	6	6	0	0	6250
Sikkim*	..	..	..	..	..	..	..
Tamil Nadu	133	115	0	0	9	9	34932
Tripura	5	5	0	0	14	14	947
Uttar Pradesh	45	31	2	1	0	# 0	3673
Uttaranchal	2	3	0	0	0	0	255
West Bengal	50	27	14	10	0	0	3133
<b>Total</b>	<b>905</b>	<b>729</b>	<b>76</b>	<b>59</b>	<b>39</b>	<b>37</b>	<b>133703</b>

Note: \* Factories Act, 1948 not yet introduced/ No registered factories, P: Provisional, .. Not Available, \$: The State Government has appointed additional Inspectors of Factories as per the provisions contained in Sub Sec 2B of the Factories Act, 1948, # CMO/ Civil Surgeons at district level are appointed / notified as civil surgeons  
**Source:** Correspondence with Chief Inspector of Factories of States/UTs

**Table 9. 4: Prosecution and Convictions under Section 92 & Section 96A for the year 2005 (P)**

State	Pending from previous year	Launched during the year	Decided during the year	Conviction	Imprisonment (Person)	Total fine imposed(Rs.)
Andaman & Nicobar Islands	0	0	0	0	0	0
Andhra Pradesh	1724	939	453	312	0	1947400
Arunachal Pradesh*	..	..	..	..	..	..
Assam	..	67	..	169	..	..
Bihar	2065	0	0	0	0	0
Chandigarh	0	24	0	0	0	0
Chattisgarh	..	..	..	..	..	..
Daman & Diu & Dadra & Nagar Haveli	..	..	..	..	..	..
Delhi	..	..	..	..	..	..
Goa	127	15	12	12	0	134000
Gujarat	25422	2070	521	521	0	1895710
Haryana	7021	1391	2238	2238	0	8906300
Himachal Pradesh	15	27	11	11	0	31500
Jammu & Kashmir	135	16	18	18	0	55000
Jharkhand	233	30	0	0	0	0
Karnataka	272	73	50	45	0	651500
Kerala	91	30	37	20	1	161500
Lakshadweep*	..	..	..	..	..	..
Madhya Pradesh	2849	998	259	74	0	327750
Maharashtra	3587	641	320	284	3	2470000
Manipur	..	..	..	..	..	..
Mizoram*	..	..	..	..	..	..
Meghalaya	0	0	0	0	0	0
Nagaland	..	..	..	..	..	..
Orissa	862	80	2	0	0	0
Pondicherry	5	10	15	3	0	6800
Punjab	2004	144	990	500	6	1930450
Rajasthan	910	258	90	15	2	294800
Sikkim*	..	..	..	..	..	..
Tamil Nadu	7414	5755	2410	2135	0	6684205
Tripura	5	1	2	2	0	0
Uttar Pradesh	2154	109	200	177	0	662500
Uttaranchal	41	15	2	..	0	10700
West Bengal	410	152	127	106	0	338200
<b>Total</b>	<b>57346</b>	<b>12845</b>	<b>7757</b>	<b>6641</b>	<b>12</b>	<b>26508315</b>

Note: \* Factories Act, 1948 not yet introduced/ No registered factories

P : Provisional .. Not Available

Source: Correspondence with Chief Inspector of Factories of States/UTs

**Table 9.5: Fatal and Non-fatal Injuries in Factories (P)**

State	2004		2005		2006	
	Fatal Injuries	Non Fatal Injuries	Fatal Injuries	Non Fatal Injuries	Fatal Injuries	Non Fatal Injuries
Andaman & Nicobar Islands	0	113	0	87	0	71
Andhra Pradesh	90	2258	134	1626	157	1312
Arunachal Pradesh*	..	..	..	..	..	..
Assam	12	66	5	46	4	62
Bihar	6	258	4	130	5	15
Chandigarh	0	0	1	1	..	..
Chattisgarh	47	671	73	582	..	..
Daman & Diu & Dadra & Nagar Hawelli	2	28	5	15	9	17
National Capital of Delhi	5	14	17	33	15	9
Goa	13	154	15	187	..	..
Gujarat	221	7665	200	5574	184	4843
Haryana	64	134	38	234	30	35
Himachal Pradesh	6	19	3	12	1	19
Jammu & Kashmir	1	121	1	125	..	..
Jharkhand	21	197	23	151	17	185
Karnataka	48	1403	34	1259	64	1371
Kerala	10	254	18	377	13	577
Lakshadweep*	..	..	..	..	..	..
Madhya Pradesh	34	1338	36	1281	33	1021
Maharashtra	153	5276	173	4137	177	4240
Manipur	0	0	..	..	..	..
Mizoram*	..	..	..	..	..	..
Meghalaya	0	1	0	0	0	1
Nagaland	0	0	..	..	..	..
Orissa	39	605	37	534	70	479
Pondicherry	4	467	6	245	12	249
Punjab	39	193	56	148	48	139
Rajasthan	52	1234	52	1274	61	1129
Sikkim*	..	..	..	..	..	..
Tamil Nadu	53	1846	57	1565	78	1637
Tripura	0	3	2	3	0	5
Uttar Pradesh	86	277	78	193	117	235
Uttaranchal	12	38	10	55	31	63
West Bengal	63	31675	64	28288	75	24761
<b>Total</b>	<b>1081</b>	<b>56308</b>	<b>1142</b>	<b>48162</b>	<b>1201</b>	<b>42475</b>

Note: \* Factories Act, 1948 not yet introduced/ No registered factories

P: Provisional, .. Not Available

Source: Correspondence with Chief Inspector of Factories of States/UTs

**Table 9.6: State-wise status of Safety Officers (SO) in factories during 2005(P)**

State	Factories requiring SO under 40-B(1)	SO required under 40-B(1)	Factories appointing SO under 40-B(1)	SO appointed under 40-B(1)
Andaman & Nicobar	0	0	0	0
Andhra Pradesh	100	138	82	86
Arunachal Pradesh*	..	..	..	..
Assam	5	5	5	8
Bihar	23	42	22	37
Chandigarh	2	2	2	2
Chattisgarh	..	..	..	..
Daman & Diu & Dadra & Nagar Haveli	10	15	15	15
Delhi	..	..	..	..
Goa	..	..	..	..
Gujarat	358	397	351	390
Haryana	62	70	52	57
Himalchal Pradesh	..	..	..	..
Jammu & Kashmir	2	2	3	3
Jharkhand	..	..	..	..
Karnataka	116	113	52	84
Kerala	25	26	25	26
Lakshadweep*	..	..	..	..
Madhya Pradesh	86	99	81	88
Maharashtra	..	..	..	..
Manipur	..	..	..	..
Mizoram*	..	..	..	..
Meghalaya	0	0	0	0
Nagaland	..	..	..	..
Orissa	56	124	54	110
Pondicherry	3	3	2	2
Punjab	36	36	36	36
Rajasthan	43	43	43	43
Sikkim*	..	..	..	..
Tamil Nadu	154	154	110	110
Tripura	1	1	0	0
Uttar Pradesh	227	263	105	127
Uttaranchal	17	21	12	13
West Bengal	242	269	238	248
<b>Total</b>	<b>1568</b>	<b>1823</b>	<b>1290</b>	<b>1485</b>

Note: \* Factories Act, 1948 not yet introduced/ No registered factories

.. Not available

P: Provisional, .. Source: Correspondence with Chief Inspector of Factories of States/UTs

**Table 9. 7: Declaration of Safety Policy for the year 2005 (P)**

<b>State</b>	<b>Factories Requiring</b>	<b>Factories Having</b>
Andaman & Nicobar	0	0
Andhra Pradesh	0	0
Arunachal Pradesh*	..	..
Assam	13	13
Bihar	160	112
Chandigarh	2	2
Chattisgarh	..	..
Daman & Diu & Dadra & Nagar Haveli	42	50
Delhi	..	..
Goa	..	..
Gujarat	3338	3050
Haryana	776	970
Himachal Pradesh	..	..
Jammu & Kashmir	17	19
Jharkhand	..	..
Karnataka	786	551
Kerala	498	484
Lakshadweep*	..	..
Maharashtra	..	..
Madhya Pradesh	985	888
Meghalaya	13	30
Manipur	..	..
Mizoram*	..	..
Nagaland	..	..
Orissa	323	285
Pondicherry	27	27
Punjab	758	714
Rajasthan	439	365
Sikkim*	..	..
Tamil Nadu	944	838
Tripura	0	0
Uttar Pradesh	3973	735
Uttaranchal	213	142
West Bengal	496	496
<b>Total</b>	<b>13803</b>	<b>9771</b>

Note: \* Factories Act, 1948 not yet introduced/ No registered factories

.. Not Available P: Provisional

Source: Correspondence with CIFs of states and UTs

**Table 9.8 : Constitution of Safety Committee for the year 2005(P)**

<b>State</b>	<b>Factories Requiring</b>	<b>Factories Having</b>
Andaman & Nicobar	..	..
Andhra Pradesh	773	680
Arunachal Pradesh*	..	..
Assam	13	13
Bihar	122	104
Chandigarh	2	2
Chattisgarh	..	..
Daman & Diu & Dadra & Nagar Haveli	47	55
Delhi	..	..
Goa	..	..
Gujarat	3425	3094
Haryana	531	456
Himachal Pradesh	..	..
Jammu & Kashmir	17	19
Jharkhand	..	..
Karnataka	585	452
Kerala	322	295
Lakshadweep*	..	..
Madhya Pradesh	609	578
Maharashtra	..	..
Manipur	..	..
Mizoram*	..	..
Meghalaya	15	10
Nagaland	..	..
Orissa	106	102
Pondicherry	29	29
Punjab	742	676
Rajasthan	327	284
Sikkim*	..	..
Tamil Nadu	1385	1337
Tripura	12	1
Uttar Pradesh	2769	1191
Uttaranchal	213	155
West Bengal	493	493
<b>Total</b>	<b>12537</b>	<b>10026</b>

Note: For remaining states Factories Act, 1948 not yet introduced/ No registered factories

.. Not Available

P : Provisional

Source: Correspondence with CIFs of states and UTs



**Table 9.9: On-site Emergency Plan ( in respect of MAH Units) as on 2005(P)**

State	Factories Requiring	Factories Having
Andaman & Nicobar	2	2
Andhra Pradesh	126	126
Arunachal Pradesh*	..	..
Assam	13	13
Bihar	2	2
Chandigarh	0	0
Chattisgarh	..	..
Daman & Diu & Dadra & Nagar Haveli	0	8
Delhi	..	..
Goa	..	..
Gujarat	497	497
Haryana	43	22
Himachal Pradesh	..	.
Jammu & Kashmir	5	5
Jharkhand	..	..
Karnataka	228	172
Kerala	40	44
Lakshadweep*	..	..
Madhya Pradesh	76	76
Maharashtra	..	..
Manipur	..	..
Mizoram*	..	..
Meghalaya	4	4
Nagaland	..	..
Orissa	31	31
Pondicherry	4	4
Punjab	164	162
Rajasthan	103	103
Sikkim*	..	..
Tamil Nadu	150	122
Tripura	2	2
Uttar Pradesh	109	108
Uttaranchal	15	15
West Bengal	85	85
<b>Total</b>	<b>1699</b>	<b>1603</b>

Note: \* Factories Act, 1948 not yet introduced/ No registered factories

P: Provisional .. Not Available

Source: Correspondence with Chief Inspector of Factories of States/UTs

**Table 9.10: Medical Facilities in factories for the year 2005 (P)**

State	Full time MO Appointed	Retainership or part-time MO Appointed	Factories having Ambulance Van	Factories having Ambulance Rooms
Andaman & Nicobar	3	0	2	2
Andhra Pradesh	118	..	..	118
Arunachal Pradesh*	..	..	..	..
Assam	0	0	0	0
Bihar	33	36	13	28
Chandigarh**	1	0	1	1
Chattisgarh	..	..	..	..
Daman & Diu & Dadra & Nagar Haveli	1	25	5	8
Delhi	..	..	..	..
Goa	..	..	..	..
Gujarat	184	2780	384	419
Haryana	0	0	0	0
Himachal Pradesh	..	..	..	..
Jammu & Kashmir	5	0	5	4
Jharkhand	..	..	..	..
Karnataka	160	139	178	236
Kerala	39	86	33	52
Lakshadweep*	..	..	..	..
Madhya Pradesh	88	295	88	114
Maharashtra	..	..	..	..
Manipur	..	..	..	..
Mizorm*	..	..	..	..
Meghalaya	1	14	5	6
Nagaland	..	..	..	..
Orissa	37	18	43	43
Pondicherry	8	22	9	9
Punjab	75	88	67	77
Rajasthan	91	0	0	91
Sikkim*	..	..	..	..
Tamil Nadu	128	193	209	237
Tripura	1	1	0	1
Uttar Pradesh	721	0	1376	142
Uttaranchal	9	33	13	21
West Bengal	292	15	287	295
<b>Total</b>	<b>1995</b>	<b>3745</b>	<b>2718</b>	<b>1904</b>

Note: \* Factories Act, 1948 not yet introduced/ No registered factories

P : Provisional. .. Not Available ,

Source: Correspondence with CIFs of states and UT

\*\* Covered under E.S.I. Act.

**Table 9.11: Canteens, Shelters, Rest Rooms and Creches for the year 2005(P)**

State	Canteen		Shelter, Rest Room, Lunch Room		Creches	
	Factories Requiring	Factories Having	Factories Requiring	Factories Having	Factories Requiring	Factories Having
Andaman & Nicobar	3	3	19	19	0	0
Andhra Pradesh	343	337	505	485	430	378
Arunachal Pradesh*	..	..	..	..	..	..
Assam	27	70	59	30	82	17
Bihar	31	31	32	31	2	2
Chandigarh	5	5	5	5	2	2
Chattisgarh	..	..	..	..	..	..
Daman & Diu & Dadra & Nagar Hawelli	50	65	100	120	85	85
Delhi	..	..	..	..	..	..
Goa	..	..	..	..	..	..
Gujarat	466	467	885	866	192	179
Haryana	283	215	464	375	94	67
Himachal Pradesh	..	..	..	..	..	..
Jammu & Kashmir	19	25	42	52	0	0
Jharkhand	..	..	..	..	..	..
Karnataka	490	485	748	611	1069	795
Kerala	315	412	607	616	388	624
Lakshadweep*	..	..	..	..	..	..
Madhya Pradesh	195	187	325	318	44	40
Maharashtra	..	..	..	..	..	..
Manipur	..	..	..	..	..	..
Mizoram*	..	..	..	..	..	..
Meghalaya	1	1	3	2	3	1
Nagaland	..	..	..	..	..	..
Orissa	106	106	125	125	53	36
Pondicherry	28	28	49	31	3	3
Punjab	238	226	341	321	56	48
Rajasthan	142	142	397	397	22	21
Sikkim*	..	..	..	..	..	..
Tamil Nadu	969	944	2054	2016	2104	1794
Tripura	3	2	3	2	1	0
Uttar Pradesh	175	168	262	199	10	9
Uttaranchal	49	49	79	79	15	15
West Bengal	401	401	668	708	28	28
<b>Total</b>	<b>4339</b>	<b>4369</b>	<b>7772</b>	<b>7408</b>	<b>4683</b>	<b>4144</b>

Note: For remaining states Factories Act, 1948 not yet introduced/ No registered factories

.. Not Available, P : Provisional

Source: Correspondence with CIFs of states and UTs

**Table 9.12: Welfare Officers for the year 2005(P)**

State/UTs	Factories Requiring	Factories Having	Officers Required	Officers Appointed
Andaman & Nicobar	2	1	0	1
Andhra Pradesh	135	117	151	125
Arunachal Pradesh*	..	..	..	..
Assam	8	53	8	84
Bihar	26	24	28	25
Chandigarh	2	2	2	2
Chattisgarh	..	..	..	..
Daman & Diu & Dadra & Nagar Haveli	4	4	4	4
Delhi	..	..	..	..
Goa	..	..	..	..
Gujarat	289	267	295	270
Haryana	82	71	72	60
Himachal Pradesh	..	..	..	..
Jammu & Kashmir	3	3	3	3
Jharkhand	..	..	..	..
Karnataka	282	285	298	286
Kerala	60	54	60	54
Lakshadweep*	..	..	..	..
Madhya Pradesh	107	107	131	124
Maharashtra	..	..	..	..
Manipur	..	..	..	..
Mizoram*	..	..	..	..
Meghalaya	1	1	1	1
Nagaland	..	..	..	..
Orissa	58	58	111	111
Pondicherry	7	7	10	7
Punjab	93	83	93	83
Rajasthan	89	89	95	97
Sikkim*	..	..	..	..
Tamil Nadu	241	227	241	227
Tripura	1	1	1	1
Uttar Pradesh	262	215	277	220
Uttaranchal	26	27	20	19
West Bengal	220	220	316	309
<b>Total</b>	<b>1998</b>	<b>1916</b>	<b>2217</b>	<b>2113</b>

Note: For remaining states Factories Act, 1948 not yet introduced/ No registered factories

.. : Not available

P : Provisional

Source: Correspondence with CIFs of states and UTs

**Table 9.13: Notification of Model Rules framed under the Factories (Amendment) Act, 1987**

S.No	State/Union territory	Model Rules
1.	Andaman & Nicobar Islands	No hazard unit, hence Rules Not applicable
2.	Andhra Pradesh	Notified
3.	Arunachal Pradesh	The Factories Act is not being implemented. Hence Not Notified
4.	Assam	Notified
5.	Bihar	Notified
6.	Chandigarh	Notified in Punjab Factories Rules
7.	Chattisgarh	*
8.	Daman, Diu, Dadra & Nagar Haveli	Under process
9.	National Capital Territory of Delhi	Notified
10.	Goa	Notified
11.	Gujarat	Notified
12.	Haryana	Notified
13.	Himachal Pradesh	Not Notified
14.	Jammu & Kashmir	Not Notified
15.	Jharkhand	*
16.	Karnataka	Notified
17.	Kerala	Notified
18.	Lakshadweep	No hazard unit, hence Rules Not applicable
19.	Madhya Pradesh	Notified
20.	Maharashtra	Notified
21.	Manipur	Not Notified
22.	Meghalaya	Notified
23.	Mizoram	No hazard unit, hence Rules Not applicable
24.	Nagaland	Not Notified
25.	Orissa	Notified
26.	Pondicherry	Notified
27.	Punjab	Notified
28.	Rajasthan	Notified
29.	Sikkim	The Factories Act is not being implemented. Hence Not Notified
30.	Tamil Nadu	Notified
31.	Tripura	Not Notified
32.	Uttar Pradesh	Notified
33.	Uttaranchal	*
34.	West Bengal	Notified

“\*”: Newly created States.

Source: Correspondence with CIFs of states and UTs

**Table 9.14: Notification of Major Accidents Hazard Control Rules**

S.No	State/Union territory	MAHC Rules, 1997
1.	Andaman & Nicobar Islands	No hazard unit, hence Rules Not applicable
2.	Andhra Pradesh	Notified
3.	Arunachal Pradesh	The Factories Act is not being implemented. Hence not applicable
4.	Assam	Notified
5.	Bihar	Draft Rules Sent for Publication
6.	Chandigarh	Notified
7.	Chattisgarh	*
8.	Daman, Diu, Dadra & Nagar Haveli	Notified
9.	National Capital Territory of Delhi	Notified
10.	Goa	Notified
11.	Gujarat	Notified
12.	Haryana	Sent for notification
13.	Himachal Pradesh	Not Notified
14.	Jammu & Kashmir	Not Notified
15.	Jharkhand	Notified
16.	Karnataka	Notified
17.	Kerala	Notified
18.	Lakshadweep	No hazard unit, hence Rules Not applicable
19.	Madhya Pradesh	Notified
20.	Maharashtra	Notified
21.	Manipur	Not Notified
22.	Meghalaya	Notified
23.	Mizoram	No hazard unit, hence Rules Not applicable
24.	Nagaland	Not Notified
25.	Orissa	Notified
26.	Pondicherry	Draft notification under consideration of Govt.
27.	Punjab	Notified
28.	Rajasthan	Notified
29.	Sikkim	The Factories Act is not being implemented. Hence not applicable
30.	Tamil Nadu	Notified
31.	Tripura	Notified
32.	Uttar Pradesh	Notified
33.	Uttaranchal	Notified
34.	West Bengal	Draft sent for notification

\* Newly created States.

Source: Correspondence with CIFs of states and UTs

## ANNEXURE- I

## UNIT LEVEL CONSULTANCY STUDIES – 2006

Sl. No.	Area	CLI MUMBAI		RLI KOLKATA		RLI CHENNAI		RLI KANPUR		RLI FARIDABAD	
		Completed	Under Progress	Completed	Under Progress	Completed	Under Progress	Completed	Under Progress	Completed	Under Progress
1	2	3	4	5	6	7	8	9	10	11	12
1	Safety Audit	6	4	4	2	3	1	6	2	-	-
2	Occupational Health	-	1	-	-	1	-	-	-	-	-
3	Airborne Contaminants	15	2	-	-	2	-	-	-	-	-
4	Noise Level	3	2	-	-	-	-	-	-	-	-
5	Ventilation study	2	1	-	-	-	-	-	-	-	-
6	Maximum Credible Loss Scenario	-	-	-	-	-	-	-	-	-	-
7	HAZOP	1	-	-	-	-	-	2	2	-	-
8	Safety Audit-MAHC	1	3	-	-	-	-	-	-	-	-
9	Risk Assessment	1	-	-	-	-	-	-	-	-	-
10	Ergonomic Evaluation	17	7	-	-	-	-	-	-	-	-
11	Heat Stress	6	-	-	-	-	-	-	-	-	-
12	Industrial Hygiene Survey	-	-	-	-	4	-	1	1	-	-
13	Dispersion Modeling	-	-	-	-	-	-	1	-	-	-
14	Environmental Conditions	2	-	3	-	3	-	-	-	-	-
	<b>Total:</b>	<b>54</b>	<b>20</b>	<b>7</b>	<b>2</b>	<b>13</b>	<b>1</b>	<b>10</b>	<b>5</b>	<b>-</b>	<b>-</b>





## ANNEXURE II

## LONGER DURATION TRAINING PROGRAMMES- 2006

Sl	Participants and Area	CII MUMBAI		RII KOLKATA		RII CHENNAI		RII KANUR		RII FARIDABAD		IISCHIGES	
		Programmes	Participants	Programmes	Participants	Programmes	Participants	Programmes	Participants	Programmes	Participants	Programme	Participants
A	<b>Inspectors of Factories</b>												
	Basic	1	6(3)	-	-	-	-	-	-	-	-	-	-
	Refresher course	1	6(4)	-	-	-	-	1	2(1)	-	-	-	-
	Chemical	-	-	1	10(7)	-	-	-	-	-	-	-	-
	Refresher Course-MHC	-	-	-	-	1	11(7)	1	9(5)	-	-	-	-
B	<b>Safety Officers</b>												
	ADS	1	5(20)	1	24(14)	1	31(25)	1	34(27)	-	-	-	-
	Refresher Course	-	-	-	-	-	-	-	-	-	-	-	-
C	<b>Factory Medical Officers</b>												
	AIH	1	4(4)	1	13(13)	-	-	-	-	-	-	-	-
	Refresher Course	-	-	1	5(5)	-	-	1	9(9)	-	-	-	-
D	<b>Magnent Personnel</b>												
	Industrial Safety	4	111(82)	-	-	-	-	2	4(17)	-	-	-	-
	Industrial Hygiene	5	4(31)	-	-	1	16(12)	-	-	-	-	-	-
	Occupational Health	2	33(28)	-	-	-	-	-	-	-	-	-	-
	Industrial Physiology	6	27(17)	-	-	-	-	-	-	-	-	-	-
	Ergonomics	1	2(2)	-	-	-	-	-	-	-	-	-	-
	Staff Training	3	6(25)	-	-	-	-	-	-	-	-	-	-
	Industrial Productivity	-	-	-	-	-	-	-	-	-	-	-	-
	Industry Psychology	4	104(37)	-	-	-	-	-	-	-	-	-	-
	MHC	1	8(5)	-	-	-	-	1	7(6)	-	-	-	-
	H&CP	-	-	-	-	-	-	-	-	-	-	-	-
	Hazardous substances	-	-	-	-	1	12(10)	-	-	-	-	-	-
	Hazardous Processes	-	-	1	5(4)	-	-	-	-	-	-	-	-
	Risk assessment	-	-	-	-	1	24(16)	-	-	-	-	-	-
Construction Safety	-	-	-	-	-	-	-	-	-	-	-	-	
	Environmental Pollutants	2	4(19)	-	-	-	-	-	-	-	-	-	
<b>E Trade Union Leaders/volunteers Joint Participation</b>													
	Industrial Safety	1	2(10)	2	7(2)	-	-	1	18(9)	-	-	-	-
	Staff Training	-	-	-	-	-	-	1	11(5)	-	-	-	-
	Industrial Productivity	-	-	-	-	-	-	-	-	-	-	-	-
	Ind. Psychology	-	-	-	-	-	-	1	18(9)	-	-	-	-
	Hazardous Substances	-	-	-	-	-	-	-	-	-	-	-	-
	Chemical Safety	-	-	-	-	1	4(19)	1	14(6)	-	-	-	-
	Ergonomics	1	16(6)	-	-	-	-	-	-	-	-	-	-
	Drk Safety	-	-	-	-	-	-	-	-	-	-	4	19(5)
	<b>Total:</b>	<b>34</b>	<b>597(335)</b>	<b>7</b>	<b>135(45)</b>	<b>6</b>	<b>137(8)</b>	<b>11</b>	<b>183(94)</b>	<b>-</b>	<b>-</b>	<b>4</b>	<b>19(5)</b>

Note: Figures in bracket indicate number of organisations.

## ANNEXURE- III

## IN COMPANY TRAINING PROGRAMMES - 2006

Sl. No.	Participants and Area	CLI MUMBAI		RLI KOLKATA		RLI CHENNAI		RLI KANPUR		RLI FARIDABAD	
		Progra- mmes	Partici- pants	Progra- mmes	Partici- pants	Progra- mmes	Partici- pants	Progra- mmes	Partici- pants	Progra- mmes	Partici- pants
A. Management Personnel											
	a) Industrial Safety	6	182(6)	-	-	3	87(3)	4	105(4)	-	-
	b) Occupational Health	1	20(1)	-	-	-	-	3	52(3)	-	-
	c) Industrial Physiology	2	65(2)	-	-	-	-	1	41(1)	-	-
	d) Industrial Ergonomics	4	122(4)	-	-	-	-	-	-	-	-
	e) Productivity	-	-	-	-	-	-	2	57(43)	-	-
	f) Staff Training	3	73(30)	-	-	-	-	-	-	-	-
	g) Industrial Psychology	1	22(1)	-	-	-	-	-	-	-	-
	h) MAHCA	1	8(8)	-	-	-	-	1	20(1)	-	-
B. Trade Union Leaders/workers/ Joint Participation											
	a) Industrial Safety	2	80(2)	-	-	1	30(1)	1	30(1)	-	-
	b) Industrial Hygiene	-	-	1	15(1)	-	-	-	-	-	-
	c) Occupational Health	1	20(1)	-	-	1	35(1)	2	42(2)	-	-
	d) Industrial Psychology	1	17(1)	-	-	-	-	-	-	-	-
	e) Dock Safety	1	53(2)	-	-	-	-	-	-	-	-
	<b>Total:</b>	<b>23</b>	<b>662(58)</b>	<b>1</b>	<b>15(1)</b>	<b>5</b>	<b>152(5)</b>	<b>14</b>	<b>347(55)</b>	<b>-</b>	<b>-</b>

Note: Figures in bracket indicate number of organisations.

**SHORT DURATION (1-2days) TRAINING PROGRAMMES - 2006**

Sl. No.	Participants and Area	CLI MUMBAI		RLI KOLKATA		RLI CHENNAI		RLI KANPUR		INSP-DOCK SAFETY	
		Programmes	Participants	Programmes	Participants	Programmes	Participants	Programmes	Participants	Programmes	Participants
1	Industrial Safety			2	19(4)	1	7(1)	1	10(6)		
2	Industrial Hygiene	2	4(2)	1	13(1)						
3	Dock Safety			1	15(1)					8	178(23)
4	Industrial Ergonomics	10	64(15)								
5	Industrial Physiology	2	37(32)								
6	Industrial Psychology	1	15(1)								
7	MAHCA	1	17(7)								
<b>Total:</b>		<b>16</b>	<b>137(57)</b>	<b>4</b>	<b>47(6)</b>	<b>1</b>	<b>7(1)</b>	<b>1</b>	<b>10(6)</b>	<b>8</b>	<b>178(23)</b>

Note: Figures in bracket indicate number of organisations