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9.1. Introduction.

9.1.1. Safety management is systematic processes that can help industrial establishments to reduce industrial accidents and pave way for an accident free working environment, and for the States reduce the number and severity of traffic crashes through highway safety improvement programs. The process provides ways for planning, implementing, and evaluating safety programs and projects. Through safety management, all opportunities to improve safety are identified, considered, implemented as appropriate, and evaluated in all phases of highway planning, design, construction, maintenance, and operations.

9.1.2. After analyzing Control of Substances Hazardous to Health Regulations 2002 (UK), it is felt that the present set of Regulations on industrial safety in India requires some extra bits added on with the change in time and industrial environment. A point to be noted is that the extent of the definitions list should not increase considerably and this leads to the assumption that there were too many ‘holes’ in the previous Regulations. The Regulations are required for the self-employed in the same way as employers and an employer is under an obligation to ensure that they apply the requirements of the Regulations to any persons who are affected by their work activities in the same way that they apply them to employees. Certain substances are banned from import from other than specified countries and in Schedule 2 there is a list of substances that are prohibited from use in specified circumstances they should be included even though we are unlikely to come across either circumstance in our health and safety work. Recent case of industrial accident at Bhushan Steel, and discovery of warlike store in imported scrap in various industries of North India is a cause for concern. There are exemptions for medical treatments this loop-hole has to be plugged. There is the usual need for review when it is no longer valid, there
have been significant changes in work or monitoring suggests the need for change. There is now a requirement to document the assessment, but only where there are 5 or more employees. There is another requirement that the Regulation requires the employer to prevent exposure to substances hazardous to health or if this is not reasonably practicable then exposure must be controlled. There are extra precautions required for handling carcinogens and a whole new subsection on the precautions required for premises handling biological agents, including signage, decontamination procedures, confinement, hygiene standards and provision of vaccines. Again it is unlikely that we will encounter the latter two situations in our routine work. Control measures have to be maintained in working order, repair and clean. If ventilation is used as a control it has to be examined at a defined frequency for certain substances (schedule 4) or for other cases at suitable intervals. PPE also has to be checked and examined and records kept of examination for 5 years. PPE must be stored in a defined place, checked at regular intervals and replaced when defective. Any contaminated PPE must be kept apart from clean PPE, and decontaminated or destroyed. If the risk assessment identified the need for monitoring then this Regulation states that it must be undertaken – which seems like a sensible requirement to me. It must be done at regular intervals, but for some substances there are specified frequencies (Schedule 5). Personal records should be kept for 40 years – others for 5 years. There must be techniques for detecting the disease or effect (i.e. the impossible is not being asked for). Surveillance for industrial safety must include surveillance by a doctor. This may have to be continued after employment has ceased and the doctor can stop an employee working or set conditions for continued work. There are rules that must be followed if a disease is contracted as a result of such exposure and a right of appeal is available to any employee aggrieved by the decision of a doctor. The employers who use substances hazardous to health must provide information, training and instruction to employees. This must include the names of the substances in question, any safety levels (OEL’s), access to data sheets,
the risk assessment, and the results of any health surveillance or monitoring. The employer must ensure that there are procedures to deal with incidents involving dangerous substances. The procedures must include information on the specific hazards that will be faced, warning and communication systems, and be made available to emergency services when needed. There are also requirements on steps and precautions to be taken to mitigate the effects of the event and restoring situation back to normal.

9.1.3. There is the requirement for the provision of emergency procedures for case of incidents involving dangers from release of asbestos fibers. They are not required, however, if because the amount of asbestos is minor, the health risk to Φ. A doctor must carry out a medical examination within two years of exposure and then repeated at two-yearly intervals. Certificates have to be provided by the doctor and employers must keep these for 40 years. If surveillance identifies a disease then the employee must be given information and advice and further surveillance. The employer must consider stopping an employee working and changing to a role where there will be no further exposure, review the risk assessment and check all other staff that may have been similarly exposed. Washing and changing facilities must be provided, as must storage for respiratory protective equipment and protective clothing. Storage facilities must be separate for different types of PPE.

9.2. Investment value

9.2.1. An in-depth analysis would indicate that industrial safety managers and finance professions work better together than separately. This would be at the time when expenditure on industrial safety is considered as an investment rather than a wasteful expenditure.

9.2.2. However true this may be, even the most ardent supporters of cooperation among the two would concede that the two disciplines are by nature
quite different. If industrial safety is Venus, finance is definitely Mars. Safety managers come up with a nurturing and protective approach to employees, often supplemented with a deferential attitude toward CFOs and CEOs. Finance managers are trained to control costs and their sources.

9.2.3. There is a definite change in the attitude. A recent in-depth survey conducted by CFO Research services states “... out of the respondents 39% said that they view HR ‘mainly’ or ‘somewhat’ as a strategic partner, 33% said they see HR as an even mix of cost centre and strategic partner and 28% said they see HR as ‘somewhat’ or ‘mainly’ as a cost centre”. Though there is no earlier survey to quantify the shift in attitudes overtime, the reports, authors and other experts say there is definitely a trend towards greater CFO understanding of, respect for and interest in HR.

9.2.4. Mark Huselid, a professor at Rutgers University in Piscataway says, “In the last couple of years the linkage has been accelerated because of economy”. An article in Times of India quotes “greater scrutiny of corporate governance matters also has put more pressure on businesses’. For HR and finance functions to co-operate Huselid states “The vast majority of CFOs surveyed view human capital as a key driver of shareholder value”. Financial executives do understand their return on their human capital investments. Only 16% of the survey respondents know that the return to a considerable or great extent. But the desire to invest in the interest of the firm is there.

9.2.5. Finance is recognising that “it’s just not the warm and fuzzies you’ve got to consider. A bad industrial accident can out weigh your budget savings”. Rick Gusso, a partner with Mercer is of the view that “In my experience it has been more than worth the risk, it’s more important for HR professionals to seize the idea that a sound organizational financial success and creating an efficient workplace environment for people’s success are mutually beneficial”. HR and
finance are learning to team up effectively to develop strategy and resolve operational problems relating to industrial safety. The U.S. General Accounting Office has conducted a series of surveys on the subject. It is inferred that finance and human capital are very tightly tied. They look at safety as an investment that needs to be made. As per a CEO, “when her agency puts together its annual budget proposal the starting point is ‘what are our human capital needs’.

9.3. Problems during Conduct of Research.

9.3.1. Census Inquiry: A complete enumeration of all the items in the population is known as a census inquiry. It can be presumed that in such an inquiry when all the items are covered no element of chance is left and high accuracy is obtained. But in practice this may not be true. Even the slightest element of bias in such an inquiry will get larger and larger as the number of observations increase. Moreover, there is no way of checking the element of bias or its extent except through a resurvey or use sample checks. Besides, this type of inquiry involves a great deal of time, money and energy. Not only is this census inquiry not possible in practice under many circumstances. For instance, blood testing done in only sample bias. Hence in this research, we have selected only certain industries and some industrial regions from the universe for our study purposes. In addition we have resorted to multi stage random sampling so that bias can be eliminated and sampling error can be estimated.

9.3.2. The lack of scientific training in methodology of research is a great impediment for researches in our country. To obviate this systematic study of research methodology was attempted at the outset.

9.3.3. Most of the business units in our country do not have the confidence that, the material supplied by them to researchers will not be misused and as
such they are often reluctant in supplying the needed information to researchers. The concept of secrecy seems to be sacrosanct to business organizations in the country so much so that it proves an impermeable barrier to researches. Thus, there is the need for generating to confidence that the information/data obtained from a business unit will not be misused.

9.3.4. Research studies overlapping one another are undertaken quite often for want of adequate information. This results in duplication and fritters away resources. This problem can be obviated by proper compilation and revision, at regular intervals, of a list of subjects on which and the places where the research is going on. Due attention was given in this research towards identification of research problems which is one of immediate concern to industries.

9.3.5. Many researches in our country also face the difficulty of adequate and timely secretarial assistance, including computer assistance. This causes unnecessary delays in completion of research studies. All possible efforts be made in this direction so that efficient secretarial assistance is made available to researches and that too well in time. University Grants Commission must play a dynamic role in solving this difficulty.

9.3.6. **Defining the research.** How to design a research problem is undoubtedly a Herculean task. However, it is a task that must be tackled intelligently to avoid the perplexity encountered in a research operation. The usual approach is that the researcher shows himself or pose a question or incase someone else wants the researcher to carry on research, the concerned individual, organization or an authority should pose the question to the researcher and setup techniques and procedures for throwing light on the question concerned for formulating or defining the research problem.
Defining a research problem properly and clearly is a crucial part of research study and must in no case be accomplished hurriedly.

9.3.6. **Sampling Procedures:** While selecting a sampling procedure one of the important aspect to be remembered is the cost involved in a sampling analysis. There are two causes of incorrect interferences viz., systematic bias and sampling error. Systematic bias results from errors in sampling procedures, and it cannot be reduced or eliminated by increasing the sample size. At best the causes responsible for these errors can be detected and corrected. **Systematic bias** is as a result of one of the following factors:-

✓ If the sampling frame is inappropriate i.e., a biased representation of the universe, it will result in a systematic bias.

✓ If the measuring device is constantly in error, it will result in systematic bias. In survey work, systematic bias can result if the questionnaire or the interviewer is biased. Similarly, if the physical measuring device is defective there will be systematic bias in the data collected through such a measuring device.

✓ If we are unable to sample the individuals initially included in the sample, there may arise a systematic bias. The reason is that in such a situation the likelihood of establishing in such a situation contact or receiving a response from the individual is often correlated with the measure of what is to be estimated.

✓ Sometimes we find that individuals act differently when kept under observation, than what they do when kept in non-observed situations. For instance, if workers are aware that somebody is observing them in course of a work study on the basis of which the average length of the time to complete a task will be determined and accordingly the quota will be set for piece work, they generally tend to work slowly in comparison to the speed with which they work if kept unobserved.
Thus, the indeterminacy principle may also be a cause of a systematic bias.

**Natural bias** of respondents in the reporting of data is often the cause of a systematic bias in many inquiries. There is usually a downward bias in the income data collected by the government taxation department, whereas we find an upward bias in the income data collected by some social organisation. People in general understate their incomes if asked about it for tax purposes, but they overstate the same if asked for social states or their affluence. Generally in psychological surveys, people tend to give what they think is the correct answer rather than revealing their true feelings.

**Sampling errors** are the random variations in the sample estimates around the true population parameters. Since they occur randomly and are equally likely to be in either direction, their nature happens to be of compensatory type and the expected value of such errors will be tending to zero. Sampling error decreases with the increase in the size of the sample, and incase of a homogeneous population it will be of a smaller magnitude. For a given sample design and size, the sample error can be measured, this process is called ‘The precision of the sampling plan’. If we increase the sample size, the precision can be improved. But increasing the sample size has its own limitation viz., a large sized sample increases the cost of collecting data and also enhances the systematic bias. Thus the effective way to increase precision is usually to select a letter sampling design which has a smaller sampling error for a given sample size at a given cost. In practice, however, people prefer a less precise design because it is easier to adopt the same and also because of the fact that systematic bias can be controlled in a better way in such a design; in this research while selecting the sample procedure, we ensured that the procedure causes a relatively small sampling error and helps to control the systematic bias in a better way.
9.3.7. **Sample Design.** There are various sample designs which can be adopted. When resorting to simple random sampling bias is generally eliminated and the sampling error can be estimated. But purposive sampling is considered more appropriate when the universe happens to be small and a known characteristic of it is to be studied intensively. There are situation in real life under which sample designs other than simple random samples may be conducted better and as such the same may be used. In a situation, where random sampling is not possible, then we have to use necessarily a sample design other than random sampling.

9.3.8. **Sources of Error in Measurement.** Measurement should be precise and unambiguous in an ideal research study. This objective, however, is often not met with in entirety. As such the researcher must be aware about the sources of error in measurement. The following are the possible sources of error in measurement:

(a) **Respondent:** At times respondent may be reluctant to express strong negative feelings or it is just possible that he may have very little knowledge, but may not admit his ignorance. All this reluctance is likely to result in an interview of ‘guesses’. Transient factors like fatigue, boredom, anxiety etc., may limit the ability of the respondent to respond accurately and fully.

(b) **Situation:** Situational factors may also come in the way of correct measurement. Any condition which places a strain on interview can have serious effects on the interviewer- respondent rapport. For instance, if someone else in present, he can distort responses by joining in or merely by being present. If the respondent feels that anonymity is not assured, he may be reluctant to express certain feelings.

(c) **Measure:** The interviewer can distort responses by rewording or reordering questions. His style, behavior and looks may encourage or discourage certain replies from respondents. Careless mechanical procession may distort the findings. Errors may also creep in because of incorrect
coding, faulty tabulation and or statistical calculations, particularly in the
data analysis stage.

(d) **Instrument**: Error may also arise because of the defective measuring
instrument. The use of complex words, beyond the comprehension of the
respondent, ambiguous meanings, poor printing, inadequate space for
replies, response choice omissions, etc., are a few things that make the
measuring instrument defective and may result in measurement errors.
Another type of instrument deficiency is the poor sampling of the universe of
items of concern. In our research all out effort was made to eliminate,
neutralize or otherwise deal with all possible sources of error so that final
results may not be contaminated.

9.3.9. While obtaining data through questionnaire certain problems were faced.
They were:-

- Low rate of return of filled in questionnaires; bias due to no response
  is often indeterminate.
- Some of the respondent was found unable to answer probably due to
  lack of education or willing cooperation.
- It was difficult to maintain control, once the questionnaire was
  dispatched.
- There is inbuilt inflexibility because of the difficulty of amending the
  approach once questionnaires have been dispatched.
- There was the problem of ambiguous replies or omission of replies
  altogether to certain questions; and it was found that interpretation of
  omissions was difficult.
- It was difficult to ascertain whether willing respondents are truly
  representative.
In effect, before using this method, (as it was essential to use), a pilot study was conducted for testing the questionnaire. The experienced gained through pilot study was utilized in improvement of the questionnaire.

9.3.10. **Secondary Data**: While using secondary data, extreme caution was required, because it was just possible that the secondary data may be unsuitable or may be inadequate in the context of the problem. Hence before using the secondary data, it was seen whether they posses the following characteristics:-

(a) **Reliability of Data**: Reliability was tested by finding out, the following things:
   i. Who collected the data?
   ii. What were the sources of data?
   iii. Where they collected using proper methods?
   iv. At what time were they collected?
   v. Was there any bias of the computer?
   vi. Level of accuracy.

(b) **Suitability of Data**: While selecting the data it was carefully scrutinised on the procedure adopted at the time of collecting data from the primary source originally.

(c) **Adequacy of Data**: The level of accuracy achieved in data was verified before selecting and applying the data.

During the process of research it was found that it is very risky to use the available data. However, the already available data was used only when they were found to be reliable, suitable and adequate.

9.3.11. **Some Problems in Processing**

(a) **The problem concerning “Don’t know” (or DK) responses**: While processing the data, we came across some responses that are difficult to handle. One category of such response was “don’t know Response” are simply DK response. When the DK response group is small, it is of little significance. But when it is relatively big, it becomes
a matter of major concern in which case the question arises: Is the question which elicited DK response useless? The answer depends on two point’s viz.; the respondent actually may fail in obtaining the appropriate information. To obviate DK response adequate emphasis was given in designing better type of questions. While compiling on this research, the DK response were excluded from tabulation and that too without inflating the actual number of other responses.

(b) **Use of Percentage**: Percentages were used in a large number in this research work. Through the use of percentage, the data are reduced in the standard form, with base equal to 100 which in fact facilitates relative comparisons. However while using percentages, following rules were kept in view:-

i). Two or more percentages should not be averaged unless each is weighted by the group size from which it has been derived.

ii) Use of too large percentage was avoided.

iii) Percentages hide the base from which they have been computed. If this is not kept in view, the real difference may not be correctly read.

iv) Percentage decreases can never exceed 100 percent and as such for calculating the percentage of decrease, the higher figure should invaluably take as the base.

v) Percentages should generally be worked out in the direction of the casual factor in case of two-dimension tables and for this purpose we must select the more significant factor out of the two given factor as the casual factor.

9.3.12. **Sampling Theory**: The main problem of sampling theory is the problem of relationship between a parameter and a statistic. The theory of sampling is concerned with estimating the properties of the population from
those of the sample and also with gauging the precision of the estimate. The fact of movement from particular (Sample) towards general (universe) is what is known as statistical induction or statistical interference. It can be said that what we try is to draw inference concerning the universe from the sample. For this we first follow deductive argument which is that we imagine a population or universe (finite or infinite) and investigate the behavior of the samples drawn from this universe applying the laws of probability.

9.4. **The Healthy Workplaces Project** was created in USA to test the following hypotheses. Given below are salient features of the same.

9.4.1. Workplaces with high financial and organizational health also have a high level of employee health and safety. The way a workplace is organised determines whether it is financially healthy and worker healthy and identifying best practices in the healthiest of workplaces and promoting them throughout the industry will improve both the safety and health of the industry and, most importantly, the safety and health of its workers.

9.4.2. Company participation in the Healthy Workplaces Project is voluntary, and all information gathered is kept in the strictest confidence. Only summary information for all companies combined will be published and made available to the public. Information collected through the Healthy Workplaces Project will be used to develop interventions that reduce or help prevent work-related injuries and illnesses.

9.4.3. **Healthy Workplaces Project elements**

9.4.3.1. **Selecting an industry.** A series of criteria were used to select industries as candidates. The goal was to select an industry in which we could have a major impact on the prevention of work-related injuries and illnesses.
Washington State was ranked according to a three-year average of workers’ compensation claims data, then identified the 25 most hazardous industries.

Intra-Industry Dispersion: Evaluated the top industries that exhibited significant variation in size, workers' compensation claims rates, employee turnover, and growth of employment over a five-year period.

Industry Structure: Further selected industries that:

1) Relatively similar products and processes,
2) Lacked dominance by any one company, and
3) Had the assistance and interest of trade associations and labor representatives.

9.4.3.2. Conducting an industry-wide telephone survey. Employers are contacted by an independent research company and invited to participate in the telephone survey. The telephone survey includes questions about human resources policies and practices, productivity, quality, safety and health program elements, and injury and illness tracking. Participants’ names and company names are kept confidential and not released to research unless the participating company grants permission. Participation in the telephone survey is voluntary.

9.4.3.3. Conducting company site visits. Companies are invited to participate in a site visit. The goals of the site visit are to:

- Understand the potential health and safety hazards in the workplace (chemical, biological, and physical);
- Understand how workers may be exposed to the hazards;
- Determine what measures have been taken to reduce exposures;
- Assess workplace organizational factors such as policies and procedures, safety training materials, and perceptions of organizational culture; and
• Identify "successful strategies" used by companies that are effective in reducing work-related injuries and illnesses.

9.4.3.4. Distributing information for the prevention of work-related injuries and illnesses. Interventions aimed at reducing work-related injuries and illnesses are devised based on information gathered from the site visits, the telephone survey, and various administrative databases available to L&I. It was necessary to identify "successful strategies" in reducing work-related injuries and illnesses, and then transfer this information industry-wide.

9.4.4. Industries contacted for study

9.4.4.1. Food processing - 1999 to 2001. Companies in the food processing industry take raw agricultural products (such as grains) and turn them into the food products that we eat every day (like bread and cereal). The food processing industry is economically important to the State. However, relative to other industries, food processing has a high rate of injuries and illnesses that result in workers’ compensation claims. Over 40,800 workers in the food processing industry are injured each year. Highlights from study include:

• Companies that were "organizationally healthy" had lower work-related injury and illness rates.

• Larger companies had lower injury and illness rates.

• "Organizationally healthy" companies paid higher wages.

• Among companies visited, those that had systems in place to keep workers safe and healthy also had lower injury and illness rates.

9.4.4.2. Millwork, furniture, and fixtures - 2001 to 2003. Companies in these industry sectors predominately take raw materials and make doors, windows, moldings, railings, plywood, cabinets, furniture, and shelves.
Although millwork and furniture manufacturing are economically important to the State, this industry also has one of the highest workers’ compensation claims rates. From 1995 to 1999, there were 11,456 claims accepted by the state-managed workers’ compensation system. These injuries included cuts, amputations, back injuries, eye injuries, and hearing loss. Highlights from industry study include:

- Overall, “organizationally healthy” companies did not have lower workers’ compensation rates than less “organizationally healthy” companies. However, among a small group of companies that SHARP visited, the “organizationally healthy” companies did have lower injury rates.
- About 75% of small companies (those with 10 or fewer employees) performed accident investigations, kept track of injuries, and had a dedicated safety and health budget, and almost half had a safety committee.
- Over 90% of larger companies (those with 11 or more employees) performed accident investigations, tracked injuries and had a safety committee, and over 75% had a dedicated health and safety budget.

**9.4.4.3. Electrical Contractors - 2002 to present.** Electrical contractors are a specialty trade within the construction industry. In 1998, there were at least 133,800 construction workers in the State. While employment within the construction industry has declined over the years, there has been growth within the specialty trades, including electrical contractors. In 2003, we held focus groups with electrical contracting managers, apprentice and journeymen electricians, and apprenticeship program trainers. The purpose of the focus groups was to identify successful strategies to reduce or control occupational injuries and illnesses.
9.5. Problems Related to Industrial Safety.

9.5.1. The country faces an unacceptable performance-potential gap in the industrial development. The recent spate of industrial development has brought new issues like competitive conduct of the business houses and industrial safety into limelight. The industrial safety movement in India is of a very recent origin. So, the industrial workers in India are more vulnerable to unethical practices by owners and management. Contrary to the early stage of development of industrial safety issues in India, the developed economies have a well-debated and structural legal system for right conduct and safety system for companies.

9.5.2. Public policy intersects the field of industrial safety when public policy makers believe that intervention in the process or outcome of industrial policy exchanges between management and workers will benefit the society as a whole. New labour policy and technological as well as industrial development that affect the industrial safety are outgrowth of management abuses brought to the attention of policy makers through the media, consumer advocacy groups or by consumers themselves and an overall public recognition of the need for economic and social welfare.

9.5.3. Industrial safety doctrine rests on the concept of safety consciousness and safe working environment. Industrial safety in acceptable terms is the ability of a firm to increase productivity without increasing industrial accident. There are no economic interpretations of industrial safety in Indian context. Mostly industrial safety is conceived in terms of economic efficiency with laws on workers’ safety largely interpreted through a concise economic thought. Maximisation of industrial safety standards and avoidance of accidents is considered the dominant goal of industrial safety norms, with safety system striving to achieve the highest practical level of safety norms.
9.5.4. This analysis involves application of effect of industrial development to an understanding of firm and individual worker behaviour and the evaluation of potentially anti safety practices. The current debate in industrial safety globally centers on the pollution and environmental hazards, both natural and artificial. There are two schools of thought on industrial development and industrial safety. Through defining behaviour purely in terms of industrial accident, enforcement authorities and the courts are viewed to be equipped with simple and objective tests for determining the effects of industrial development on the industrial safety. Whereas industrial development lower industrial accidents, enhances workers welfare, restraints on these aspects do not. According to this view firms can and do take advantage of these imperfections resulting in industrial accidents. During the 1980s, focuses within the industrial organization shifted from studies of industrial safety to focus on strategic behaviour of firms within imperfectly competitive markets.

9.5.5. Through regulations, policy makers attempt to prohibit certain types of practices like unsafe conditions, unsafe working environment. Regulations also influence the compensation packages. Through worker education government may cultivate desired worker response on industrial safety. Some theorists complain that industrial development enables management to exploit workers in a more professional way. Of late, the legislators have enhanced the number of safety regulations in response to public outcries about dishonest and unethical industrial practices. Government policy makers and trade union leaders have increasingly recognized that THEY CANNOT PROTECT WORKERS AGAINST EVERY POSSIBLE INDUSTRIAL ABUSE and the best defense for the worker is the knowledge.

9.5.6. Many government and non-government agencies offer workers education programs and disseminate information. There is an increased cost resulting from
regulations. The legislation’s in respect of industrial safety has been found out of tune with the industrial development.

9.5.7. Industrial development is sometimes taken as a productivity increase concept. This is the generalized view, which hampers industrial safety. If the industrial society takes this as a process development, with, both technological development of the plants and technical expertise improvement of the worker, then there is a room for industrial safety aspects being in-tune with the industrial development. In India, what we generally find is that most of the industries or factories move in to production without incorporating all safety measures. This only shows that the industrial safety arrangements are not keeping pace with the industrial development.

9.5.8. A safety policy should be governed by the principles that, it is essential to respect human life, all the accidents and risks to health are preventable, safe working conditions is the right and obligation of each worker, safety training is essential at all levels and lethargy in implementing safety procedures and using protective equipment’s. Interaction between worker and work environment leads to occupational health hazards. To minimize health hazards there is a need to monitor the workers health and also working environment. Some theorists complain that industrial development enables management to exploit workers in a more professional way.

9.5.9. Labour legislation is based on certain fundamental principles. Labour legislation is necessary as the factory system had inherent evils to which factory workers were exposed in the bargaining. Workers were financially weak and had little or no bargaining power. Workers were prone to accidents due to improper machines and working conditions. Children and women were taking to work under, hazardous conditions of work and at odd hours. Some employers affect insurance against their legal liability to compensation under the Workmen’s
compensation Act. Only manual workers falling within the definition of workman are entitled to compensation. Aim of the Factories Act 1948 is to protect workers employed in factories against industrial and occupational hazards and to ensure safe and healthy conditions of life and work. It makes detailed provisions regarding health, safety and welfare of workers in order to provide good working conditions and other facilities to enhance their welfare. It is proposed that the provisions of the safety aspects should be applicable as per categories of factories. The provisions are intended to benefit only workers in factory and for the field workers it is left to interpretation. Safety officers should be employed by the state for a particular type of factories or geographical area. The Factory Act by itself contain adequate provisions to safeguard the safety of workplace and workers. The appointments of Inspector, Safety officer, welfare officer should have the representation of the workers or their union.

9.5.10. Total accident investigation report shows that the accidents were due to unsafe acts and unsafe conditions. Unsafe conditions are associated with defective plants, tools, equipment, machinery, materials and factory building also. Poor supervision over safety device is also one of the major causes of accidents. In comparison lesser number of accidents occurred due to unsafe physical conditions. Accident reporting and accident investigation is useful for the analysis of accidents.

9.5.11. A safety policy should include aspects about creating awareness about safe design and practices follow all statutory regulation, prevention of damages to the plant and equipment, injuries to employees at the project site, adherence to all acts, laws, rules and regulations of the state and the central Government and impart training in safety. The primary objective of any safety policy is to ensure effective control of accidents at site, investigating all serious accidents to reinforce safety programme or the code of practice itself, eliminating all unsafe conditions in their work area. A safety policy, which keeps pace with industrial
development and technological upgradation should be dovetailed, into the safety instructions of factories as per their production features.

9.5.12. Industrial development and technological development caused by 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. A national inventory on capabilities and management of occupational safety and health will be of great help for designing and implementing various instruments to protect the safety and health of the large work force working in various sectors of the economy. Further it is advisable that all the units after the commencement of the Industrial activity shall carry out an independent Safety Audit of the respective industrial activities with the help of an expert not associated with such industrial activities.

9.5.13. The fall-out of this is the aspect of industrial safety and hygiene. Factory owners may resort to large-scale dilution of statutory requirements of industrial safety and hygiene, the accident rate may increase. Industrial safety is that condition of enterprise operation in which, by controlling hazards, accident free production is achieved. It is not necessary that all accidents should result in personal injury. In fact, the accidents without personal injury outnumber those, which have resulted in an injury. It is through these factory inspectors that welfare facilities of workers are ensured which will contribute towards a condition of accident free production.