

Health and Safety Measures on Works in Industry

Manjunath.V¹, Selvaraj.G², Prabhu.R³

PG Scholar, Department of Industrial Safety Engineering, Selvam College of Technology, Namakkal,
Tamilnadu, India¹

Assistant Professor, Department of Mechanical Engineering, Selvam College of Technology, Namakkal,
Tamilnadu, India.^{2,4,5}

Principal & Professor, Selvam College of Technology, Namakkal, Tamilnadu, India.³

ABSTRACT: The study is focused on how to model and assess safety at industrial installations. A starting point was the concept of safety function, which is defined as a technical, organizational or combined function, which can reduce the probability and/or consequences of a set of hazards in a specific system. A tentative theoretical framework has been developed. In a case study, a workplace at a process industry was analyzed. A number of safety functions were identified and characterized according to the frame-work. The efficiency of these safety functions was assessed, and a few different approaches were tried in this evaluation. A conclusion was that the safety function concept worked well in the practical analysis of the safety in the proposed system. It was also clear that there is a need for further improvement of the theoretical framework, and a number of ideas came up during the case study.

KEYWORDS: The concept of safety function, which is defined as a technical, organizational or combined function.

I. INTRODUCTION

Due to rapid industrialization, industrial workers are exposed to several types of hazards and accidents. Every year lakhs of workers are injured due to mechanical, chemical, electrical and radiation hazards and it leads to partial or total disablement. So in recent years, greater attention is given to health and safety due to pressure from government, trade unions, labor laws and awareness of employers.

The efficiency of workers depends to a great extends on the environment in which the work. Work environment consists of all the factors, which act and react on the body and mind of an employee. Occupational health and safety is a discipline with a broad scope involving many specialized fields.

- a) The promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations.
- b) The prevention among workers of adverse effects on health caused by their working conditions.
- c) The protection of workers in their employment from risks resulting from factors adverse to health.
- e) The adaptation of work to humans.

WHAT IS SAFETY?

Safety refers to the absence of accidents. Stated differently, safely refers to the protection of workers from the danger of accidents. Safety, in simple terms, means freedom from the occurrence or risk of injury or loss. Industrial safety or employee safety refers to the protection of workers from the danger of industrial accidents. An accident, then is an unplanned and uncontrolled event in which an action or reaction of an object, a substance, a person, or a radiation results in personal injury.

II. TYPES OF ACCIDENTS

Accidents are of different types. They may be classified as major and minor ones, depending upon the severity of the injury. A scratch or a cut which does not seriously disable him/her is a minor accident, but an accident nevertheless. A mere incision or a deep scratch, say, on the leg or the shoulder.

An accident may be internal or external. If a worker falls, or an object falls on him or her, it is possible he or she may show no external signs of injury, but he or she may have fractured a bone or strained a muscle or nerve- which is an internal injury.

III. HEALTH AND SAFETY AT WORK

According to Cole (2002), employer has a common law duty to provide a safe place of work for his or her employees and is liable at common law for accidents encounter by his or her employees in the course of their employment. The provision of a safe place of employment.

- The provision of safe means of access to work.
- The provision of safe systems of working.
- The provision of adequate equipment, materials and clothing to enable employees to carry out their work safely.
- The provision of competent co-workers.
- A duty of care to ensure that employees are not subjected to any unreasonable risks in the workplace.

IV. STATUTORY PROVISIONS OF SAFETY IN INDIA

According to factories Act, 1948, the statutory provisions regarding the safety of the workers are stated in the sections 21 to 41. They are

(1) Fencing of Machinery (Sec 21):

In every factory, every dangerous part of any machinery, and every part of an electric motor or rotary converter, every part of transmission machinery, must be securely fenced by safeguards of substantial construction.

(2) Employment of Young Persons on Dangerous Machines (Sec 23):

A young person should not be allowed to work at dangerous machines unless, has been sufficiently instructed and received sufficient training.

V. IMPORTANCE OF MANAGEMENT COMMITMENT ON HEALTH & SAFETY

In order to develop a successful health and safety programme, it is essential that there be strong management commitment and strong worker participation in the effort to create and maintain a safe and healthy workplace.

VI. STATUTORY PROVISIONS OF HEALTH IN INDIA

According to factories Act, 1948, the statutory provisions regarding the health of the workers are stated in the sections 11 to 20.

(1) Cleanliness (Sec 11) :

Every factory shall be kept clean by daily sweeping or washing the floors and workrooms and by using disinfectants where every necessary. Walls, doors and windows shall be repainted or varnished at least once in every 5 years.

(2) Disposal of Wastes and Effluents (Sec 12) :

The waste materials produced from the manufacturing process must be effectively disposed of wastes.

(3) Ventilation and Temperature (Sec 13) :

There must be provision for adequate ventilation for the circulation of fresh air. The temperature must be kept at a comfortable level.

(4) Removal of Dust and Fumes (Sec 14) :

If the manufacturing process used gives off injurious or offensive dust and steps must be taken so that they are not inhaled or accumulated.

(5) Artificial Humidification (Sec 15) :

The water used for this purpose must be pure. The State Government can frame rules regarding the process of humidification etc,

(6) Overcrowding (Sec 16):

There must be no overcrowding in a factory. In factories existing before the commencement of the Act there must be at least 9.9 cubic meters of space per worker. For factories built afterwards, there must be at least 4.2 cubic meters of space.

(7) Lighting (Sec 17) :

Factories must be well lighted. Effective measures must be adopted to prevent glare or formation of shadows which might cause eye strain.

(8) Drinking water (Sec 18) :

Arrangements must be made to provide a sufficient supply of wholesome drinking water.

(9) Toilet Facilities (Sec 19) :

Every factory must provide sufficient number of latrines and urinals. There must be separate provisions for male and female workers.

Latrines and urinals must be kept in a clean and sanitary condition

VII. HEALTH & SAFETY PROGRAMME

Health and safety programmes also have positive effects on both worker morale and productivity, which are important benefits. At the same time, effective programmes can save employers a great deal of money.

- a) Workplace hazards are controlled - at the source whenever possible.
- b) Both workers and employers are informed about health and safety risks in the workplace, committee that includes both workers and management.
- c) Worker health and safety efforts are ongoing.

REVIEW OF LITERATURE

Occupational health as a science concerned with health in its relation to work or working environment. In most cases, occupational health safety (OHS) is largely measured by negative outcomes such as workplace injury and illness but these measures have a shortfall, for instance, a low incidence of injury does not necessarily mean that adequate safety systems and controls are in place.

- 1. The need for more innovative ways to reduce the high rates of workplace injury and illness.
- 2. The pressure to reduce the social and economic costs of injury and illness, particularly compensation costs.
- 3. To identify the different categories of workers of Industry.
- 4. To find out the number of accidents and payment of compensation to workers of Industry.

VIII. RESEARCH METHODOLOGY

RATIONALE OF THE RESEARCH STUDY:

When it comes to performance, employee's performance is one the main in organizational success, improving employee's performance to optimally utilize knowledge and skills of their employees.

(A) SCOPE & COVERAGE OF STUDY :

This study was given an overview of the health and safety measures existing at CSE power Pvt. Ltd. Since health and safety are two important elements essential for improving the productivity of an organization.

This study was highlight on the perception of the workers regarding health and safety.

(B) OBJECTIVES OF THE RESEARCH STUDY :

Basic Objectives :

- To ascertain the health and safety measures adopted in CSE power Private Limited.

Other Objectives :

- To study the awareness of the workers about health and safety in the work place.
- To find the occurrence of accidents happened at work place.
- To identify the role of management in implementing health & safety.
- To give suggestions to improve the health & safety in the organization.

(C) SOURCES OF INFORMATION:

PRIMARY DATA:

The primary data has been obtained from the selected employees & senior executive of CSE power Private Limited through circulation of the structured non-disguised questionnaire.

SECONDARY DATA:

The secondary data has been obtained from published as well as unpublished literature on the topic and from Books, Journals, News Papers, Research Articles, etc.

(D) SIGNIFICANCE OF THE PROPOSED RESEARCH STUDY:

Health and Safety measures are inevitable to any organization where workers are involved. It's an organization's responsibility to provide to its workers beyond the payment of wages for their services. The working environment in a factory adversely affects the worker's health and safety because of the excessive heat or cold, noise, odors, fumes, dust and lack of sanitation and pure air etc.,

(E) FINDINGS, SUGGESTIONS & CONCLUSIONS

FINDINGS:

- Only 20% of the respondents respond that they are not aware of the health and safety measures and 80% of the respondents are aware of the health and safety measures.
- 60% of the respondents say that they have no effective arrangements for communicating health and safety matters, only 40% agrees that they have effective arrangements for communicating health and safety matters.
- Majority of the respondents are told that company is providing medical facility to the workers.

(F) RECOMMENDATIONS/ SUGGESTIONS:

- The company has to create the awareness for the workers regarding health and safety.
- It is better to provide frequent health and safety training, at least once in a year.
- The management has to take necessary steps to reduce the stress level of the workers.
- Proper training has to be given to the workers to avoid frequent accidents.
- Meditation practices can be given to avoid electric shocks, finger injuries etc. due to lack of concentration.
- The company has to conduct the regular inspections to ensure higher level of safety in the workplace.

XI. RESULTS AND DISCUSSION

It was discovered that employees at different workstations are faced with different types of hazards because the outputs produced are different at each stage of production. It was discovered upon observation that each type of hazard is more dominant in some areas of the factory than in others.

1. Different groups of workers are affected differently by OHS hazards due to the nature of their jobs.

Depicts that 65% of the dust and steam in the factories affect the extruders. Extruders also face 40% of the heat and steam in the factory. Loaders face the greatest amount of musculoskeletal hazards (65%).

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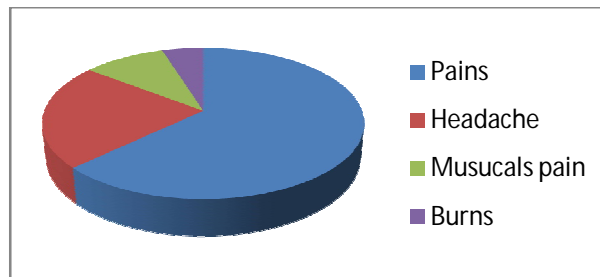
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X. CONCLUSION

It is revealed from the study that, the health and safety measures adopted in CSE power Pvt. Ltd. are provided to the workers according to the provisions of the factories Act. It reveals that the awareness of the workers about health and safety in the workplace is inadequate. Suitable ideas were suggested to avoid those accidents and to improve the health and safety measures. The role of management in implementing health and safety in the organization is very effective. Most of the workers were satisfied with the health and safety measures adopted in the company. If the company implements effective disciplinary procedures; it will help the company to go with their policies and also to maintain health and safety in the organization.

RECOMMENDATIONS

The study recommends the following for the factories:

1. Machines should be used to load and off load trucks in order to eliminate musculoskeletal hazards that risk the health of loaders.
2. Hazards should be controlled at the source in order to avoid infecting workers.
3. Psychological disorders should be reduced by avoiding giving challenging jobs that provide learning opportunity or career options to packers and mixers.
4. Regular medical checkups so as to determine workers state of health should be done.

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