
INDOSHNEWS

Vol.7 No.1
January-March 2002

Published by the Directorate
General Factory Advice
Service & Labour Institutes,
N.S. Mankikar Marg,
Sion, Mumbai 400 022.
INDIA

Editor-in-Chief
Shri S.K. Saxena

Executive Editor
Shri D.B. Deb

Assistant Editors
Shri T.K. Biswas
Shri J. Sankar

Editorial Board Members

Shri Moinul Haque
Shri S.G. Darvhekar
Shri V.L. Kathane
Shri M.M. Alam Khan
Shri A.K. Dubey
Dr. A.K. Majumdar
Shri V.B.Sant
Shri E.Laxminarayana
Shri S.N.Borkar
Dr. R.Iqbal

Cover page designed by
Shri S.N.Borkar

Judgements made opinions
expressed in the Newsletter do
not necessarily reflect the views
of DGFASLI

The electronic version of the
Indoshnews on the Internet
can be accessed at the following
address:
www.dgfasli.nic.in

CONTENTS

FROM THE DESK

COVER FEATURE

ARTICLE	7
CONSULTANCY/RESEARCH.....	12
FATAL ACCIDENTS IN PORTS...	14
EDUCATION & TRAINING	15
CIS	16
DATA SHEET	17
GLIMPSES OF BOOKS	19
CLIPPINGS	20
INSTITUTE NEWS	21
ANNOUNCEMENTS	22
ABOUT DGFASLI	30

DGFASLI

Visit us at:www.dgfasli.nic.in
Telephone : PABX 91-22-4092203
Fax : 91-22-4071986

ANNUAL SUBSCRIPTION

Rs. 100 (India)
Rs. 200 (Foreign)



मेरी कलम से

मैं कामना करता हूँ कि इंडोश्न्यूज़ के पाठकों और कार्यस्थलों पर कार्यरत लोगों के लिए वर्ष २००२ बहुत ही शुभ हो ।

केरल राज्य के उद्योगों में सुरक्षा एवं स्वास्थ्य प्रबंध की स्थिति पर एक रिपोर्ट का संक्षिप्त रूप इंडोश्न्यूज़ के इस अंक की मुख्य विशेषता है । इस रिपोर्ट में औद्योगिक प्रतिष्ठानों, इकाई एवं राज्य, दोनों ही स्तरों पर कार्यबल की प्रकृति तथा स्वास्थ्य एवं सुरक्षा प्रबंध की स्थिति का विस्तारपूर्वक वर्णन किया गया है । इसमें राज्य स्तर पर काम कर रही एजेन्सियों की सूची और सुरक्षा व स्वास्थ्य प्रबंध में उनकी भूमिका का भी वर्णन किया गया है ।

यह अध्ययन एक मार्गदर्शी अध्ययन के रूप में अध्ययनों के लिए उपकरणों का परीक्षण करने के लिए किया गया । मुझे यह सूचित करते हुए हर्ष हो रहा है कि ये उपकरण संतोषजनक पाए गए तथा इन्हें अन्य राज्यों में भी प्रयोग में लाया जा सकता है ।

यह सर्वविदित है कि एक प्रभावशाली कार्य योजना बनाने के लिए वर्तमान स्थिति का पूरा-पूरा ज्ञान होना चाहिए । इस रिपोर्ट में इसी ज्ञान के आधार को स्थापित करने का प्रयास किया गया था । यदि यही कार्यविधि अन्य राज्यों में भी लागू की जाए, तो तभी हम एक राष्ट्रीय परिदृश्य प्राप्त कर सकते हैं, जिसके आधार पर एक राष्ट्रीय नीति और एक राष्ट्रीय योजना बनाई जा सकती है । डीजीफासली देशभर में स्थापित अपने सूचना-तंत्र के जरिए, कारखाना निदेशालयों एवं कार्यस्थल में सुरक्षा एवं स्वास्थ्य के प्रसार से जुड़े अन्य व्यावसायिक संगठनों सहित, राज्य स्तरीय एजेन्सियों के सहयोग से यह कार्य करने का बीड़ा उठा सकेगी ।

इस रिपोर्ट का विवरण हमारी वेबसाइट पर उपलब्ध है ।

(सुधीर कुमार सक्सेना)
मुख्य संपादक



FROM THE DESK

I wish the readers of INDOSHNEWS and the people at work places a very Happy 2002.

In this issue of INDOSHNEWS, the cover feature is an abridged version of a report on the status of safety and health management in industries in the State of Kerala. This report brings out details of industrial establishments, the nature of the work force and the status of health and safety management both at the unit level and at the State level. It also includes the list of agencies and their role in management of safety and health at the State level.

This study was done as a pilot study to test the instruments for the studies. I am glad to inform that the instruments have been found to be satisfactory and ready to be applied in other States as well.

Everyone appreciates that, to draw an effective action plan, the present status should be known thoroughly. This report had tried to establish that database. If this exercise is extended to other States, then only we can get a national picture on the basis of which a national policy and the national plan can be drawn up. The DGFASLI, having its network throughout the country, will be in a position to take up the assignment in collaboration with the State level agencies including the Factories Directorates and other professional organizations involved in promoting safety and health at workplace.

Details of this report is available at our web site.

(S.K. SAXENA)
EDITOR -IN-CHIEF

MANAGEMENT OF OCCUPATIONAL SAFETY & HEALTH IN THE STATE OF KERALA

INTRODUCTION

Management of occupational safety and health has become a very vital issue because of the technological advancements and deployment of newer technology and complex processes. In the present era of globalization and opening up of the Indian economy, there is a flow of new technology, products and resources to India. This influx with the modern technology is also bringing with it associated problems. The problems are more complex when the issue of management of safety, health and environment is concerned. This necessitates newer policies and programmes. The major problem faced by the policy planners is the non-availability of timely information on vital areas such as occupational injuries and diseases, infrastructure available at the unit and the state level for taking up awareness, promotional and developmental programs. Establishing a system for the flow of information and creating an inventory of occupational safety and health information for each state in the country can address the above problems.

A pilot project was taken up in the state of Kerala with the objective to collect and compile various information on occupational safety and health, and extent of compliance with the important provisions under the Factories Act 1948 and the rules notified there under. The project also included critical review of system of recording and notification of occupational accidents and diseases as per the ILO Codes of Practice at the unit and the state level.

Manufacturing Sector

The Manufacturing sector is the second largest economic sector in the State of Kerala contributing to 33.66% of the state income. As per the statistics available, there are 17124 registered

factories in the State of Kerala which include 11932 units indicated as factories by the state government. During the year 1998, only 3098 factories submitted Annual Returns and over 2900 factories submitted the complete details in their Annual Returns. As per the Annual Returns submitted, the largest industry in the manufacturing sector is Refractory Products and structural clay including building bricks. This constitutes about 15% of the total factories where as ply and plywood product factories constitute about 11%. As per the Annual Returns, the industry employs the largest number of work force. It represents 27% of the work force employed in factories. Out of this, almost 42% are employed in Fish Processing factory alone. Mandays worked in the factories which submitted returns during the year were 46.33 million. The factory segment produces largest number of total mandays worked.

In the State of Kerala, there are 2808 units which are carrying on hazardous processes as well as operations declared as dangerous by the State Government. Out of this, 1306 factories are notified factories and 413 are cashew factories. These units employ 1,69,374 workers which include 99305 women workers. The largest employers of women workers are cashew factories where in 84075 women workers are employed.

There are 34 Major Accident Hazard installations in the State employing 17716 workers. Out of this 723 are female workers. The largest number of MAH installations are LPG Bottling Plants and hazardous chemical used is LPG.

Occupational injuries - The State has about 17124 working industries covered under the Factories Act 1948. In the year 1998, there were 5467 reportable

accidents in these factories out of which 33 were fatal and 5449 resulted in non-fatal injuries. The task force could not analyze all the reported accidents because of the constraints of resources such as time and funds. Therefore a sample of 499 non-fatal accidents was selected to know the trend of non-fatal injuries in various types of industries. 33 fatal injuries and 499 non-fatal injuries were taken and analyzed as per the Indian Standards 3786 and the ILO Code of Practice of recording and notification of occupational accidents and diseases. The analysis has been done on the basis of industry group wise, causation, agency, nature of injury, location of injury, sex and age. The major fatal injuries were in industries manufacturing basic chemicals and chemical products. Explosion and explosives were the major causes of accidents. Multiple injuries had occurred to the workers. 70% of the workers were not covered under insurance scheme of ESIC and 70% of the workers were in the age group of 18 to 36 years.

In case of non-fatal injuries, 35% of the injuries were in cotton textile manufacturing industry. Most of the accidents were due to struck by falling objects, stepping on, striking against and struck by objects. Agency wise, material and substance contributed to most of the non fatal injuries. Most of the injuries were in the upper limb and were of lacerations, cuts contusion, etc. The Frequency, Severity and Incidence Rate of the accidents were also computed. The Frequency Rate(FR) calculated for the number of reportable lost time injuries for 5467 accidents in all types of industries taken together was found to be 13.02 and for the fatal injuries the frequency rate was 0.08. The Severity Rate(SR) calculated on the basis of mandays lost due to reportable injuries and man hours worked for 5467 accidents in all types of industries taken together was 142.1 and that for the fatal injuries was 10.9. The general Incidence Rate(IR) taken as the ratio of the number of injuries to the number of persons

employed during the period of review was expressed as per thousand persons employed. The IR for all type of injuries in the state of Kerala for the year 1998 was 11.28.

In MAH installations, 3 fatal injuries and 579 non-fatal injuries were reported.

Occupational disease - In the state of Kerala, no case of occupational disease has been reported to the Directorate of Factories and Boilers. However, the ESIC, which deals with compensation to the workers for any loss while working in the factory has 44 cases of occupational diseases as per the Employees State Insurance Corporation (ESIC) Act 1948. Out of the observed cases, most of them are of byssinosis, whereas remaining few are that of silicosis, Pneumoconiosis, noise induced hearing loss, silicosiderosis and carcinoma lung. Of the above, byssinosis, silicosis, occupational cancer and noise induced hearing losses are notifiable diseases as per the Third schedule under section 89 of the Factories Act 1948. These cases have not been reported to the Director of Factories and Boilers. The workers who have acquired the above diseases are mostly from textile, spinning & weaving mills and are receiving compensation from the ESIC as per the laid down rules.

The Occupational diseases result in loss of earning capacity of the workers. This loss varies according to the occupational diseases contracted by the worker. The severity of the disease may result in permanent disability to the worker. The cases that have been reported and are being compensated by the ESIC in the state of Kerala show that the loss in earning capacity varies from 5-100%. In most of the cases, the loss is more than 50%. The industry-wise analysis of the occupational diseases shows that the textile industry has the highest number of occupational diseases, and Byssinosis is the major disease. In the foundry industry, the occupational diseases detected are Pneumoconiosis,

silicosis and byssinosis. In the plywood industry, noise induced hearing loss prevailed.

The cases reported above were only from the industries covered under the ESIC Act 1948 and therefore cannot be taken as a true representative of the total population of workers working in the manufacturing sector in the state of Kerala. However, the figures are sufficient indicators of the dangers of the occupational diseases arising from the risk factors existing in the work place, and needs to be looked into.

Management of Occupational safety and health

Management of OS&H deals with the infrastructure and resources available at the unit level and at the state level for managing the crucial issue of occupational safety and health. In order to have a fair idea about the safety and health status in the State, the following aspects on safety and health were studied:

- Safety Policy
- Appointment of Safety Officers
- Safety Committee
- Occupational health centers (Factory Medical Officer, Ambulance)
- Welfare (Welfare Officer, Canteen, creche, lunch room, shelter etc.)
- On-site emergency plans
- Safety reports
- Safety audits
- HAZOP studies

In the state of Kerala, 3047 units were required to have safety policy, however only 25% of the units had prepared the same. Against the requirement of 78 Safety Officers, 89 were appointed in various factories. Safety Committees are exist only in 5% of the factories and in 93 units, ambulances have been provided. As per norms, 177 units should have Welfare Officers but only

160 units had Welfare Officers. Crèche facilities were available in 500 units. Shelter and lunch room were observed in 1462 units and 1121 units respectively and canteen facilities exist in 490 units.

In case of MAH installation, 32 out of 33 units had prepared onsite emergency plans; 23 units prepared the Safety Report, 27 units conducted safety audits and 23 units conducted risk assessment studies.

Management of OSH at state level –

There are certain statutory requirements as provided under the Factories Act, 1948 and Rules notified thereunder, for each of the aspects stated above. On-site emergency plans and HAZOP studies are additional requirements exclusively applicable to MAH installations which are covered by separate set of rules called the Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989. Management of safety and health at the state level is more complex than at the unit level.

Safety and health at work is governed by variety of statutes in the state depending on the nature of work place, manufacturing activity and specific aspects of safety and health. Some of the important statutes are given below :

- The Factories Act 1948
- The Kerala State Factories Rules
- Indian Boilers Act 1923
- Kerala Boilers Rules
- Indian Boilers Regulations
- Dangerous machines (Regulations) Act
- Child Labour (Prohibition and Regulations) Act
- Manufacture, Storage and Import of Hazardous Chemicals Rules 1989
- Major Industrial Accident Hazards (Kerala) Rules, 1993
- Dock Workers (Safety, Health and Welfare) Regulation
- Dock Workers (Safety, Health and Welfare) Rules

Building and other construction workers Act
Indian Electricity Act
Indian Electricity Rules
Indian Explosives Act
The Petroleum Act
Static and Mobile Pressure Vessels Rules

There are different departments of Central Government and State Government entrusted with the responsibility of enforcement of these statutes. The efforts of the enforcement agencies are also supplemented by other organizations such as training and research institutions, employers' associations, employees' associations, etc. in promoting occupational safety and health in the state.

The main department entrusted with the management of occupational safety and health at the State level through enforcement of the Factories Act and other legislations is the Directorate of Factories & Boilers. This department functions under the Department of Labour & Rehabilitation, Ministry of Labour, Govt. of Kerala. The Directorate is headed by a Director and is assisted by 5 Joint Directors. One Joint Director (Medical) is exclusively for looking after the industrial hygiene and health. The Joint Directors are assisted by Senior Inspector of Factories, Inspector of Factories and Additional Inspectors. For effective management, the state is divided into 3 zones and 20 divisions. In addition to the enforcement of various statutes, the Directorate also conducts education and training programmes, provides technical advice and also organizes promotional activities in order to increase safety and health awareness at work place.

The other important departments which play an important role in management of occupational safety and health are Office of the Labour Commissioner, Science - Technology & Environment department, Pollution Control Board, Department of

Explosives, Industry and Commerce Deptt., Electrical Inspectorate, Public Health Department, Employees State Insurance and Workmen Compensation Department, Fire Brigade, etc.

The Employers' Associations such as Confederation of Indian Industries, Kerala State Productivity Council, Kerala Management Association and Employee's Associations such as Ernakulam District Construction Workers Union also contribute towards the management of occupational safety and health in the State of Kerala.

In addition to this, NGOs such as Loss Prevention Association of India, National Safety Council, INDAL Occupational Health Service Center and Central Board for Workers Education have an important role to play in the management of occupational safety and health.

For the assessment of infrastructure available and capabilities of the organizations, institutions and agencies engaged in safety and health, the profile program on the similar lines as that developed by ILO was used.

FINDINGS & RECOMMENDATIONS:

During the study, number of findings were brought out with respect to the management of occupational safety and health at unit level as well as state level. Some of these findings are given below:

1. Almost 94% of the returns submitted by various factories as required under the provisions of Factories Act, 1948 were found complete in all respects.
2. There was a difficulty in classifying a particular factory as one carrying on hazardous process as defined under Section 2(cb); or as one covered under Section 87 of the Factories Act

- merely on the basis of information given in annual return, licence or form of registration. Therefore, it was suggested that annual return form prescribed under the Kerala State Factories Rules should be modified to include the following information:
- a) Description of factory as per National Industries Classification(NIC),1998
 - b) Whether covered under Section 2(cb)
 - c) Whether notified as factory carrying on dangerous operations under Section 87.
 - d) Whether covered under MSIHC Rules.
3. Electrocution or contact with electrical energy is the major cause of fatal accidents.
 4. Almost 30% of the non-fatal accidents are caused due to struck by falling objects and about 29% are due to striking against or struck by objects. This indicates that proper work procedures, safe system of work, safe operating procedures are not being followed in factories.
 5. Material handling equipment, tools, implements and appliances used on the shop-floor and machines are major agencies causing non-fatal injuries. Therefore, the occupiers and managers of the factories should be advised on:
 - a) maintenance and proper use of material handling equipment;
 - b) safe use of tools, appliances and equipment;
 - c) adequate guarding of machinery; and
 - d) proper house keeping.
 6. The analysis of accidents with respect to the location of injuries revealed that head, hands, feet are the body parts which are frequently injured in accidents. This indicates that proper protection of these body parts is not ensured at workplace. Therefore, occupiers should be advised to give appropriate personal protective equipment to their workers and to make sure that these are used by workers in factories.
 7. Out of 44 cases reported to ESIC hospitals, 26 were syssinosis cases, which is caused due to prolonged exposure of workers to coir fibres, cotton fibres and other such fibres. Therefore, it is suggested that all such industries processing or handling coir, cotton or synthetic fibres should be notified under Section 87 of the Factories Act as factories carrying on dangerous operations and the medical examination of workers employed in such factories should be made statutory.
 8. Although 44 cases of occupational diseases were reported to ESIC hospital, not a single case was reported to the Directorate of Factories & Boilers as required under Section 89 of the Factories Act. Therefore, it must be emphasized upon the management of the factories that suspected cases of occupational diseases reported to the ESIC hospital, should also be reported to the Chief Inspector of Factories in a prescribed form.
 9. There are more than 2800 factories requiring medical examination of workers employed therein by Medical Inspector of Factories/Certifying Surgeon, which is practically impossible given the present strength with the Inspectorate. It is suggested that private medical practitioners as well as the Civil

Surgeons in State run hospitals could be appointed as Certifying Surgeon for a particular area.

10. In the State, on an average, 478 factories were inspected per inspector covering almost 86% of the registered factories as against suggested norm of 150 factories per inspector. This figure is quite high leaving scope for compromise on quality of inspection. Therefore, it is suggested that this ratio should be brought down to a reasonable level by strengthening of Inspectorate and prioritization of inspection.

CONCLUSIONS

The project was aimed at assessing the status of occupational safety and health at

unit level in the manufacturing sector in Kerala. Because of limitations in term of time and funds, the focus was on the information available with the Directorate of Factories, visit and discussion with the Officers of Directorates and other Government departments connected with matters concerning Occupational safety and health. As a result, the findings of the study have some limitations and should be used with caution. Nevertheless, the findings could be definitely used for strengthening the system of OSH management in the State. It is also recommended that further studies should be undertaken to identify the areas of concern and problems encountered in ensuing safety and health of workers in factories.

PSYCHOSOCIAL AND OTHER RELATED FACTORS CONTRIBUTING TO ROAD ACCIDENTS IN PORTS

P.K. MOHANTY

INTRODUCTION

The phenomena of road traffic are strongly affected by the technology invasion, population explosion and nature of human action. The nature of the action is not that of an individual alone, but rather the individual's embodiment of what the society and culture he has and its nature. Most of the human behaviour in road traffic is not directed by physical roads, but rather the behaviour towards other people encountered on the roads as well as towards various norms that the society forms. (Yasuhisa Nagayama - 1988). The most direct and effective method to evaluate vehicle handling is by measuring driver's feeling, which is however, influenced by number of factors. (Kaneo Hiramatsu - 1989) First and foremost are his abilities, potentiality and personality. However, social influence can not be neglected.

Road accidents in India have become a matter of great concern for all. It is rising continuously. In 1991, around 60,000 persons were killed in road accidents as compared to 4,500 in 1961. So during this period, (1961-91) traffic accidents have increased more than 10 times. Besides, over 2,50,000 persons received reportable injuries of varying nature (Divekar & Ghosh - 1993) which may go very high by the year 2001. In India, 1% of the world's vehicle population exists, but 6% of world's traffic accidents occur here. (Sarin, Mittal & Lal - 1992). The estimated cost due to road accidents in 1991 was around Rs.1600 crores amounting to around 1% of country's GDP.

The scenario in ports in respect of accidents due to transportation of cargo is no different from the global scenario. Most of the accidents are caused during transportation of materials. Road is the main source of transportation in all the major ports, though train facilities are also available in almost all

the ports. The means, which are used for transportation, are mainly (1) Lorries, (2) Tractors & Trailers, (3) Top Lift trucks, (4) Fork Lift trucks, (5) Mobile cranes, (6) Railway locomotive, (7) Launches, (8) Mechanised Conveyors, (9) Hand Carts, etc. Though all the means are used for transportation, it is seen from the record that mainly the following five transport means are involved in accidents; viz - (1) Lorries, (2) Tractors & Trailers, (3) Top Lift Trucks, (4) Fork Lift Trucks and (5) Mobile-Cranes. More than 50% fatalities (1993) (DGFASLI Annual Report -1996) in ports are due to road traffic accidents. Hence it has become essential to conduct a study on road accidents in ports to suggest some suitable measures to minimise them.

OBJECTIVES OF THE STUDY

1. To investigate into the psychosocial factors contributing to the causation of accidents.
2. To find out the influence of other factors such as road condition, pedestrian behaviour, traffic rules, type of vehicular maintenance on occurrence of road accidents;
3. To suggest remedial measures for recurrence of accidents.

METHODOLOGY/

Sample

Since drivers are responsible for most of the accidents, they can suggest the best preventive

measures for the same: so also may be the officials involved in accident investigation and transport operations. Hence the study includes 727 drivers and 119 officials for the purpose.

Measures

The tools for data collection consisted of:

1. Personal-Demographic Information Questionnaire (PDIQ)
2. Attitude Scale (AS) – (Ganguli & Bhattacharya-1972)
3. Two psycho-motor ability tests to ascertain potentiality factors :
 - Reaction Time
 - Eye-Hand Co-ordination.
4. Type 'A' Behaviour Questionnaire (Gmelch-1982)
5. Causes of Road Accidents Questionnaire (CRAQ).
6. Preventive Measures of Road Accidents Questionnaire (PMRAQ).

Data Collection

During data collection, 4 questionnaires and 3 psychological tests were administered on the drivers. Data on Causes of Road Accidents and Preventive Measures of Road Accidents were obtained through CRAQ and PMRAQ from Port officials also.

RESULTS & DISCUSSION

Findings

There are mainly three factors contributing to more than 90% of road accidents:

Vehicular Factors

Ineffective brakes, bald (worn-out) tyres, defective wiper, improper design of the seat of the driver and overall improper maintenance of the vehicle do contribute to around 2 - 5% of the total number of causes contributing to road accidents (National Safety Council-1991). Some other vehicular factors which

also contribute to the causes of road accidents are improper loading and placing of materials, truck carrying dust type materials without proper covering, tanker carrying oil, fuel, gas and chemicals without adequate sealing.

Environmental Factors

Inclement weather (cyclonic and rainy), damaged road condition (big potholes and uncovered manholes, uneven surface), inadequate street light, no indication at turning point are some of the major environmental causes of road accidents in port/coastal area. Other users of the port not following the traffic rules also contribute to occurrences of accidents by drivers.

Behavioural Factors

The potentialities of driver i.e. his observation capability, reaction time, eye-hand co-ordination, glared vision, visual fatigue and eyesight would contribute substantially for committing road accidents. Drivers, with 'A' type behaviour pattern (aggressive, dominating, fast, competitive) because of their temperaments, drive fast and commit accidents. The attitude and value followed by the drivers also are some of the major causes of accidents. A recent study conducted over 727 heavy vehicle drivers revealed that the negative attitudes of the drivers (employed under private agencies) towards job security, welfare facilities, medical benefits are some of the major causes of drivers' stress. Psychological Stress (due to long duty hours, to fulfil the stipulated trip) along with mental worries caused by socio-economic problem also are causes of road accidents. Drivers used to drive fast, closely follow the vehicle in front and pursue close overtaking to reach the destination fast and earn speed money (incentive). They also drive fast during their last trip to reach home as early as possible. There are causes due to lack of defensive driving skills also. Physical illness, poor eyesight and improper co-ordination also are some of the major causes of accidents. Sometimes it has been noticed that untrained drivers (cleaner and helper) drive the vehicle and commit unforced errors. It is an

established fact that most of the heavy vehicle drivers drive their vehicle under the influence of drugs and alcohol. Under the influence of these psychotic drugs they lose control and co-ordination of their muscles and adjustment and hence commit accidents.

Recommendations Preventive And Remedial Measures.

Road accidents like other accidents can not be reduced to zero ; but it can be reduced to a great extent if the following measures are followed systematically.

Regulate Vehicle Movement During Inclement Weather

During the rainy season, the climate in the coastal region turns cyclonic. Cyclone with rain makes the driving dangerous for truck and lorry drivers. But they are hard pressed to drive their vehicle to fulfil their pre-planned time schedule to reach destinations. Inclement weather coupled with bad road condition, poor visibility, driver's urgency to meet the target, tight time schedule, road blockades due to uprooted trees and falling of boulders make driving vulnerable to accidents. During such weather conditions, the movement of the vehicle should be regulated according to the prevailing situation. The authorities should direct the drivers to think rationally before bringing their vehicle on road in such weather condition.

Proper Punishment For Accident Committers

Drivers who commit accidents are not properly punished. Once they commit accident in one area, their transport owners shift them to other area. It encourages them to be more careless and irresponsible. Heavy punishment on erring drivers can make them more careful as well as make other drivers fearful and concerned.

Rest after four hours driving

Mostly drivers of transport vehicles (90% plying on the road in the ports) are employed by private agencies. They have to drive for a

long time and continuously. In some cases it was observed that they have to drive 24 hours, 48 hours and even 72 hours at a stretch with very little or no rest in between. It used to create both mental and physical stress resulting in accidents. It is suggested that they should be given rest after every four hours driving. Port Authorities should instruct the transport owners to provide such facilities to the drivers employed by them and introduce a shift system for them.

Short-term Training in Defensive Driving

Training is required to refresh the drivers in their driving skill, reduce mental stress and remind them of defensive driving: while driving they should maintain safe driving distance, the speed should not exceed a specific limit, while overtaking they should be cautious and should not pursue close overtaking, etc. Driving skill does not depend only on number of years of experience. It also depends upon the individual's potentialities and personality. Drivers must have good reaction time (reflex action), good eye-hand co-ordination, fast decision-making, etc. During the training they should undergo some psychomotor ability tests like Simple Reaction Time Test and Eye-hand Co-ordination Test (Rotary Pursuit). The test results may guide them on their driving skill. Increase in the age

reduces eye-hand Co-ordination and makes the individual slow in reacting. During the training, they should be guided to drive according to their age and ability. Individual with type 'A' behaviour has more chance of committing accidents. Hence individual possessing type 'A' behaviour may be converted into type 'B' behaviour i.e. calm, judgmental, slow, emotionally stable, etc through appropriate training.

Proper Supervision

The Port Authorities should instruct all the employers of the dock workers to ensure that their workers load the material on vehicles in such a manner not to over load the vehicle or placing the same to cause imbalance of

vehicles and also not to allow over hanging of cargo. Further, the Port Authorities should initiate action that all dusty cargoes are not over-filled and suitably covered to prevent its spillage on road on movement. This can be achieved to a great extent by having a proper supervision at the time of loading and placing of cargo.

Establishing Reliable Information System

In order to have a safe and free movement of vehicles, the driver should be informed about any untoward incident like accident, digging of the road, road repairing, falling of trees and boulders on the road and inclement weather at the right time through some reliable information system.

Vehicle Maintenance

Vehicle maintenance such as ineffective brakes, bald tyres, defective wiper etc. acquired primary importance. It is also observed that the headlights of transport vehicle are sometimes broken, brake light, back light and indicator light are not in proper condition. It is therefore essential that vehicles used for dock work should be maintained well to avoid accidents. Port Authorities and private transport owners should devise a viable system for vehicle check up and maintenance of their vehicles as per the dock safety status.

Avoid Driving during Illness

Port Authorities should advise the private transport owners operating in the ports to provide free-medical facilities and sick leave with pay to their drivers and not to allow them to ply the vehicle during illness. They should get their drivers medically examined periodically.

Review of Stipulated Trip

Port Authorities, Association of Transport Owners and Workers Representatives should jointly discuss and work-out a suitable and workable solution to decide on the number of trips to be done by a driver on a particular day.

This would help in easing out stress and strain from the minds of the drivers.

Checking against Alcohol & other Intoxicating Drugs

Port Authorities should ensure a random and periodical check against the drivers driving the vehicle under the influence of alcohol or other intoxicating drugs. Stringent action may be taken against the drivers driving under the influence of alcohol or other intoxicating drugs.

Road Maintenance

Port Authorities should initiate action to get the roads inspected and repaired on regular basis especially before the onset of monsoon. A record of such maintenance should be kept for verification. Further, all suitable measures should be taken to ensure that there should be no water logging on the roads. The Port Authorities should initiate action to regulate the speed of moving vehicles inside the ports by displaying speed limits and setting-up of traffic control posts at strategic points. Further, mobile traffic squad consisting of CISF and port officials should have a check on the speed of the vehicles. Erring vehicles should be penalised on the spot. Action should be taken to install indicators at the turning points having reflecting element.

Adequate Welfare Facilities

There should be sufficient drinking water facilities and toilets even to cater to the needs of private vehicle operators as per the statutory requirements.

Sub-committee on Road Safety

The Port Authorities may constitute a Sub-committee on road safety from among the members of Safety Committee of the port..The Sub-committees should be empowered to make surprise visits in the ports and check road conditions, traffic signs, illumination and speedy vehicles and have the power to seize license of the drivers not following traffic rules. Further, the Sub-committees should

meet and discuss from time to time about the road safety in the port. The findings and recommendations of the Sub-committee should be discussed with the Chairman of the Safety Committee and should be implemented effectively.

CONCLUSION

The above findings and recommendations are based on the observations of the prevalent working conditions in the port and on the basis of site visits, discussions and interviews with the Drivers, Port Officials and Inspectors of Dock Safety. Above all, the study will provide improvement in road safety through psychological inputs as suggested. It is expected that with the implementation of these recommendations, there will be a significant improvement on road safety in the ports.

REFERENCE

1. DGFASLI, Annual Report on working of the Dock Workers, 1996.
2. Divekar S.M. and Ghosh G., Promotion of Road Safety through Defensive Driving., Report (Loss Prevention Association of India.), 1991
3. Ganguly O.N. and Bhattacharya S.K., A Study of Personal Factors Contributing to the Causation of Road Accidents in Tamil Nadu State Transport, DGFASLI Report No.10, 1972

4. Kaneo Hiramatsu IATSS Research, 1989 Vol.13 ,No.1, P 61-69 and 1988, Vol. 12, No.1, P45-53.
5. National Safety Council(USA), Accident Facts Report 1991.
6. .Sarin S.M., Mittal N., Lal M., Traffic Accident in India. Report (Central Road Research Institute, New Delhi), 1992
7. Walter H. Gmelch., Beyond Stress to Effective Management., 1982.
8. Osaka University (Japan), Yasuhisa Nagayama International Comparison of Traffic Behaviour and Perception of Traffic., 1988.

Shri P. K. Mohanty
Assistant Director
(Industrial Psychology)
Industrial Psychology Division,
DGFASLI, Central Labour Institute
Sion, Mumbai.400022

STATUS OF OCCUPATIONAL ENVIRONMENT IN SLATE PENCIL INDUSTRY

This study was conducted by Regional Labour Institute, Kanpur, in a Slate Pencil Industry to find out the status of occupational environment in the slate pencil units and to determine the health of the workers engaged there.

METHODOLOGY

The monitoring of occupational environment was carried out in 22 different slate pencil units to determine the exposure of airborne dust to the working population. Therefore, dust samples were collected from the breathing zone of the workers and existing conditions of environment and health were reviewed during the study. The levels of the airborne dust were compared with the permissible limit of exposure i.e. 0.61 mg/m^3 which was determined and calculated on the basis of the free silica contents (46%) present in slate pencil dust.

OBSERVATIONS

In work areas, the average exposure of slate pencil dust was 3.61 mg/m^3 to 4.11 mg/m^3 on the stone splitting, 5.38 mg/m^3 to 20.95 mg/m^3 on the stone cutting machines (circular saws) in some slate pencil units and 12.31 mg/m^3 to 26.67 mg/m^3 in some industries and 8.08 mg/m^3 to 8.78 mg/m^3 on the breaking open of the grooves and packing of slate pencils. On all these locations, levels of airborne dust were higher than the permissible limit of exposure i.e. 0.61 mg/m^3 for slate pencil dust. The levels were considerably high on cutting machines where the cutting of the tiles, making the strips and grooving take place.

FINDINGS

The duct of the local exhaust system was without hood on all the cutting machines

emanated from the operation. The dust collection arrangement on the local exhaust system was not satisfactory in most of the units. In most of the units, packing, repacking, breaking open the grooves or similar other operations were carried out in same shed where cutting of stone or making the grooves on them was being done and as a result the workers were also affected with dust generated from the cutting machine. The workers involved on various operations were not using any respiratory and other personal protective equipment. The basic amenities like drinking water, washing facilities, toilets etc. were also not available in most of the units.

RECOMMENDATIONS

In order to improve the occupational environment of the slate pencil industry, the study recommended that existing local exhaust systems on cutting machines/circular saws should be modified to improve their efficiency and effectiveness. Suitable exhaust hood on the duct and proper arrangement to collect the dust from air discharged into the atmosphere should be provided on the exhaust system. The breaking open of the grooves, packing of slate pencils and other similar operations should be segregated from the area where cutting machines are installed. The workers involved on the cutting machines and on operations should be provided with dust respirator and other suitable personal protective equipment and their use should be ensured at the time of work by the industrial management.

The accumulation of stone scrap and dust outside the industrial units should be discontinued and it may be disposed off at safe places and even can be diverted to refill the excavated stone quarries. The housekeeping in the slate pencil units should be improved. The pulley belts should be guarded properly and electrical fittings should be maintained in good condition in the industries and basic

amenities like drinking water, washing facilities, urinals/toilets may be ensured in each unit.

A FOLLOW-UP ENVIRONMENTAL STUDY IN WHEEL AND AXLE PLANT

The study was conducted by Regional Labour Institute, Chennai as a consultancy study.

OBJECTIVE

The study was conducted with the objective to evaluate the levels of airborne contaminants such as Silica Dust, Metallic fumes, e.g. Iron and Manganese Fumes, Welding Fumes, Carbon Monoxide etc. in work environment, measure the sound levels in various operations and to suggest remedial measures wherever necessary to improve the environmental conditions.

METHODOLOGY

Airborne samples of dust and metallic fumes were collected on 37 mm glass fiber filter papers whereas the samples for respirable dust and fumes were collected on 25 mm cellulose membrane filter papers using cyclone separator. All these samples were analysed by gravimetry. The should levels were measured with the help of LUTRON sound level meter.

FINDINGS

The concentrations of total respirable metallic dust at different locations in melting area were found less than 5 mg/m³ except slag off station where the concentration was found exceeding the TLV.

The concentration of siliceous dust at all the locations such as sand coating, core cleaning,

riser core baking etc. in moulding room area were found far exceeding the permissible level. Concentration of fused silica dust in spray mixing area was also found very high as compared to the PLE. Concentration of Graphite dust near horizontal and vertical lathe in graphite mould repair shop and welding fumes in scrap pre-conditioning bay were also found exceeding their PLEs.

Noise levels in a number of operations were found exceeding the permissible level for 8 hours exposure i.e. 90 dBA.

RECOMMENDATIONS

Various remedial measures were suggested for improvement of environmental conditions. These included closing of openings near the exhaust fans in the sheds, provision of a platform and local exhaust system for transferring the fused silica powder, reducing the excess length of the duct and avoiding sharp bends in the duct of the exhaust system provided with the lathe machines in graphite mould shop, ensuring the use of ear plugs in noisy areas, provision of sound proof cabins for staff in high noise areas, etc. In addition, various general remedial measures such as periodic medical examination of workers, work environment monitoring, audio metric examination of workers engaged in noisy areas etc. have also been suggested.

Provision and use of standard quality ear muffs with ISI mark to the workers for their protection in very high noise areas was suggested while going near compressor and diesel generator in running condition.

A plot clerk of a transport company was engaged in directing the coal laden tipper lorries to the stockyard in a Port during the night shift on 21.4.2001. In the morning of 22.4.2001, his body was found lying on the coal stack bearing injuries indicating that he was run over by a pay loader. Investigation into the accident revealed that it had taken place due to the unsafe action of the deceased while sleeping over the coal stack. The transport company may be advised to instruct all the employees working in the yard to desist from sleeping in the working area.

On 22.5.2001 during the first shift, logs were being discharged by a stevedore from a vessel berthed at a Port. When a dock worker was moving to a log to sling it, the ship listed to the shore side and the log rolled on the worker causing fatal injury.

Investigation revealed that the accident occurred as the ship listed to the shore side as all the three derricks were operating on shore side as a lack of harmonization of operation contravening Reg.65 (4) and 70(2) (a) of Dock Workers(Safety, Health & Welfare) Regulation 1990.

On 10.5.2001, the work of discharging of log bundles from the trailer on to the yard of a Port was being done by a clearing agent with the help of mobile crane and dock workers. During the course of operation, when one bundle of logs was placed on the stack, another bundle from the stack fell over a dock worker who was sleeping there causing a fatal injury.

Investigation of the accident revealed that the accident occurred as the worker was sleeping near the stack and also due to lack of supervision which is a contravention of Regulation 7(5), 66(1) and 66(6) of the Dock Workers (Safety, Health & Welfare) Regulation 1990.

On 21.4.2001, during the repair of a fork lift in a Port, a worker was fatally injured by being pressed between the FLT and shed wall.

Investigation of the accident revealed that the accident happened as a FLT was operated suddenly by the operator without any warning and carrying a person on it.

On 10.6.2001 at a Port, an electrician was trying to fix an electrical lamp in the hold of a barge. Suddenly he got an electric shock, fell down and died on the spot.

Investigation revealed that the accident is a non-reportable one.

At a Port, when a wharf crane was loading sulphur from a vessel by grab, suddenly the grab entangled with the hatch coaming. Crane driver tried to free the grab by applying a pull to the runner wire. The runner wire snapped and the counter weight trapping came down crushing the operators, trapping the operators inside.

Investigation revealed that the accident occurred due to improper operation on the part of crane drive.

At a Port, discharging of wooden log from vessel was being done by a stevedore engaging dock workers. Suddenly, one of the log rolled and hit a worker fatally injuring him

Investigation revealed that the accident occurred due to breach of Regulation 116 & 117 of dock workers.

At a Port, one truck was engaged for transporting iron ore. The truck was waiting near the weigh bridge. The driver of the truck was sought help by another truck for pushing his vehicle and starting the engine. When the truck was started the cleaner of the truck was run over by the same truck.

Investigation revealed that the accident occurred due to contravention of Regulation 57(3) & 57(8)(b) of dock workers.

TRAINING PROGRAMME ON SAFETY ENGINEERING AND MANAGEMENT

INTRODUCTION

Due to the growth of “Technology driven” market, Engineering/Manufacturing industry is subjected to a heavy competition in respect of products, price and quality. It is the “knowledge push and need pull” which makes the industrial situation more serious in terms of investment and employment. Industrial accidents are associated with hazardous conditions or unsafe actions prevailing in work places which are responsible for injuries, occupational health disorders and loss of property.

The management is responsible to provide a safe and healthy work environment and ensure safe work practices to its workers. Keeping this in view, a five-day specialized training programme on Safety Engineering and Management has been designed.

OBJECTIVES

- To highlight the elements of Safety Management
- To make aware of various statutory provisions relating to Safety & Health
- To create awareness regarding various safety management systems
- To introduce Engineering Techniques to control accidents
- To acquaint with psychological aspects

PARTICIPATION

The programme is designed for middle management personnel from production, maintenance, safety, quality and purchase departments of manufacturing sector and ports.

COURSE COVERAGE

The programme covers engineering and managerial aspects of controlling accidents at work. The following topics will be discussed:

- Principles of Accident Prevention and Concepts of Safety Management.
- Safety in the use of Machines
- Safety and Health provisions under the Factories Act, 1948
- Electrical Equipment/machines, used in Hazardous areas.
- Safety in Material Handling
- Safety Audit
- Ergonomics of Work Station Design
- Occupational Health problems in Industry
- Human Rights – Concept and Scope
- Occupational Health & Safety Management System
- Environmental Management System
- Industrial Hygiene – Principles and Practices
- Psychological Aspects of Safety

DURATION: 5 DAYS

Conducted by:
Safety Division
Central Labour Institute,
Sion, Mumbai.400022

INTERNATIONAL OCCUPATIONAL SAFETY AND HEALTH INFORMATION CENTRE (CIS)

CIS (from the French name, Centre international d'Information de securite et d'hygiene du travail) i.e. International Occupational Safety and Health Information Centre, is a part of the International Labour Office, Geneva, Switzerland. The mission of CIS is to collect world literature that can contribute to the prevention of occupational hazards and to disseminate this information at an international level. CIS imparts to its users the most comprehensive and up-to-date information in the field of Occupational safety and health. The work of CIS is supported by a worldwide Safety and Health information exchange network which includes over 91 affiliated National Centres and 38 CIS collaborating Centres. Central Labour Institute, Mumbai has been designated as the CIS National Centre of India.

CIS can offer you rapid access to comprehensive information on occupational safety and health through:

- Microfiches on original documents abstracted in CIS DOC (CISILO)
- ILO CIS Bulletin "Safety and Health at Work"
- Annual and 5-year indexes
- The CIS Thesaurus
- The list of periodicals abstracted by CIS

EXCERPT FROM CIS DOC

Title: Dermal risk assessment in occupational medicine

CIS ACCESSION NUMBER

CIS 01-826

ABSTRACT

The importance of the study of dermal exposure to dangerous chemicals has increased during the last few years, mainly because of a reduction of respiratory exposure to toxicants. Pesticides, aromatic amines and polycyclic aromatic hydrocarbons are considered to be the chemicals with the highest dermal risk. In the occupational exposure limit lists of the ACGIH and of many countries, compounds that can be absorbed through the skin are identified by a skin notation, which usually indicates that the percutaneous absorption of the chemical can contribute to the body burden. However, a generally accepted criterion for assigning skin notation does not exist. It is only when standardized measurements of dermal exposure will be possible that Dermal Occupational Exposure Limits (DOEL) can be set, enabling a regulatory approach in the dermal risk assessment field. So far, attempts to develop health-based DOELs have not been successful, and further work is required to build broad consensus.

Note:

For details write to CIS National Centre for India, Central Labour Institute, Sion, Mumbai 400 022.

The Library & Information Centre of Central Labour Institute has unique collection of Material Safety Data Sheet of about 1,20,000 chemicals/materials taken from Canadian Centre for Occupational Health & Safety. MSDS provides extensive coverage over safety perspective with detailed evaluation of health, fire and reactivity hazards. It also provides precaution as well as recommendation on handling, storage, personal protective equipment, accidental release etc.

**PRODUCT NAME(S) : SODIUM
ACETATE**

HEALTH HAZARD INFORMATION

PHYSICAL APPEARANCE: Clear, Colourless liquid.

IMMEDIATE CONCERNS: CAUTION: Avoid contact with eyes, skin or clothing. Harmful if swallowed. Wear goggles or safety glasses and rubber gloves when handling this product. May be irritating to nose and throat. Avoid breathing dust. Remove and wash contaminated clothing before reuse. Do not mix with other chemicals.

POTENTIAL HEALTH EFFECTS

EYES: Causes eye irritation. Avoid contact with eyes.

SKIN: Causes skin irritation. Avoid contact with skin.

INGESTION: May be harmful if swallowed.

INHALATION: May be irritating to nose and throat. Avoid breathing vapors.

CHRONIC: There are no known chronic hazards.

ROUTES OF ENTRY: Skin contact, Inhalation, Ingestion, Eye contact.

FIRST AID MEASURES

EYES: If contact with eyes occurs, immediately flush contaminated eye(s) with cool, gently flowing water for at least 20 minutes, holding eyelid(s) open. Take care not

to splash contaminated water into the non-affected eye. Seek immediate medical attention.

SKIN: If contact with skin occurs, rinse off excess chemical and flush with cold water for at least 15 minutes. If skin irritation persists, seek immediate medical attention.

INGESTION: If swallowed, promptly drink large amounts of water. DO NOT induce vomiting. Avoid alcohol. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Call a physician or poison control center immediately.

INHALATION: If inhaled, remove individual to fresh air. If breathing is difficult, have trained person administer oxygen. If not breathing, give artificial respiration. Call a physician immediately.

FIRE FIGHTING MEASURES

GENERAL HAZARD: There are no unusual fire and explosion hazards known.

EXTINGUISHING MEDIA: Water Fog.

FIRE FIGHTING PROCEDURES: Firefighters should wear full protective clothing and self-contained breathing apparatus (SCBA). Thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident.

ENGINEERING CONTROLS:

General room ventilation plus local exhaust should be used to minimize exposure to vapours.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE:

Wear goggles or safety glasses with side shields when handling this product.

SKIN: No special requirement.

RESPIRATORY: None required.

WORK HYGIENIC PRACTICES: Remove and wash contaminated clothing before reuse.

OTHER USE PRECAUTIONS:

Facilities storing or utilizing this material should be equipped with an eyewash and safety shower.

PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Odour: Slight
Appearance: Clear
Colour: Colourless
pH: ~6
Solubility in Water: Miscible in water
Specific Gravity: 1.04 g/ml

STABILITY AND REACTIVITY

CONDITIONS TO AVOID: High temperature. Poor ventilation. Contamination.

STABILITY: This product is stable under normal conditions.

POLYMERIZATION: Hazardous polymerization will not occur under normal conditions.

INCOMPATIBLE MATERIALS: Other swimming pool/spa chemicals in their concentrated forms. Bases and strong oxidizing agents.

HANDLING AND STORAGE

HANDLING:

Use safe chemical handling procedures for the hazards presented by this material.

STORAGE: Keep this product in original, closed container when not in use. Store in a cool, dry, well-ventilated area. Keep this product and all other chemicals out of reach of children.

ACCIDENTAL RELEASE MEASURES

GENERAL PROCEDURES:

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Using appropriate protective clothing and safety equipment, contain spilled material. Cover the liquid with an inert absorbent. Using clean dedicated equipment, weep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean, dry plastic containers for disposal. Dispose of according to municipal, provincial and federal regulations.

TOXICOLOGICAL INFORMATION

EYES

This product is irritating to eyes.

SKIN

This product is irritating to skin.

CARCINOGENICITY

This product is not listed as a carcinogen by IARC.

This product is not listed as a carcinogen by NTP.

This product is not listed as a carcinogen by OSHA.

ECOTOXICOLOGICAL INFORMATION

This product may be toxic to fish and aquatic organisms. Keep product from entering waterways and watersheds.

DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:

Disposal of unused, uncontaminated product is regulated according to municipal, provincial and federal regulations.

EMPTY CONTAINER:

Do not re-use container. Rinse thoroughly before discarding in trash.

NOTE: The above details constitute part information of MSDS taken from Canadian Centre for Occupational Health and Safety. For complete MSDS write to MIS division, Central Labour Institute, Sion, Mumbai.400022. MSDS on about 1,00,000 chemicals/materials are available with Central Labour Institute. Computer printout will be supplied on nominal charge basis.

LIBRARY AND INFORMATION CENTRE

The Library-cum-Information Centre of Central Labour Institute has unique and rare collection of different kind of publications in the field of Occupational Safety, Health, Management and allied subjects. It also has a good collection of different standards, codes, regulations on these matters. In the current year the centre is subscribing to 25 Indian & foreign journals, besides receiving complimentary copies of different periodicals from all over the world. The centre provides facilities for study and research and at the same time supplies authentic and up-to-date information on Occupational Safety, Health and Management. It also extends reading facilities to students & scholars attending different training programmes & courses conducted by CLI. From January 2001 till date a number of publications in the field of OS&H have been added to Library. Some of them are :

LABOUR ECONOMICS: Principles, Problems and Practices of Trade Unionism, Industrialisation, Wages, Social Security and I.L.O

Author: Jiwitesh Kumar Singh

Publisher: Deep & Deep Publications Pvt.Ltd., New Delhi

This book studies in depth problems and industrial relations the basic elements in the socio-economic life in a nation.

It intends to give a comprehensive survey of the field of labour economics, problems and industrial relations. It is divided into five

sections. Section I introduces characteristic features of labour in general and Indian labour in particular as well as Economic of Labour. Section II deals with different dimensions of the problems relating to trade unionism. Section III analyses various aspects of industrial relations and personnel management. Section IV is devoted to the study of problems relating to wages. The last section (Section V) deals with social security and the International Labour Organisation in the context of India.

PRACTICAL OCCUPATIONAL HEALTH

Author: W O Phoon

Publisher: PG Publishing Pvt Ltd, Singapore

This book is unabashedly a single-author book for mainly medical practitioners, students of medicine, and trainees in occupational health and safety. It lays emphasis on principles and practices which are generally applicable the whole world over. At the same time, regional differences are highlighted whenever appropriate. Many examples are also included largely from the author's own labour experience, either to drive home particular points or to make the subject more alive to the mind of the reader. Throughout the book, issues are examined from the perspective of the practitioner and the practical nature of the problems is accorded strong emphasis.

सरकारी उपक्रम बंद करने का इरादा नहीं : वाजपेयी

नई दिल्ली प्रधानमंत्री अटलबिहारी वाजपेयी ने श्रमिक जगत को आश्चर्य किया है की सरकार की ऊदारीकरण नीति और श्रम कानूनों में संशोधन की प्रक्रिया किसी भी तरह से मजदूर विरोधी नहीं है। श्रम कानूनों में संशोधन मजदूर संगठनों,नियोक्ताओं और अन्य सभी सम्बद्ध निकायों की सलाह से किए जाएंगे। उन्होंने आशा व्यक्त की कि दूसरा श्रम आयोग सरकार को शीघ्र ही अपनी रिपोर्ट दे देगा। इसकी सिफारिशों पर सरकार गम्भीरता से विचार करेगी।

श्री वाजपेयी ने सोमवार को श्रम क्षेत्र में सराहनीय योगदान के लिए २८ श्रमिकों को १७ श्रम पुरस्कारों से अलंकृत करते हुए कहा कि सरकार वैश्वीकरण की नीति का अंधाधुंध अनुसरण नहीं कर रही है। देश के विकास और आकांक्षाओं के लक्ष्य को ध्यान में रख कर ही यह नीति अपनाई जा रही है। तेजी से बढ़ रहे प्रतियोगी बाजार में भारत को अपना वजूद बनाना है तो इस दिशा में खुले दिमाग से सोचना होगा।

देश के सार्वजनिक क्षेत्र को भारतीय अर्थव्यवस्था का एक मजबूत स्तम्भ बताते हुए श्री वाजपेयी ने कहा कि सरकार केवल उन्हीं औद्योगिक इकाइयों को बंद करने के पक्ष में है जो पूरी तरह से रूग्ण हैं और पुनर्जीवित किए जाने की स्थिति में नहीं हैं। उन्होंने कहा कि सार्वजनिक उद्यमों के प्रति सरकार का रुख बहुत ही सकारात्मक है। इसमें किसी को भी संदेह नहीं होना चाहिए। सरकार चाहती है कि जो श्रम कानून अपना महत्व खो चुके हैं और नई आर्थिक व्यवस्थाओं के तहत सामयिक नहीं हैं, उनमें संशोधन किए जाएं। इससे भारत की अर्थव्यवस्था को गति मिलेगी। श्री वाजपेयी ने इस अवसर पर उपस्थित श्रमिक संगठनों के प्रतिनिधियों की तरफ मुखातिब होते हुए कहा कि श्रम संशोधनों की प्रक्रिया के दौरान उनके हितों का पूरा ध्यान ही नहीं रखा जाएगा बल्कि उन्हें पूरी तरह से संरक्षण प्राप्त हो, इस पर भी गौर किया जाएगा। श्रम जगत को यह सोचना है कि भारतीय बाजार को किस तरह प्रतियोगी बनाया जा सकता है।

इस अवसर पर सुपर थर्मल पावर स्टेशन (कोरबा, मध्य प्रदेश) के राघवन पिल्लै परमेश्वरन नायर को सर्वोच्च पुरस्कार श्रम रत्न से अलंकृत किया गया। श्री नायर को पुरस्कार स्वरूप दो लाख रुपए और सनद भेंट की गई। दो श्रमिकों को श्रम भूषण, छह को श्रम वीर और आठ को श्रम श्री एवं श्रम देवी पुरस्कारों से सम्मानित किया गया। केन्द्रीय श्रम मंत्री शरद यादव ने श्रम कल्याण के लिए चलाए जा रहे विभिन्न कार्यक्रमों की जानकारी दी।

स्रोत: नवभारत टाईम्स

Amendments to Labour Laws necessary: Government

New Delhi: The Government assured Rajya Sabha it is taking all necessary steps to safeguard legitimate interests of workers in various sectors, including small industries and factories.

Labour Minister Sharad Yadav said in a written reply that amendments to certain Labour Laws have become necessary in order to bring them in tune with emerging needs of the economy for higher productivity, competitiveness, higher level of investments, including foreign investment.

The Minister said government has not declared any labour policy under pressure of foreign investors.

To another query on whether government is inviting foreign direct investment only in those companies which are making profit, Shri Yadav said government does not discriminate between loss and profit-making companies.

Source: Times of India

INTERNATIONAL CONGRESS 2001

The International Congress on Humanizing Work and Work Environment (HWWE 2001) was held at IIT, Mumbai from 11th to 14th December 2001. The workshop was organised by the Ergoasia, a conglomeration of the International Ergonomics Association (IEA) and the Indian Society of Ergonomics (ISE). DGFASLI was one of the collaborators of the Congress and involved actively to organize the congress. An officer from Central Labour Institute was deputed to work as a member of the organizing committee. The congress was inaugurated by Prof. A. Misra, Director, IIT, Mumbai. Shri S.K. Saxena, Director General, Factory Advice Service & Labour Institutes, Mumbai, delivered a speech on the inaugural session along with other dignitaries. The International Ergonomics Association (IEA) sponsored an eminent ergonomist Prof. Pat Scott as its representative.

Thirteen keynote addresses were presented by eminent persons across the globe on various aspects of the congress theme. Shri S.K. Saxena, Director General, FASLI presented a keynote address on 'Humanizing work and work environment in industry: Role of DGFASLI'. Shri Saxena also spoke in the panel discussions on 'Women at Work'.

A total of about one hundred and seventy five abstracts were received for paper presentation from fifteen countries across the globe. Five Officers from the Central Labour Institute presented scientific papers on following areas:

1. "Heat Stress in a typical Steel Forging Plant" by Dr.S.K.Sensarma, Director Incharge (Industrial Ergonomics).

2. "Personal Protective Equipment- Respiratory" by Shri M.M. Alam Khan, Director Incharge (Industrial Hygiene).
3. "Aerobic Capacity of Dock Workers" by Shri P.C.Ghosh, Director Incharge (Industrial Physiology).
4. "Accident and Injury Prevention at Work Place" by Shri S.K. Dutta, Director Incharge (Industrial Safety)
5. "Suitability of Queen's College Test for Estimation of Aerobic Capacity of Indian Athletes" by Dr. R. Iqbal, Assistant Director (Industrial Physiology).

During the congress, three workshops were conducted as a part of the HWWE 2001 on the following areas:

1. Industrial Ergonomics
2. Human Computer Interaction
3. Fitness – Excellence in Performance

DGFASLI nominated nine officers from various divisions to participate in the workshop on 'Industrial Ergonomics' and two officers in the workshop on 'Human Computer Interaction'.

An officer from Central Labour Institute proposed the Vote of Thanks in the concluding session of the workshop on "Fitness – Excellence in Performance".

**TRAINING PROGRAMMES
APRIL TO JUNE 2002
CENTRAL LABOUR INSTITUTE ,SION, MUMBAI**

Programme title	Contact person
Associated Fellowship of Industrial Health	Director (Medical) & Incharge Indl. Medicine Division
Selection and Quality Assurance for effective use of PPE	Director (Indl.Hygiene) & Incharge Indl.Hygiene Division
Training Programme on Noise Hazards,Prevention & Control	Director (Physiology) & Incharge Indl.Env.Engineering Division
Ergonomics	Director (Physiology) & Incharge Indl.Ergonomics Division
Wage & Salary Management	Director (Productivity) & Incharge Productivity Division
Industrial Hygiene Techniques	Director (Indl.Hygiene) & Incharge Indl.Hygiene Division
Refresher Course for Safety Officers	Director (Safety) & Incharge Indl.Safety Division
Workshop on Counselling Skills Incharge	Director (Indl.Psychology) & Indl.Psychology Division
Industrial Heat	Director (Physiology) & Incharge Indl. Ergonomics Division
Workshop for Safety Committee Members	Director (Safety) & Incharge Indl.Safety Division
Resolving Stress & Trauma in Manual Material Handling – An Ergonomic Approach	Director (Physiology) & Incharge Indl.Psychology Division
Total Quality Management & ISO Incharge 9000- QMS	Director (Productivity) & Productivity Division
Training Programme on Industrial Safety for National Safety Council Maharashtra Chapter	Director (Safety) & Incharge Indl. Safety Division

Effective Supervision for Results	Director (Staff Trg.) & Incharge Staff Training Division
Training Programme on Emergency Planning and Preparedness in Major Accident Hazard Installations	Director (Hygiene) & Incharge MAHCA Division
Refresher course for Sr.Inspector of Factories	Director (Safety) & Incharge Incl.Safety Division

**TRAINING PROGRAMMES
APRIL TO JUNE 2002
REGIONAL LABOUR INSTITUTE ,LAKE TOWN , KOLKATA.700 089**

Programme title	Contact person
Prevention and Control of Fire in Industry for Worker Members of Safety Committee	Director Incharge
Safety Engineering and Management	Director Incharge
Techniques of Hazards Identification & Assessment	Director Incharge

**TRAINING PROGRAMMES
APRIL TO JUNE 2002
REGIONAL LABOUR INSTITUTE , CHENNAI**

Programme title	Contact person
Fire Prevention and Control	Director Incharge
Training programme on Heat Stress – Effects & Control	Director Incharge

Programme title	Contact person
Training programme on Safety Management in Engineering Industries	Director Incharge
Training programme on Evaluation and Control of Airborne Contaminants in Work Environment	Director Incharge

**TRAINING PROGRAMMES
APRIL TO JUNE 2002
REGIONAL LABOUR INSTITUTE, KANPUR**

Programme title	Contact person
Training programme on Prevention & Control of fire in Industry	Director Incharge
Training programme on Safety Audit	Director Incharge
Training programme on Safety & The Law	Director Incharge
Training programme on Safety Engineering & Management	Director Incharge
One month certificate course on Safety & Health for Supervisory Personnel working in Hazardous Processes.	Director Incharge

TRAINING PROGRAMMES
JANUARY TO DECEMBER 2002(TENTATIVE)
REGIONAL LABOUR INSTITUTE
S.C.F-46, SECTOR 19, PART-II MARKET, FARIDABAD 12102

Programme title	Contact person
Training programme on Effective Supervision in Managing Safety, Health & Better Environment	Deputy Director (Staff Trg./Prod)
Training programme on Team Building for Safety, Health and Welfare	Deputy Director (Staff Trg./Prod)
Training programme on Personal Growth and Group Dynamics	Deputy Director (Staff Trg./Prod)

इंडोश्नेट

भारत सरकार का श्रम मंत्रालय व्यवसायिक सुरक्षा और स्वास्थ्य सूचना प्रणाली पर इंडोश्नेट नामक राष्ट्रीय नेट वर्क का विकास कर रहा है। श्रम मंत्रालय का एक संबद्ध कार्यालय, कारखाना सलाह सेवा एवं श्रम संस्थान महानिदेशालय इस नेट वर्क प्रणाली के सफल कार्यान्वयन में सहायता देता है। इस नेट वर्क का उद्देश्य व्यवसायिक सुरक्षा और स्वास्थ्य संबंधी राष्ट्रीय जानकारी सुदृढ़ करना और लाभहानि रहित आधार पर इसका आदान-प्रदान करना है ताकि हमारे समग्र सूचना स्रोतों का परस्पर लाभ के लिए उपयोग हो सके। आपस में सूचना या जानकारी की यह सहभागिता केवल राष्ट्रीय स्तर तक ही सीमित नहीं होगी बल्कि इसमें अंतर्राष्ट्रीय स्रोत भी शामिल होंगे। इस जानकारी का आदान-प्रदान ई-मेल के साथ-साथ डाक/कुरियर सेवा द्वारा किया जाएगा। यदि औद्योगिक संगठनों, संस्थानों, उद्योग संघों, मजदूर संघों, व्यवसायिक निकायों और गैरसरकारी संगठनों के पास व्यवसायिक सुरक्षा स्वास्थ्य संबंधी कोई जानकारी हो और वे राष्ट्रीय और अंतर्राष्ट्रीय स्तर पर उक्त जानकारी बाँटना चाहते हों तो कारखाना सलाह सेवा एवं श्रम संस्थान महानिदेशालय की ओर से इस नेट वर्क के सदस्य के रूप में भाग लेने के लिए उनका स्वागत है। इच्छुक इकाइयों संगठनात्मक रूपरेखा संबंधी प्रोफार्मा के लिए महानिदेशक, कारखाना सलाह सेवा एवं श्रम संस्थान महानिदेशालय, केंद्रीय श्रम संस्थान भवन, एन.एस.मंकीकर मार्ग, सायन, मुंबई-४०० ०२२ से संपर्क करें।

टिप्पणी : जिन इकाइयों ने हमारे पहले आग्रह के संदर्भ में संपर्क किया है और निर्धारित प्रोफार्मा में रूपरेखा भेज दी है, वे दुबारा आवेदन न करें।

नेशनल रेफरल डायग्नोस्टिक सेंटर

भौतिक, रासायनिक, जैविक तथा मनो-सामाजिक जैसे विभिन्न कारणों से कामगारों पर होने वाले विपरीत स्वास्थ्य प्रभावों की रोकथाम और नियंत्रण करने के लिए व्यावसायिक स्वास्थ्य विकार और व्यावसायिक रोगों की शीघ्र पहचान और उसका निदान एक प्रमुख पहलू है। व्यावसायिक रोगों का शीघ्र पता लगाने और निदान करने के लिए केंद्रीय श्रम संस्थान, मुंबई के औद्योगिक चिकित्सा प्रभाग के अधीन 'नेशनल रेफरल डायग्नोस्टिक सेंटर' कार्यरत है जो व्यावसायिक स्वास्थ्य समस्याओं / व्यावसायिक रोगों की रोकथाम / नियंत्रण के लिए आवश्यक उपायसुझाता है। प्रभावित कामगारों की चिकित्सीय जाँच के लिए यह निदान केंद्र पूर्णतया सज्जित है और यहाँ श्वास/धमनी संबंधी जाँच, श्रव्यता मापन, ई.सी.जी., टिट्मस दृष्टि जाँच, जैविक निगरानी आदि के लिए सुविधाएँ उपलब्ध हैं। कारखाना चिकित्सा अधिकारी, ई.एस.आई. डॉक्टर, कारखानों के चिकित्सा निरीक्षक सहित व्यावसायिक चिकित्सक तथा मेडिकल कॉलेज और अस्पतालों के प्रमाणित शल्य चिकित्सक और डॉक्टर व्यावसायिक रोगों के संदेहास्पद रोगी, निदान और परामर्श के लिए इस केंद्र में भेज सकते हैं। इस मामले में अधिक जानकारी के लिए महानिदेशक, कारखाना सलाह सेवा एवं श्रम संस्थान महानिदेशालय, केंद्रीय श्रम संस्थान भवन, एन.एस.मंकीकर मार्ग, सायन, मुंबई-४०० ०२२ से संपर्क करें।

INDOSHNET

Ministry of Labour, Government of India, is developing a National Network on Occupational Safety and Health information system known as INDOSHNET. Directorate General Factory Advice Service & Labour Institutes (DGFASLI), an attached office of the Ministry of Labour will act as a facilitator of the network system. The objective of the network is reinforcement and sharing of national occupational safety and health (OS &H) information on no-profit no-loss basis with a view to pooling our information resources for mutual benefit. The sharing of information will not only confine to the national level but also includes international sources. The communication of information will be through E-mail as well as postal/courier service. DGFASLI invites industrial organisations, institutions, industry associations, trade unions, professional bodies and non-governmental organisations having information on OS&H and willing to share the same with others at the national and international level to participate as members in the network. Interested agencies may please write for proforma of organisational profile to Director General, DGFASLI, Central Labour Institute Bldg., N.S. Mankikar Marg, Sion, Mumbai 400 022.

Note: Those who have responded to our earlier communication and sent organisation profile in the prescribed format need not write again.

NATIONAL REFERRAL DIAGNOSTIC CENTRE

Early detection and diagnosis of occupational health disorders and occupational diseases is one of the most important factors in the prevention and control of adverse health effects on workers due to various factors - physical, chemical, biological and psycho-social. The Industrial Medicine Division of Central Labour Institute, Mumbai runs a National Referral Diagnostic Centre (N.R.D.C.) for early detection and diagnosis of occupational diseases and recommends necessary measures for prevention/control of occupational health problems/occupational diseases. The diagnostic centre is well equipped for medical examination of the exposed workers and facilities are available for carrying out special investigation, e.g. Pulmonary function tests, Audiometry, ECG, Titmus vision test, Biological monitoring, etc. Medical professionals including Factory Medical Officers, ESI Doctors, Medical Inspectors of Factories and Certifying Surgeons, Doctors from Medical Colleges and Hospitals can refer suspected cases of occupational diseases to N.R.D.C. for diagnosis and advice. The communication should be addressed to the Director General, DGFASLI, Central Labour Institute Bldg., N.S. Mankikar Marg, Sion, Mumbai 400 022 for further details.

‘इंडोश्यूज़’ एक त्रैमासिक समाचार पत्र है जो व्यावसायिक सुरक्षा और स्वास्थ्य के क्षेत्र में अनुसंधान, ध्ययन और सर्वेक्षण के माध्यम से उपलब्ध जानकारी तथा तत्संबंधी विचार विनिमय में अत्यंत सहायक है । कारखाना सलाह सेवा एवं श्रम संस्थान उन व्यक्तियों, उद्योगों, औद्योगिक संगठनों, मज़दूर संघों और व्यावसायिक निकायों से लेख आमंत्रित करता है जिनके पास व्यावसायिक सुरक्षा एवं स्वास्थ्य संबंधी जानकारी है तथा जो उसे स्वेच्छा से दूसरों में बाँटना चाहते हैं ।

१. प्रकाशन के लिए पांडुलिपि की दो प्रतियां ‘डबल स्पेस’ में ए-४ आकार के कागज़ पर एक ओर टाइप किए गए लेख जो ३ या ४ पृष्ठ से अधिक न हों, मुख्य संपादक के पास भेजी जानी चाहिए । कोई फ़ोटो छापा नहीं जाएगा ।
२. प्रकाशन के लिए स्वीकृत पांडुलिपियों में प्रकाशन की दृष्टि से आवश्यक संपादकीय परिवर्तन करने का अधिकार प्रकाशक का है । प्रकाशक बिना कोई कारण बताए लेख का प्रकाशन नहीं भी कर सकता है ।
३. लेखक अपने लेख में दिए गए आँकड़े तथा संदर्भ स्वयं सुनिश्चित करने में सावधानी बरतें ।

INOSHNEWS is a quarterly newsletter that facilitates exchange of ideas and data developed through research, study and surveys in the areas of occupational safety and health. DGFASLI invites articles from individuals, industry, industrial associations, trade unions, professional bodies etc. having information on OS & H and willing to share the same with others at the national and international level.

- 1. Manuscripts for publication should be typed in double space within 3 to 4 A4 size sheets only on one side of the paper and sent in duplicate to the Editor-in-Chief. No photographs can be published.**
- 2. Once the manuscripts are accepted for publication, publisher reserves the right to make editorial changes as may be necessary to make the article suitable for publication; and publisher reserves the right not to proceed with publication for whatever reason.**
- 3. Authors should take care to ensure the accuracy of data and reference.**

भारत सरकार, श्रम मंत्रालय
कारखाना सलाह सेवा एवं श्रम संस्थान महानिदेशालय

कारखाना सलाह सेवा एवं श्रम संस्थान महानिदेशालय इंडीजीफासलीट भारत सरकार के श्रम मंत्रालय का एक संबद्ध कार्यालय है। कारखानों और गोदी में व्यावसायिक सुरक्षा और स्वास्थ्य संबंधी नीति बनाने के लिए तथा कार्य स्थलों पर कामगारों की सुरक्षा, स्वास्थ्य, दक्षता संबंधी मामलों पर राज्य सरकारों और कारखानों को परामर्श देने की दृष्टि से १९४५ में भारत सरकार के श्रम मंत्रालय के अधीन डीजीफासली की स्थापना की गई थी। यह महानिदेशालय देश के प्रमुख पत्तनों में सुरक्षा एवं स्वास्थ्य संबंधी नियम भी लागू कराता है।

कारखाना सलाह सेवा और श्रम मंत्रालय संस्थान महानिदेशालय इंडीजीफासलीट के निम्नलिखित अंग हैं:

- मुंबई स्थित मुख्यालय;
- मुंबई स्थित केंद्रीय श्रम संस्थान और
- कोलकाता, चेन्नई, फरीदाबाद और कानपुर स्थित क्षेत्रीय श्रम संस्थान।

मुंबई स्थित केंद्रीय श्रम संस्थान समाजार्थिक प्रयोगशाला के रूप में कार्य करता है और यह मानवीय पहलुओं से संबंधित औद्योगिक विकास के सभी पक्षों के वैज्ञानिक अध्ययन का एक राष्ट्रीय संस्थान है।

पिछले ३३ वर्षों में केंद्रीय श्रम संस्थान का केवल आकार की दृष्टि से ही नहीं बल्कि महत्ता की दृष्टि से भी विकास हुआ है और इसने राष्ट्रीय तथा अंतर्राष्ट्रीय स्तर पर मान्यता प्राप्त की है। एशिया और पैसिफिक क्षेत्र में व्यावसायिक सुरक्षा और स्वास्थ्य पर सर्वोत्कृष्ट प्रशिक्षण केंद्र के रूप में अंतर्राष्ट्रीय श्रम संगठन ने मान्यता प्रदान की है। यह सीआईएस इअंतर्राष्ट्रीय व्यावसायिक सुरक्षा और स्वास्थ्य सूचना केंद्र टके राष्ट्रीय केंद्र तथा राष्ट्रीय सुरक्षा एवं स्वास्थ्य जोखिम सतर्कता प्रणाली के केंद्र के रूप में कार्य करता है। राष्ट्रीय स्तर पर सरकार को अनुसंधान और प्रशिक्षण सुविधा उपलब्ध कराने और श्रम मंत्रालय के तकनीकी सहायक के रूप में कार्य करने के अलावा यह संस्थान अध्ययन, तकनीकी परामर्श, प्रशिक्षण और सूचना प्रसार के माध्यम से औद्योगिक पत्तन सेक्टर को गहन और बहु-आयामी सेवा उपलब्ध कराता है। इसके अधीन, व्यावसायिक विकारों की शीघ्र पहचान और उसके नियंत्रण और रोकथाम के लिए रेफरल डायग्नोस्टिक सेंटर कार्यरत है। सुरक्षा और स्वास्थ्य से संबंधित स्तरीय यू-मैटिक वीडियो फिल्मों के निर्माण के लिए परिष्कृत उपकरणों से सज्जित एक आधुनिक ऑडियो विजुअल स्टूडियो उपलब्ध है। केंद्रीय श्रम संस्थान के लघु रूप में क्षेत्रीय श्रम संस्थान हैं जो अपने संबद्ध क्षेत्रों की आवश्यकता पूरी करते हैं।

निरंतर बढ़ती माँग को देखते हुए, इस संगठन का आगे विकास हो रहा है। किसी विकासशील देश में विभिन्न और जटिल प्रकृति के उद्योगों की बड़ी संख्या को देखते हुए, कामगारों की सुरक्षा और स्वास्थ्य एक चुनौतीपूर्ण कार्य है। तकनीक, औद्योगिक समाज की साख और समर्पित कर्मचारियों से सज्जित यह संगठन भविष्य की चुनौतियों का सामना करने में सक्षम है। कार्य स्थल सुरक्षित बनाने के अपने लक्ष्य के लिए यह संगठन प्रतिबद्ध है।

Visit us at: www.dgfasli.nic.in

**GOVERNMENT OF INDIA, MINISTRY OF LABOUR
DIRECTORATE GENERAL FACTORY ADVICE SERVICE & LABOUR
INSTITUTES**

The Directorate General Factory Advice Service & Labour Institutes (DGFASLI) is an attached office of the Ministry of Labour, Government of India. DGFASLI organisation was set up in 1945 under the Ministry of Labour, Government of India to serve as a technical arm to assist the Ministry in formulating national policies on occupational safety and health in factories and docks and to advise State Governments and factories on matters concerning safety, health, efficiency and well-being of the persons at workplace. It also enforces safety and health statutes in major ports of the country.

The Directorate General Factory Advice Service & Labour Institutes (DGFASLI) comprises:

- * Headquarters situated in Mumbai
- * Central Labour Institute in Mumbai
- * Regional Labour Institutes in Kolkata, Chennai, Faridabad and Kanpur

The Central Labour Institute in Mumbai functions as a socio-economic laboratory and is a national institute dealing with the scientific study of all aspects of industrial development relating to the human factors.

Over the past 33 years the Central Labour Institute has constantly grown not only in size but also in stature and has earned national and international recognition. It has been recognised by the International Labour Organisation as a Centre of Excellence in training on Occupational Safety and Health in the Asian and Pacific Region. It also functions as a National Centre for CIS (International Occupational Safety and Health Information Centre) and the Centre for National Safety and Health Hazard Alert System. At the national level, apart from providing research and training support to the Government and functioning as a technical arm of the Ministry of Labour, the institute provides comprehensive and multi-disciplinary services to the Industrial Port sector through studies, technical advice, training and dissemination of information. It also runs National Referral Diagnostic Centre for early detection of occupational disorders and thereby controls and prevents them. It has a modern Audio Visual Studio fully equipped with sophisticated video production equipment to produce quality U-matic video films on Safety and Health. The Regional Labour Institutes are a scaled-down version of the Central Labour Institute and cater to the needs of their respective regions.

The organisation is poised to grow further, and meet the increased demands on it. In a developing country with a large number of industries having diverse and complex nature, the task of protecting safety and health of workers is an uphill task. Armed with the technology, good-will of the industrial society and the strength of the dedicated staff, the organisation is well prepared to meet the challenges of tomorrow. It is committed to the goal of making the workplace safer.

Visit us at : www.dgfasli.nic.in

