CHAPTER 10

FINDINGS AND RECOMMENDATIONS
FINDINGS

- An industrial accident is an event which is neither anticipated nor designed to occur. It arises in the course of employment in a factory or industrial establishment. The nature of an accident may differ from industry to industry. It may injure an employee, may result in disablement or death.

- Prevention of accident is a must. It is the responsibility of each and every one of us. Well planned accident prevention programme will reduce/eliminate bad effect/consequences of social, economical, legal and human aspects of society at large.

- Formation of safety committee, safety groups and appointment of safety monitors work centre plays a major role in accident prevention programme.

- Employee's active involvement and management's concern and full support is essential to create productive and safe working relationship throughout the organisation.

- Employee's participation in management's activities is now vividly seen through various open forums such as Quality circles, Co-operative Society, Welfare Committees, Trusts etc. Similarly, involvement of employees the organisation of SAFETY will definitely prove mutually beneficial.

- Industrial accidents are regarded as a menace to the community from individual, industrial and natural point of view.

From the Point of view of an Individual

1. Accidents cause danger to lives. 2. Sometimes accidents are fatal. In such cases it is difficult to judge the loss also. 3. An accident may cause permanent disability. 4. Disabled persons are permanent burden on the Nation. 5. An accident is a personal loss. 6. Due to accident the workers family gets disturbed. 7. If the worker loses his limbs, legs, hands etc. his efficiency gets hampered. 8. The worker mentally gets disturbed. 9. Accidents cause instability among the labours, mental, physical, social workability and create unnecessary disturbances in employer employee relations.
From the point of view of the Industry

1. Industry suffers a financial loss due to medical assistance, reinstallation of machinery. This is national waste. 2. Industry suffers a loss of man hours, finance revenue, as well as it is harmful for the goodwill. 3. It causes discomfort among the workers. The employees lead to strikes and thus productivity gets affected. 4. Due to mistake of one worker whole industry has to suffer a loss.

Other Opinions

1. Industrial accidents should not be considered a menace to community. 2. Industrial accident is a national waste. 3. Sufferer becomes a burden to the society. 4. From the national point of view, it seems that the industry is negligent in the safety of workers. 5. Accidents have social impact also e.g. Bhopal gas tragedy. 6. Accident certainly affects quality of the product.

IMPACT OF INDUSTRIAL ACCIDENTS

Impact on the employees: 1. An industrial accident may result in Mental disability, 2. Physical disability, 3. Nervousness, 4. Fear to work, 5. Frustration, 6. It is individual loss, 7. Sometimes accidents are fatal, the loss cannot be judged, 6. If the worker has lost his limbs legs, hands, etc. his efficiency is hampered, 7. Employees become more alert, 8. Workers feel insecure.

Impact on the trade union: 1. Frustration, insecurity about the future, temptation to work study, 2. The union is held responsible by the management, 3. Unions try to protest, 4. It creates conflicts between the union and the management, 5. It may spoil industrial relations with the labour, 6. Bargaining for the safe working conditions.

Impact on the Management: 1. Accident exposes inefficiency of the management, 2. The management suffers less of revenue and man hours, 3. Accident gets bad name, 4. Managements have to spend more money to reduce the number of accidents, 5. The work schedule gets disturbed, 6. Prompt enforcement of the law, 6. Managements have to face statutory problems, 7. Loss of compensation, 8. Loss of production.
Impact on society: 1. Society has a feeling of insecurity about the organisation. It refuses to co-operate, 2. Any loss to individual, management or union is a loss to the society, 3. Disabled person is a permanent liability to the society, 4. Industries become sick and hence development cannot take place, 5. Economic instability to the society.

The following are the main causes of accidents:


Situations for repeated accidents and its reasons

The accident may take place in the industry. It should be observed that accidents should not repeat and if repeated, it is necessary to see the reasons for it. Following are the situations for repeated accidents and its reasons.

1. Eye injury Foreign particles have harmed the workers.
   Reason: Workers do not use personal protective equipments of eye protection.

   Reason: Unsafe material handling
   Inadequate maintenance inspection system.

3. Electrical accidents:
   Reason: Short circuits

4. Occurrence of repeated accidents:
   Reasons: (1) Safety equipments are not being used by the employees, (2) Lack of education to the workers about safety, (3) Lack of proper safety measures.
Growing age increases the number accidents:

The reasons are: 1. Due to age the physical weakness results into accidents, 2. Young workers are reckless in work, 3. Young workers are over confident they have lack of experience, 4. Workers loose eyesight, they have blood pressure, 5. Young workers are of lack of knowledge, 6. Sometimes elder workers are also overconfident.

Growing age decreases accidents:

The reasons are: 1. Man becomes mature, keeps his eyes open, 2. Workers become more cautious due to growing of age and the more cautious about safety.

Experience increases accidents:

The reasons are: 1. Due to experience, an attitude is developed that the person is a master, 2. The operator becomes overconfident, 3. He feels that he is experienced and hence does not require safety equipment, 4. Less experience means lack of knowledge.

Experience decreases accidents:

The reasons are: 1. Experience teaches a man lot. He keeps his eyes and ears open.

Supervision increases accidents:

Main reasons are: 1. Insufficient supervision, 2. Carelessness about supervision, 3. There is no supervision at all, 4. No quality check-ups.

Supervision decreases accidents:

Reasons are: 1. Proper and regular supervision, 2. There is strict supervision, 3. Supervisor guides the new comer and trains the new comers.

There is not even a single company against which a worker or group of workers or a trade union, had filed a case in the civil, labour or High Court after the accident. In case of accidents full compensation has been paid by the management and the employees are treated well. The family of the workers are also taken into confidence.

Help of foreign delegates or foreign consultants was not taken in the case of accidents.
Generally the factors responsible for the industrial accidents can be grouped as under:

1. **Insecured atmosphere**: Wrongly structured construction, insufficient lighting, wet-floor humidity, slippery land, open moving machinery parts, chemical pollution, suffocated atmosphere, narrow deficiency staircases, sharp, hot and humid weather, sudden turnings, uncertified steps, oxygen deficiency.

2. **Accidents due to workers**: Indisciplined and childish behaviour of workers, workers lack of knowledge about machinery, over smartness, daring, quarrels, insufficient knowledge and experience, ENT handicapped, mental disorders.

3. **Accidents due to management**: Untrained workers, faulty machine arrangement, indisciplined atmosphere, excessive workload, faulty electrification/wiring, lack of safety tools and instruments.

- Primarily there are three types of accidents which are:
  
  (i) **Minor Accidents** taking place in industries:

  (ii) **Serious accidents**

  (iii) **Major or very serious accidents**

  (i) **Minor Accidents**: Such accidents require less than 48 hours period is sufficient for getting cured. Small wounds, scratches, electric mild shock, *muka mar* etc. Minor accidents do not affect on production process. The percentage of such accidents is more.
(ii) **Serious Accidents**: Such accidents need more than 48 hours to get cured. Deep wounds, bleeding, bones fracture etc. Such accidents are of serious nature and it certainly affects the process of production.

(iii) **Major or very serious accidents**: Very serious accidents may result into the death of the worker. Percentage of such accidents is less but such accidents are very unfortunate.

- Whatever type of accident takes place, then supervisor of concerned department is directly or indirectly is held responsible.

- **Investigation of Accident**

  Investigation is important to know the causes of accident. The following factors are important in investigation:

  (i) Exact time of accident
  (ii) Witnesses of accident
  (iii) Report of the person who had met with an accident
  (iv) Exact reasons of accident
  (v) Factors responsible for accident.

**RECOMMENDATIONS**

- Considering the huge cost of accident and its effects on the organisation, comprehensive accident prevention programme should be planned and implemented in the company.

- Enforcement of safety rules and regulations, adhering to instructions of safe working will definitely prevent and eliminate accidents and occurrences which damage plants properly.
On going training and education activity promoting safety awareness among employees at all level will positively help in executing accident prevention programme.

The prevention of accidents and safety are inter-related and requires a multi-dimensional approach.

If the company incurs the cost of the safety then we can save an accidental consequences. Safety is not just accident prevention but total prevention of any possibility of hazard. If the cost of safety is not incurred then not only we have to take risk of accidents but also the cost of damages and its causes which are not easy to measure. It can create emotional instability, fear, rejections in the work quality not upto the mark etc.

Accident is the stigma on all the aspects of company's name Accidents can cause human loss as well as financial loss to the company. They are two sides of the same coin. Accidents cannot be prevented unless safety is provided. Safety and accident prevention techniques helps the workers to work easily and tension free. They be for the benefit of the company.

Creating safety awareness amongst the employees and their family members in the work situation as well as in every day life is necessary for any Industrial Organisation. Celebration of Safety Week is one such effort towards this movement. The safety week can be celebrated in the month of March and it can begin on 4th March, the NATIONAL SAFETY DAY. During the Safety Week a special safety audit of all the Divisions including that the contract labour can be conducted. The SAFETY OATH can be taken by all individual employees in groups in all the Divisions at a given time on the day. Cultural events emphasising safety measures can be presented during a function where prizes for the best posters, essays, and slogans on safety can be given to the winners of the competitions by the Chief Guest of the day. Such competitions can be taken twice a year in which employees as well as their family members should be allowed to participate.

Recognition for the efforts made, qualities shown and achievements accomplished always remains a great motivational force for an individual employee for further progress and satisfaction. It further enhances the
individual's performance when such recognition is given the presence of his fellow being. These functions should be held as and when the occasion arises.

☐ FACTORS TO BE INCORPORATED WHILE ORGANISING A SAFETY PROGRAMME

(a) Collecting accident data: Collection of data is useful in training. It creates awareness among the workers, it helps in investigations.

(b) Investigation of accidents: This provides details where we have gone wrong. These reasons can be avoided so that in future such accidents will not occur.

(c) Help in developing engineering applications: This may not be included in organising a safety programme however in engineering applications certain safety measures can be taken.

(d) Conducting safety training: This is of top most priority in conducting safety programme. We cannot have safety programme without proper planning for safety training. It should be given at all levels i.e. lower level, middle level, top level management.

(e) Information meetings by management personnel: Information meetings also should be part and parcel of safety management programme. With this safe working conditions can be introduced.

(f) Introducing safe working procedures: Safe working procedures is execution part of the safety programme. Whatever is decided in policy and programme is to be introduced in safe working conditions.

(g) Preparing instruction material by safety foreman: In safety programme, for training purpose instruction materials is required by the safety foreman who provides practical guidelines and not theoretical.

(h) Appointing safety officer: By appointing safety officer number of accidents can be reduced. This will facilitate routine checkup of machinery, equipment environment etc.
(i) **Safety policy, safety education, safety publications** : This is long-term measure and application in safety programme. This will be related with legal requirements and rules and regulations also in consultation with the unions.

### THE IMPORTANCE OF DEVELOPING SAFE HABITS AMONG THE WORKERS

1. Safe habits are useful to both the workers and the management, 2. Safe habits are helpful in avoiding accidents and mishaps, 3. Safe habit helps to develops personality of an individual, 4. One becomes aware about his responsibility, 5. There is increase in morale due to safe habit, 6. A worker can work more easily and freely, 7. Qualitative production becomes possible, 8. Quantity of production increases, 9. Development of safe working conditions become possible, 10. Accidents can be prevented, 11. Employees will become less negligent, 12. Hygienic point is very important, 13. Workers will get mental peace, 14. Safe habit is advantageous to organisation, 15. Safe habit provides safe working environment, 16. The workers can actively participate in the training programme, 17. One can save the life of a worker, 18. Workers can be made alert about the hazardous injuries caused by the accidents, 19. Employees can work with proper guidance without any faults and mistakes, 20. Employees do not have consequent of any misdeed, 21. Environment will be clean and tidy, 22. No loss to man, machine and material, 23. Loss of productive time can be avoided, 24. Delay in work can be avoided, 25. Safety habit helps to develop good behaviour.

### THE ROLE AND RESPONSIBILITIES OF THE EMPLOYERS UNION, MANAGEMENT, SOCIETY TO PREVENT THE ACCIDENTS

A. **Role and responsibilities of the employees** : 1. The employees should abide by safety rules, 2. Work as per process layout, 3. Abide by law, 4. Implement and apply sense of mind to work safely, 5. Innovate ideas for safe working conditions, 6. To keep emotional stability, 7. The workers must be made aware of the causes of accidents, 8. To inform the management regarding any problem arising with machinery.
B. Role and responsibilities of the trade unions: 1. To see that all workers are abide by safety norms, 2. To see that the management also follows safety rules, 3. To educate the employees, 4. The union must re-inforce the instructions, 5. To lay down precautionary measures, 6. The trade union should explain the consequences of the accidents to the workers.

C. Role and responsibilities of the management: 1. The management should see that all the norms laid down by the Government are implemented, 2. To act upon the suggestions made by the workers and the union, 3. The management must motivate workers to follow the safety rules, 4. To see safety equipment is up to date, 5. To lay down the precautionary measures, 6. Training programmes to be conducted.

D. Role and Responsibilities of the society: 1. Society must be aware, 2. Society can help in spreading safety methods, 3. Society should act as a body of exerting pressure on employee union.

MEASURES TO AVOID OR REDUCE THE NUMBER OF ACCIDENTS

Measure 1: Periodic inspection by the technical officers it: 1. guarantees safety, 2. will definitely reduce the number of accidents, 3. improves proper working conditions, 4. ensures that everything is in order, 5. helps workers to be alert, 6. keeps a check on the staff safety aspects, 7. helps the machines to put in proper working conditions, 8. helps in finding out exact cause of accident, 9. will keep in touch about the condition of the machines working, 10. helps us in maintaining the machines and its smooth flow.

Measure 2: Appointment of the inquiry committee: 1. The recommendations of the investigation committee should be implemented as far as possible, 2. It avoids any fault, 3. It creates awareness, 4. This will throw light on the main purpose behind the accident, 5. It creates some reliability among the workers, 6. Workers faith in company increases.

Measure 3: Advice to the employers and State Government to ensure the health and the safety of the workers: 1. Not very effective measure, 2. It passes on the responsibility down the line and make people accountable, 3. This will alert the workers not to drink during the office hours.
Measure 4: Bulletins and posters illustrating some of the common causes of the accidents in the factories:
1. This is the best method of communication to create an awareness,
2. It brings awareness and education to the staff,
3. Publish internal magazines,
4. They will come to know the causes of accidents,
5. Bulletins and posters work on psychology of the workers and makes much careful,
6. This will alert the factory management about the accidents.

Measure 5: Work of accident prevention by voluntary bodies such as SAFETY FIRST ASSOCIATION etc.:
1. Safety First Association conduct seminars and give free booklets,
2. Nobody is bothered about the workers, they are just watchers, not doers,
3. This will bring the factory and their workers in one level.

PREVENTION OF INDUSTRIAL ACCIDENTS AND PRECAUTIONS REQUIRED FOR THE INDUSTRY

In order to avoid industrial accidents the following precautions can be suggested:

(1) A proper training should be given to workers,
(2) Unsafe acts and unsafe conditions should be prevented,
(3) Strict adherence of safety rules using safety measures,
(4) Maintaining good housekeeping,
(5) Looking after labour welfare,
(6) Good maintenance helps to maintain good atmosphere,
(7) Safety culture should be developed,
(8) There should be proper maintenance of machines and equipments,
(9) Regular check up of the workers is essential,
(10) Educating the workers about safety measures from time to time,
(11) Safety Inspectors should be appointed,
(12) By providing necessary facilities to the workers for avoiding mistakes and replacing outdated machinery and maintaining it timely,
(13) There should be proper handling of machinery equipment,
(14) Every worker should be trained for first aid,
(15) Safety awareness programmes to be conducted frequently,
(16) Machines should be kept up to date,
(17) Proper interaction with the employees,
(18) Providing safety equipment to workers,
(19) Periodic inspection of technical officers,
(20) Sufficient space between two machines should be maintained,
(21) Faulty machines are to be replaced,
(22) There should be sufficient lighting and ventilation.
Accidents are a serious source of waste yet the figures in the Annual Reports of the Chief Inspector of factories show that over 80 per cent of factory accidents are due to human carelessness and failure. Well organised safety scheme can considerably reduce the incidence of accidents. In addition to maintaining health of workers the following are the essentials of any accident prevention scheme:

1. The appointment of a full or part time safety officer to whom can be delegated much of the work outlined below.

2. Instruction of all new employees on safe working methods through personal talks, films, lectures, demonstrations and pamphlets.

3. Careful and frequent inspection of the works to ensure that gangways are clear, works tidiness and good housekeeping are basic in any safety programme.

4. Provision of overall, special protective clothing, caps, goggles and respirators whenever these are necessary and supervision to ensure that such equipment is properly used and maintained.

5. Training of men and women in the works in first-aid and arrangements for refreshers courses.

6. Ensuring that even the most trivial accidents are reported to the first-aid room and that the employees attend for re-dressings while they are at work.

7. Keeping full records of all accidents and treatment in the first aid room. Analysing frequency and severity of accidents.

Accidents are a serious source of waste due to human carelessness and failure. Well organised safety schemes can considerably reduce the incidence of accidents.

Proper instructions and training to the employees on safe working methods should be given. It can be given through personal talks, films, lectures, demonstrations etc.

Provision of special protective clothings, caps, shoes etc. should be given to the workers as well as the workers should also benefit themselves with the facilities provided.
Every industrial undertaking must ensure good safety performance. The thrust of all activities, such as enforcement of safety legislation and training, educational, promotional and motivational activities in the Pune region as well as in whole country should be geared towards these activities. Employers should accept their statutory as well as voluntary responsibilities on safety without any reservations. Greater emphasis must be laid on the acceptance of voluntary responsibility by creating awareness and self-motivation.

Role of a manager at the time of Accident:

All events taking place on the shop floor for that supervisor of the concerned department is directly or indirectly responsible. Thus, he will have to take care to see that no accident will take place and safety will be maintained. He must have first-aid knowledge. He should not loose his courage. He will have to inspire confidence in others. He have to send message regarding occurrence of the accident immediately and while doing so he will have to see and maintain uninterrupted production process. The manager/supervisor will have fulfill such responsibilities.

There should be sufficient awareness amongst workers regarding accidents and safety. There is always less safety enviornment to reduce the percentage of accidents.

Lectures, seminars, workshops, meetings should he held. Proper discussions must he held regarding the causes of accidents which have occurred in the company.

Essay competitions, drawings, competitions, communication message, competitions should he organised on and industrial safety. Prizes must be announced.

Those employees who have rendered their services without any accident shuld be felicitated.
Articles written by experts on Accidents and its prevention should be published in monthly magazines/periodicals published by the company.

Safety committee should be formed and workers should be given participation in the same. Thus, Company Management can explain the importance of industrial safety to its workers. Industrial accidents as well as road accidents can be reduced by taking care and by observing safety rules only and we can make our life happy.

Certain suggestions regarding Accident Report
1. All papers should be kept at centralised place,
2. These papers should be made available for the purpose of inspection to the concerned workers,
3. Specimen papers should be printed,
4. The seniors must be aware of the use of registered papers.

In modern days, it is better to keep computerised data regarding accidents. It is useful for social welfare officer, Insurance company and Police.

Certain suggestions regarding investigation of accident
1. Investigation work should be started as early as possible.
2. In depth study of proofs should be made.
3. There should be maximum number of witnesses – ‘Truth’ in the same should be analysed.
4. Investigation work should be carried on at the place of accident.
5. Complete secrecy should be maintained till the investigation report is sent to the concerned officer.