

**Paper III**  
**Regulatory & Management Skill**



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## Unit - 1 □ Supervisory & Management Skill

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### Structure

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### 1.1 Supervisor

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Supervisor has got an important role to play in factory management. Supervision means overseeing the subordinates at work at the factory level. The supervisor is a part of the management team and he holds the designation of first line managers. He is a person who has to perform many functions which helps in achieving productivity. Therefore, supervisor can be called as the only manager who has an important role at execution level. There are certain philosophers who call supervisors as workers. There are yet some more philosophers who call them as managers. But actually he should be called as a manager or operative manager. His primary job is to manage the workers at operative level of management.

A supervisor plays multidisciplinary role at one time like —

**As a Planner** - A supervisor has to plan the daily work schedules in the factory. At the same time he has to divide the work to various workers according to their abilities.

**As a Manager** - It is rightly said that a supervisor is a part of the management team of an enterprise. He is, in fact, an operative manager.

**As a Guide and Leader** - A factory supervisor leads the workers by guiding them the way of perform their daily tasks. In fact, he plays a role of an inspirer by telling them.

**As a Mediator** - A Supervisor is called a linking pin between management and workers. He is the spokesperson of management as well as worker.

**As an Inspector** - An important role of supervisor is to enforce discipline in the factory. For this, the work includes checking progress of work against the time schedule, recording the work performances at regular intervals and reporting the deviations if any from those. He can also frame rules and regulations which have to be followed by workers during their work.

**As a Counselor** - A supervisor plays the role of a counselor to the worker's problem. He has to perform this role in order to build good relations and co-operation from workers. This can be done not only by listening to the grievances but also handling the grievances and satisfying the workers.

Therefore, we can say that effective and efficient supervision helps in serving better work performance, building good human relations, creating a congenial and co-operative environment. This all helps in increasing productivity.

### **Functions of Supervisor**

Supervisor, being the manager in a direct contact with the operatives, has got multifarious function to perform. The objective behind performance of these functions is to bring stability and soundness in the organization which can be secured through increase in profits which is an end result of higher productivity. Therefore, a supervisor should be concerned with performing the following functions -

**1. Planning and Organizing** - Supervisor's basic role is to plan the daily work schedule of the workers by guiding them the nature of their work and also dividing the work amongst the workers according to their interests, aptitudes, skills and interests.

**2. Provision of working conditions** - A supervisor plays an important role in the physical setting of the factory and in arranging the physical resources at right place. This involves providing proper sitting place, ventilation, lighting, water facilities etc. to workers. His main responsibility is here to provide healthy and hygienic condition to the workers.

**3. Leadership and Guidance** - A supervisor is the leader of workers under him. He leads the workers and influences them to work their best. He also guides the workers by fixing production targets and by providing them instruction and guidelines to achieve those targets.

**4. Motivation** - A supervisor plays an important role by providing different incentives to workers to perform better. There are different monetary and non-monetary incentives which can inspire the workers to work better.

**5. Controlling** - Controlling is an important function performed by supervisor. This will involve

- ❖ Recording the actual performance against the time schedule.
- ❖ Checking of progress of work.
- ❖ Finding out deviations if any and making solutions
- ❖ If not independently solved, reporting it to top management.

**6. *Linking Pin*** - A supervisor proves to be a linking pin between management and workers. He communicates the policies of management to workers also passes instructions to them on behalf of management. On the other hand, he has a close contact with the workers and therefore can interact the problems, complaints, suggestions, etc to the management. In this way, he communicates workers problems and brings it to the notice of management.

**7. *Conflict/Grievance Handling*** - The supervisor can handle the grievances of the workers effectively for this he has to do the following things :-

- ❖ He can be in direct touch with workers.
- ❖ By winning the confidence of the workers by solving their problems.
- ❖ By taking worker problems on humanitarian grounds.

If he cannot tackle it independently, he can take the help and advice of management to solve it.

**8. *Reporting*** - A supervisor has got an important role to report about the cost, quality and any such output which can be responsible for increasing productivity. Factors like cost, output, performance, quality, etc can be reported continually to the management.

**Introducing new work methods** - The supervisor here has to be conscious about the environment of market and competition present. Therefore he can innovate the techniques of production. He can shift the workers into fresh schedules whenever possible. He can also try this best to keep on changing and improving to the physical environment around the workers. This will result in

- ❖ Higher productivity,
- ❖ High Morale of Workers,
- ❖ Satisfying working condition,
- ❖ Improving human relations,
- ❖ Higher Profits, and
- ❖ High Stability

**Enforcing Discipline** - A supervisor can undertake many steps to maintain discipline

in the concern by regulating checks and measures, strictness in orders and instructions, keeping an account of general discipline of factory, implementing penalties and punishments for the indisciplined workers. All these above steps help in improving the overall discipline of the factory.

### **Levels of Management**

The term 'Levels of Management' refers to a line of demarcation between various managerial positions in an organization. The number of levels in management increases when the size of the business and work force increases and vice versa. The level of management determines a chain of command, the amount of authority & status enjoyed by any managerial position. The levels of management can be classified in three broad categories:

1. Top level / Administrative level
2. Middle level / Executory
3. Low level / Supervisory / Operative / First-line managers

Managers at all these levels perform different functions. The role of managers at all the three levels is discussed below:

### **Top Level of Management**

It consists of board of directors, chief executive or managing director. The top management is the ultimate source of authority and it manages goals and policies for an enterprise. It devotes more time on planning and coordinating functions.

1. The role of the top management can be summarized as follows -
2. Top management lays down the objectives and broad policies of the enterprise.
3. It issues necessary instructions for preparation of department budgets, procedures, schedules etc.
4. It prepares strategic plans & policies for the enterprise.
5. It appoints the executive for middle level i.e. departmental managers.
6. It controls & coordinates the activities of all the departments.
7. It is also responsible for maintaining a contact with the outside world.
8. It provides guidance and direction.
9. The top management is also responsible towards the shareholders for the performance of the enterprise.

### **Middle Level of Management**

The branch managers and departmental managers constitute middle level. They are responsible to the top management for the functioning of their department. They devote more time to organizational and directional functions. In small organization, there is only one layer of middle level of management but in big enterprises, there may be senior and junior middle level management. Their role can be emphasized as -

1. They execute the plans of the organization in accordance with the policies and directives of the top management.
2. They make plans for the sub-units of the organization.
3. They participate in employment & training of lower level management.
4. They interpret and explain policies from top level management to lower level.
5. They are responsible for coordinating the activities within the division or department.
6. It also sends important reports and other important data to top level management.
7. They evaluate performance of junior managers.
8. They are also responsible for inspiring lower level managers towards better performance.

### **Lower Level of Management**

Lower level is also known as supervisory / operative level of management. It consists of supervisors, foreman, section officers, superintendent etc. According to R.C. Davis, "Supervisory management refers to those executives whose work has to be largely with personal oversight and direction of operative employees". In other words, they are concerned with direction and controlling function of management. Their activities include -

1. Assigning of jobs and tasks to various workers.
2. They guide and instruct workers for day to day activities.
3. They are responsible for the quality as well as quantity of production.
4. They are also entrusted with the responsibility of maintaining good relation in the organization.
5. They communicate workers problems, suggestions, and recommendatory appeals etc to the higher level and higher level goals and objectives to the workers.
6. They help to solve the grievances of the workers.
7. They supervise & guide the sub-ordinates.

8. They are responsible for providing training to the workers.
9. They arrange necessary materials, machines, tools etc for getting the things done.
10. They prepare periodical reports about the performance of the workers.
11. They ensure discipline in the enterprise.
12. They motivate workers.
13. They are the image builders of the enterprise because they are in direct contact with the workers.

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## **1.2 Planning Function of Management**

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Planning means looking ahead and chalking out future courses of action to be followed. It is a preparatory step. It is a systematic activity which determines when, how and who is going to perform a specific job. Planning is a detailed programme regarding future courses of action. It is rightly said "Well plan is half done". Therefore planning takes into consideration available & prospective human and physical resources of the organization so as to get effective co-ordination, contribution & perfect adjustment. It is the basic management function which includes formulation of one or more detailed plans to achieve optimum balance of needs or demands with the available resources.

According to Urwick, "Planning is a mental predisposition to do things in orderly way, to think before acting and to act in the light of facts rather than guesses". Planning is deciding best alternative among others to perform different managerial functions in order to achieve predetermined goals.

According to Koontz & O'Donnell, "Planning is deciding in advance what to do, how to do and who is to do it. Planning bridges the gap between where we are to, where we want to go. It makes possible things to occur which would not otherwise occur".

### Steps in Planning Function

Planning function of management involves following steps:-

#### **1. Establishment of objectives**

- a. Planning requires a systematic approach.
- b. Planning starts with the setting of goals and objectives to be achieved.
- c. Objectives provide a rationale for undertaking various activities as well as indicate direction of efforts.

- d. Moreover objectives focus the attention of managers on the end results to be achieved.
- e. As a matter of fact, objectives provide nucleus to the planning process. Therefore, objectives should be stated in a clear, precise and unambiguous language. Otherwise the activities undertaken are bound to be ineffective.
- f. As far as possible, objectives should be stated in quantitative terms. For example, Number of men working, wages given, units produced, etc. But such an objective cannot be stated in quantitative terms like performance of quality control manager, effectiveness of personnel manager.
- g. Such goals should be specified in qualitative terms.
- h. Hence objectives should be practical, acceptable, workable and achievable.

### **2. Establishment of Planning Premises**

- a. Planning premises are the assumptions about the lively shape of events in future.
- b. They serve as a basis of planning.
- c. Establishment of planning premises is concerned with determining where one tends to deviate from the actual plans and causes of such deviations.
- d. It is to find out what obstacles are there in the way of business during the course of operations.
- e. Establishment of planning premises is concerned to take such steps that avoids these obstacles to a great extent.
- f. Planning premises may be internal or external. Internal includes capital investment policy, management labour relations, philosophy of management, etc. Whereas external includes socio- economic, political and economical changes.
- g. Internal premises are controllable whereas external are non- controllable.

### **3. Choice of alternative course of action**

- a. When forecast are available and premises are established, a number of alternative course of actions have to be considered.
- b. For this purpose, each and every alternative will be evaluated by weighing its pros and cons in the light of resources available and requirements of the organization.
- c. The merits, demerits as well as the consequences of each alternative must be examined before the choice is being made.
- d. After objective and scientific evaluation, the best alternative is chosen.

- e. The planners should take help of various quantitative techniques to judge the stability of an alternative.

#### **4. Formulation of derivative plans**

- a. Derivative plans are the sub plans or secondary plans which help in the achievement of main plan.
- b. Secondary plans will flow from the basic plan. These are meant to support and expediate the achievement of basic plans.
- c. These detail plans include policies, procedures, rules, programmes, budgets, schedules, etc. For example, if profit maximization is the main aim of the enterprise, derivative plans will include sales maximization, production maximization, and cost minimization.
- d. Derivative plans indicate time schedule and sequence of accomplishing various tasks.

#### **5. Securing Co-operation**

- a. After the plans have been determined, it is necessary rather advisable to take subordinates or those who have to implement these plans into confidence.
- b. The purposes behind taking them into confidence are :-
- c. Subordinates may feel motivated since they are involved in decision making process.
- d. The organization may be able to get valuable suggestions and improvement in formulation as well as implementation of plans.
- e. Also the employees will be more interested in the execution of these plans.

#### **6. Follow up/Appraisal of plans**

- a. After choosing a particular course of action, it is put into action.
- b. After the selected plan is implemented, it is important to appraise its effectiveness.
- c. This is done on the basis of feedback or information received from departments or persons concerned.
- d. This enables the management to correct deviations or modify the plan.
- e. This step establishes a link between planning and controlling function.
- f. The follow up must go side by side the implementation of plans so that in the light of observations made, future plans can be made more realistic.

## **Characteristics of Planning**

### **1. Planning is goal-oriented.**

- a. Planning is made to achieve desired objective of business.
- b. The goals established should general acceptance otherwise individual efforts & energies will go misguided and misdirected.
- c. Planning identifies the action that would lead to desired goals quickly & economically.
- d. It provides sense of direction to various activities. E.g. Maruti Udhyog is trying to capture once again Indian Car Market by launching diesel models.

### **2. Planning is looking ahead.**

- a. Planning is done for future.
- b. It requires peeping in future, analyzing it and predicting it.
- c. Thus planning is based on forecasting.
- d. A plan is a synthesis of forecast.
- e. It is a mental predisposition for things to happen in future.

### **3. Planning is an intellectual process.**

- a. Planning is a mental exercise involving creative thinking, sound judgement and imagination.
- b. It is not a mere guesswork but a rotational thinking.
- c. A manager can prepare sound plans only if he has sound judgement, foresight and imagination.
- d. Planning is always based on goals, facts and considered estimates.

### **4. Planning involves choice & decision making.**

- a. Planning essentially involves choice among various alternatives.
- b. Therefore, if there is only one possible course of action, there is no need planning because there is no choice.
- c. Thus, decision making is an integral part of planning.
- d. A manager is surrounded by no. of alternatives. He has to pick the best depending upon requirements & resources of the enterprises.

### **5. Planning is the primary function of management / Primacy of Planning.**

- a. Planning lays foundation for other functions of management.
- b. It serves as a guide for organizing, staffing, directing and controlling.

- c. All the functions of management are performed within the framework of plans laid out.
- d. Therefore planning is the basic or fundamental function of management.

**6. Planning is a Continuous Process.**

- a. Planning is a never ending function due to the dynamic business environment.
- b. Plans are also prepared for specific period of time and at the end of that period, plans are subjected to reevaluation and review in the light of new requirements and changing conditions.
- c. Planning never comes into end till the enterprise exists issues, problems may keep cropping up and they have to be tackled by planning effectively.

**7. Planning is all Pervasive.**

- a. It is required at all levels of management and in all departments of enterprise.
- b. Of course, the scope of planning may differ from one level to another.
- c. The top level may be more concerned about planning the organization as a whole whereas the middle level may be more specific in departmental plans and the lower level plans implementation of the same.

**8. Planning is designed for efficiency.**

- a. Planning leads to accomplishment of objectives at the minimum possible cost.
- b. It avoids wastage of resources and ensures adequate and optimum utilization of resources.
- c. A plan is worthless or useless if it does not value the cost incurred on it.
- d. Therefore planning must lead to saving of time, effort and money.
- e. Planning leads to proper utilization of men, money, materials, methods and machines.

**9. Planning is Flexible.**

- a. Planning is done for the future.
- b. Since future is unpredictable, planning must provide enough room to cope with the changes in customer's demand, competition, govt. policies etc.
- c. Under changed circumstances, the original plan of action must be revised and updated to make it more practical.

**Advantages of Planning**

**1. Planning facilitates management by objectives.**

- a. Planning begins with determination of objectives.
- b. It highlights the purposes for which various activities are to be undertaken.
- c. In fact, it makes objectives more clear and specific.
- d. Planning helps in focusing the attention of employees on the objectives or goals of enterprise.
- e. Without planning an organization has no guide.
- f. Planning compels manager to prepare a Blue-print of the courses of action to be followed for accomplishment of objectives.
- g. Therefore, planning brings order and rationality into the organization.

**2. Planning minimizes uncertainties.**

- a. Business is full of uncertainties.
- b. There are risks of various types due to uncertainties.
- c. Planning helps in reducing uncertainties of future as it involves anticipation of future events.
- d. Although future cannot be predicted with cent percent accuracy but planning helps management to anticipate future and prepare for risks by necessary provisions to meet unexpected turn of events.
- e. Therefore with the help of planning, uncertainties can be forecasted which helps in preparing standbys as a result, uncertainties are minimized to a great extent.

**3. Planning facilitates co-ordination.**

- a. Planning revolves around organizational goals.
- b. All activities are directed towards common goals.
- c. There is an integrated effort throughout the enterprise in various departments and groups.
- d. It avoids duplication of efforts. In other words, it leads to better co-ordination.
- e. It helps in finding out problems of work performance and aims at rectifying the same.

**4. Planning improves employee's moral.**

- a. Planning creates an atmosphere of order and discipline in organization.
- b. Employees know in advance what is expected of them and therefore conformity can be achieved easily.

- c. This encourages employees to show their best and also earn reward for the same.
- d. Planning creates a healthy attitude towards work environment which helps in boosting employees moral and efficiency.

**5. Planning helps in achieving economies.**

- a. Effective planning secures economy since it leads to orderly allocation of resources to various operations.
- b. It also facilitates optimum utilization of resources which brings economy in operations.
- c. It also avoids wastage of resources by selecting most appropriate use that will contribute to the objective of enterprise. For example, raw materials can be purchased in bulk and transportation cost can be minimized. At the same time it ensures regular supply for the production department, that is, overall efficiency.

**6. Planning facilitates controlling**

- a. Planning facilitates existence of certain planned goals and standard of performance.
- b. It provides basis of controlling.
- c. We cannot think of an effective system of controlling without existence of well thought out plans.
- d. Planning provides pre-determined goals against which actual performance is compared.
- e. In fact, planning and controlling are the two sides of a same coin. If planning is root, controlling is the fruit.

**7. Planning provides competitive edge**

- a. Planning provides competitive edge to the enterprise over the others which do not have effective planning. This is because of the fact that planning may involve changing in work methods, quality, quantity designs, extension of work, redefining of goals, etc.
- b. With the help of forecasting not only the enterprise secures its future but at the same time it is able to estimate the future motives of it's competitor which helps in facing future challenges.
- c. Therefore, planning leads to best utilization of possible resources, improves quality of production and thus the competitive strength of the enterprise is improved.

**8. Planning encourages innovations**

- a. In the process of planning, managers have the opportunities of suggesting ways and means of improving performance.

- b. Planning is basically a decision making function which involves creative thinking and imagination that ultimately leads to innovation of methods and operations for growth and prosperity of the enterprise.

## **Disadvantages of Planning**

### **Internal Limitations**

There are several limitations of planning. Some of them are inherit in the process of planning like rigidity and other arise due to shortcoming of the techniques of planning and in the planners themselves.

#### **1. Rigidity**

- a. Planning has tendency to make administration inflexible.
- b. Planning implies prior determination of policies, procedures and programmes and a strict adherence to them in all circumstances.
- c. There is no scope for individual freedom.
- d. The development of employees is highly doubted because of which management might have faced lot of difficulties in future.
- e. Planning therefore introduces inelasticity and discourages individual initiative and experimentation.

#### **2. Misdirected Planning**

- a. Planning may be used to serve individual interests rather than the interest of the enterprise.
- b. Attempts can be made to influence setting of objectives, formulation of plans and programmes to suit ones own requirement rather than that of whole organization.
- c. Machinery of planning can never be freed of bias. Every planner has his own likes, dislikes, preferences, attitudes and interests which is reflected in planning.

#### **3. Time consuming**

- a. Planning is a time consuming process because it involves collection of information, it's analysis and interpretation thereof. This entire process takes a lot of time specially where there are a number of alternatives available.
- b. Therefore planning is not suitable during emergency or crisis when quick decisions are required.

#### **4. Probability in planning**

- a. Planning is based on forecasts which are mere estimates about future.
- b. These estimates may prove to be inexact due to the uncertainty of future.
- c. Any change in the anticipated situation may render plans ineffective.
- d. Plans do not always reflect real situations inspite of the sophisticated techniques of forecasting because future is unpredictable.
- e. Thus, excessive reliance on plans may prove to be fatal.

**5. False sense of security**

- a. Elaborate planning may create a false sense of security to the effect that everything is taken for granted.
- b. Managers assume that as long as they work as per plans, it is satisfactory.
- c. Therefore they fail to take up timely actions and an opportunity is lost.
- d. Employees are more concerned about fulfillment of plan performance rather than any kind of change.

**6. Expensive**

- a. Collection, analysis and evaluation of different information, facts and alternatives involves a lot of expense in terms of time, effort and money
- b. According to Koontz and O'Donnell, ' Expenses on planning should never exceed the estimated benefits from planning. '

**External Limitations of Planning**

- 1. Political Climate- Change of government from Congress to some other political party, etc.
- 2. Labour Union- Strikes, lockouts, agitations.
- 3. Technological changes- Modern techniques and equipments, computerization.
- 4. Policies of competitors- Eg. Policies of Coca Cola and Pepsi.
- 5. Natural Calamities- Earthquakes and floods.
- 6. Changes in demand and prices- Change in fashion, change in tastes, change in income level, demand falls, price falls, etc.

**1.3 Concept of Planning in Safety Management**

Planning forms the backbone of any management activity including industrial safety management. Planning involves decisions making in advance taking due account of the

constraints and priorities, resource available and shape of things to come in future. Anticipation of goals choosing between alternatives, the possible pitfalls and lacuna during working, any bottlenecks in the smooth functioning of various activities are some of the main concern of a systematic planning. Clarity of vision intellectual acumen and strong but conscious determination pave the way to success so far as planning is concerned.

### **Basic Considerations for Planning Safety Management**

Basic considerations for planning safety management encompasses the following :

1. **Participating of Workers.** Workers must be exhorted to be safety conscious. The socio-economic background, attitudes towards safety of the workers may be assessed so that right type of training may be imparted to them.
2. **Experience of Workers.** The experience of workers play a pivotal role in containing hazards to a great extent. The novice among the workers should have interaction with the experienced worker so that adequate knowledge may be disseminated among the new entrants.
3. **Age and Other Factor of Worker.** The age of the workers as well as their salient traits have some bearing on safety. Hence the age as well as traits of the workers must have due consideration for building up strategy management.
4. **Actual Working Procedures and the Working Conditions.** A safe layout, a safe working procedure a safe working condition all contribute individually or collectively in the field of safety management. A poor layout, defective working procedure, worn out machines lack of repair and maintenance and last but not the least an uncongenial working environment have deleterious effect in the field of safety management.
5. **Past Experience of Planning.** Past experience of planning plays a very important role in chalking out future line of action in safety planning. The successful as well as the unsuccessful experiments of the past can help to formulate superior planning standard.
6. **Role of Employee or Management.** The role of employee or management in including the norms of safety among workers is a very important consideration for safety planning. Mutual cooperation and understanding between the management and the workers is the touchstone for a successful planning in safety management.

## **Framing Safety Policies**

While framing or formulating safety policies the following considerations need attention :

1. Meaning of Policies and Safety Policies. Policy forms the very foundation and core of any management activity. Policies are the basic guidelines which dictate the thinking style as well as the actions to achieve the desired goal or objectives. Policies restrict the arena within which decision are to be taken conformity with the objectives. Hence principles, rules and norms either explicit or implicit set up by the management and others along with the constraints therein fall under the ambit of policies. As a special case of policy making, the safety policy in itself has all the innate characteristics of policy making hitherto stated along with emphasis on the field of safety management.

2. Component or Content of Safety Management.

01. The Target. The target in the field of safety must be defined by the management.
02. The authority. The powers vested with the authority must be defined in unambiguous terms.
03. Norms and standards. The management must be clear regarding norms and standards to be followed.
04. Formation and Functioning of safety committee. Safety committee should be formed and should be vested with adequate powers. The safety committee must be functional and effective and not perfunctory by nature.
05. Safety personnel. The duties of the safety personnel must be well defined so that no confusion arises on this account.
06. Scope and responsibility. Specific person should shoulder and share responsibilities for each action taken in the matter of safety. Accountability is the prime need in all safety management activities. Scope of various personnel in respect of safety must be well- defined in order to have a foolproof safety management system.

## **Importance of Safety Policy**

Safety policy are very important and absolutely indispensable in order to :

- I. Provide a suitable base for coordination of safety activities in the various levels of hierarchies.
- II. Provide cogent, coherent and distinct objectives or goals in the field of safety management
- III. Provide fruitful cooperation to translate safety activities into action at all levels.

- IV. Provide an effect platform for initiations and motivation in the field of safety.
- V. Provide a course of action which can ensure that accepted norms of safety are not deviated or violated.

### **Effective Safety Policy**

An effective safety policy is characterised by the following:

**A. Flexibility :** The safety policy needs to be flexible and broad- based in the sense that they will provide guideline for the problems which vary in nature such that frequent changes in the policy are avoided.

**B. Explicitness :** The safety policy should be so formulated that explicitness is maintained. This implies that the policy should be in writing and ambiguous terms or statements should be absent in the formulation of the said policy.

**C. Coherence :** The safety policy should be coherent neither contradictory nor at variance with other policies thus maintaining the very essence of compatibility.

**D. Pragmatism :** The safety policies must reflect pragmatism. The viability and the success of the policy lie in the input- output assessment such that the benefits are commensurate with monetary involvements.

**E. Acceptability:** Any safety policy must have clear acceptability among the workers and should enough credibility and sincerity of purpose so that workers do not show a sense of aversion towards the policy.

The formulation of safety policy also includes ways and means to make safety policy positive or effectives. The ways and means to make safety policy positive or effective are contained in the Health and Safety at Work Act 1974. The main features of the said act are as follows:

1. Formulation of self- regulation safety policy by the employers shall be allowed.
2. Employee should be convinced regarding the need and usefulness of the safety policy. This goal can be achieved by ensuring that the workplace as well as the working environment are free from risks. It is to be further ensured that unprecedented risks have been contained through adequates and constant control/vigil.
3. Workers should be taken into confidence and their involvement in the framing of safety policy and decision-making should be welcomed.
4. The safety policy must not includes rules and regulation which are inflexible and compelling by nature.

5. The safety policy shall aim at rewarding persons who exhibit exemplary performance in containing accidents.
6. Safety policy shall be positive and optimistic in approach. The usefulness of safety norms should be highlighted through various information, data and other statements.
7. Safety policy should be specific through flexible in case of certain circumstance.
8. While reviewing the safety policy the workers should be taken into confidence.
9. No relaxation should be allowed in the enforcement of safety policy.

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## 1.4 Directing Function of Management

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Directing is said to be a process in which the managers instruct, guide and oversee the performance of the workers to achieve predetermined goals. Directing is said to be the heart of management process. Planning, organizing, staffing have got no importance if direction function does not take place.

Directing initiates action and it is from here actual work starts. Direction is said to be consisting of human factors. In simple words, it can be described as providing guidance to workers is doing work. In field of management, direction is said to be all those activities which are designed to encourage the subordinates to work effectively and efficiently. According to Human, "Directing consists of process or technique by which instruction can be issued and operations can be carried out as originally planned" Therefore, Directing is the function of guiding, inspiring, overseeing and instructing people towards accomplishment of organizational goals.

Direction has got following characteristics:

**1. Pervasive Function** - Directing is required at all levels of organization. Every manager provides guidance and inspiration to his subordinates.

**2. Continuous Activity** - Direction is a continuous activity as it continuous throughout the life of organization.

**3. Human Factor** - Directing function is related to subordinates and therefore it is related to human factor. Since human factor is complex and behaviour is unpredictable, direction function becomes important.

**4. Creative Activity** - Direction function helps in converting plans into performance. Without this function, people become inactive and physical resources are meaningless.

**5. Executive Function** - Direction function is carried out by all managers and executives

at all levels throughout the working of an enterprise, a subordinate receives instructions from his superior only.

**6. Delegate Function** - Direction is supposed to be a function dealing with human beings. Human behaviour is unpredictable by nature and conditioning the people's behaviour towards the goals of the enterprise is what the executive does in this function. Therefore, it is termed as having delicacy in it to tackle human behaviour.

### **Importance of Directing Function**

Directing or Direction function is said to be the heart of management of process and therefore, is the central point around which accomplishment of goals take place. A few philosophers call Direction as "Life spark of an enterprise". It is also called as an actuating function of management because it is through direction that the operation of an enterprise actually starts. Being the central character of enterprise, it provides many benefits to a concern which are as follows:-

**1. It Initiates Actions** - Directions is the function which is the starting point of the work performance of subordinates. It is from this function the action takes place, subordinates understand their jobs and do according to the instructions laid. Whatever are plans laid, can be implemented only once the actual work starts. It is there that direction becomes beneficial.

**2. It Ingrates Efforts** - Through direction, the superiors are able to guide, inspire and instruct the subordinates to work. For this, efforts of every individual towards accomplishment of goals are required. It is through direction the efforts of every department can be related and integrated with others. This can be done through persuasive leadership and effective communication. Integration of efforts bring effectiveness and stability in a concern.

**3. Means of Motivation** - Direction function helps in achievement of goals. A manager makes use of the element of motivation here to improve the performances of subordinates. This can be done by providing incentives or compensation, whether monetary or non - monetary, which serves as a "Morale booster" to the subordinates Motivation is also helpful for the subordinates to give the best of their abilities which ultimately helps in growth.

**4. It Provides Stability** - Stability and balance in concern becomes very important for long term sun survival in the market. This can be brought upon by the managers with the help of four tools or elements of direction function - judicious blend of persuasive

leadership, effective communication, strict supervision and efficient motivation. Stability is very important since that is an index of growth of an enterprise. Therefore a manager can use of all the four traits in him so that performance standards can be maintained.

**5. Coping up with the changes** - It is a human behaviour that human beings show resistance to change. Adaptability with changing environment helps in sustaining planned growth and becoming a market leader. It is directing function which is of use to meet with changes in environment, both internal as external. Effective communication helps in coping up with the changes. It is the role of manager here to communicate the nature and contents of changes very clearly to the subordinates. This helps in clarifications, easy adaptations and smooth running of an enterprise. For example, if a concern shifts from handlooms to powerlooms, an important change in technique of production takes place. The resulting factors are less of manpower and more of machinery. This can be resisted by the subordinates. The manager here can explain that the change was in the benefit of the subordinates. Through more mechanization, production increases and thereby the profits. Indirectly, the subordinates are benefited out of that in form of higher remuneration.

**6. Efficient Utilization of Resources** - Direction finance helps in clarifying the role of every subordinate towards his work. The resources can be utilized properly only when less of wastages, duplication of efforts, overlapping of performances, etc. doesn't take place. Through direction, the role of subordinates become clear as manager makes use of his supervisory, the guidance, the instructions and motivation skill to inspire the subordinates. This helps in maximum possible utilization of resources of men, machine, materials and money which helps in reducing costs and increasing profits.

From the above discussion, one can justify that direction, surely, is the heart of management process. Heart plays an important role in a human body as it serves the function pumping blood to all parts of body which makes the parts function. In the similar manner, direction helps the subordinates to perform in best of their abilities and that too in a healthy environment. The manager makes use of the four elements of direction here so that work can be accomplished in a proper and right manner. According to Earnest Dale, "Directing is what has to be done and in what manner through dictating the procedures and policies for accomplishing performance standards". Therefore, it is rightly said that direction is essence of management process.

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## **1.5 Supervisory Responsibility of Management in Safety**

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Responsibility of management in the field of safety includes responsibilities of various

line managers and staff specialists in a safety organisation/ department. It also includes the responsibilities of trade unions, government organisation/bodies, international organisation/ bodies in the field of safety. Line managers can be grouped into two sub-heads

1. Plant Manager and
2. Line Supervisor.

Similarly staff specialist specialists can be grouped into two sub-heads viz

1. Safety manager/specialists and
2. Part - Time safety specialist.

Responsibilities of line managers will includes responsibilities of plant managers as well as line supervisors.

### **Responsibilities of Plant Manager**

The following are the prime responsibilities of plant manager :

- 1) Active participation in all safety management activities and programmes.
- 2) Enforcement of all safety norms.
- 3) Making adequate provisions against hazards of all types including those due to fire, chemicals etc.
- 4) Assignment of proper personnel to meet emergency and related rescue- work.
- 5) Shouldering the overall responsibility of safety management.
- 6) Delegation of powers to various department to carry out such measures which will ensure safety in each department thus upholding the proper safety standards in each and every department.
- 7) Submission of the annual safety report highlight the achievements, failures and improvements.
- 8) Active participation as the permanents chairman of the safety committee.
- 9) Advising the safety department in connection with special hazards and unforeseen situations.
- 10) Thorough checking of injury reports and to express views on the same.
- 11) Encouragement of research and development in the fields of safety including use of modern techniques of safety appraisal.
- 12) Modernisation of the safety department including inclusion of use of superior personal protective equipments and devices, alarm-systems etc.

## **Responsibilities of Line Supervisors**

The following are the main responsibilities of line supervisors :

1. Imparting training and education to all categories of employees (experienced, novice or new entrants as well as transferred) in safety procedures and norms.
2. Assessment of need of safety procedures and their proper enforcement.
3. Regular testing and monitoring of the working environment, plants etc.
4. Actives participants in safety and housekeeping committees.
5. Regular and thorough safety inspections and to exhort the supervisors for proper repairs and maintenance.
6. Acceptance of direct responsibility in the matter of safety programmes.
7. Investigation of all accidents (fatal and non - fatal) and preparation of injury reports.
8. Assignments of special duty for certain experienced employees to help out new entrants or transferred employees not quite conversant with the plant and safety norms.
9. Carrying out of monthly safety meetings.
10. Assisting the personnel to cope with emergency situations as for example accidents due to fire gas leaks etc.
11. Arrangements of special training in case of new equipments or work procedures.
12. Improvements of the safety programme and to enhance the effectiveness of the same.

## **Responsibilities of Safety Managers(Full Time)**

The prime responsibilities of full safety managers/specialists are as follows :

1. Assistance in the formation of full time safety committees and its smooth functioning.
2. Assistance to top managers to frame safety policies and continues follows- up actions regarding their enforcement. Attention of concerned managers to be draws in case of any infringement of the said policies so that corrective measures could be adopted in time.
3. Enforcement of all safety norms,rules, regulations, codes and laws relating to safety as envisaged by the central, state or local authorities along with proper maintenance of legal records and necessary reports pertaining to safety.
4. Controlling and monitoring of all activities which are hazardous in nature in order

to wards off accidents resulting into injury, damage to equipments and loss of material or property.

5. Coordination of all department of the organisation which could be involved in prevention of accidents directly or indirectly namely engineering department, medical, fire department and the plant proper.
6. Maintenance of safety information and monitoring of programmes related to detection and suitable rectification of hazardous conditions.
7. The dissemination of knowledge and relevant information regarding safety to all the departments of the organisation.
8. Awareness as to the latest research and development regarding safety equipments and hazardous materials, amendments in laws, regulations, rules, codes, new techniques of accident preventions in the field of safety management.
9. Approval or rejection of plant layouts including plants, machineries and equipments (including hazards monitoring, detection and warning equipments) in additions to personal protective equipments followed by recommendation of right type of plant layout and equipments.
10. Imparting training on safety to personnel at various levels.
11. Regular inspection and maintenance of the plant; at the same time, maintenance of all records related to safety.
12. Cooperation with the government agencies and insurance companies and consultants and to carry out the instructions or advice recommended by the relevant authorities.
13. Reviews and recommendation pertaining to all hazardous activities.
14. Incorporation of any revision or improvement in the working procedures and the working environment as deemed fit.
15. Investigations of accidents already occurred with due emphasis on the preventions of recurrence of such accidents.
16. Study and measurement of environmental hazards regarding radiations, noise pollutions, air pollution etc.
17. Complete planning for waste disposal of harmful or toxic wastes in full corroboration with the standards laid down by the pollution control boards.

### **Responsibilities of Workers in the Field of Safety**

The following are the major responsibilities of workers :

1. Acquaintance with safety norms, rules, regulations, laws, codes etc. in connection with safety management.
2. Abiding by the instructions, rules and regulations regarding safety.
3. Abiding by the orders of the authorities in the matters of safety.
4. Alacrity on the part of workers while working.
5. Pointing out to the authorities any lacuna in the work procedures, defective tools and machineries, defective controls and lack of repairs and maintenance which may result in hazardous situations.
6. Check on personal habits, as for example alcoholism, drug addiction, untidy habits and manners and clumsy working etc.

### **Responsibilities of Government, Social Organisation and Public Authorities**

The following responsibilities and functions are vested upon government and public authorities as well as social organisations so far as industrial safety is concerned :

1. Framing of safety laws and regulations and their enforcement. Safety laws and regulations must be framed with due care taking due account of the prevailing conditions in the industries concerned. These laws and regulations become fruitless due to lack of enforcement. Enforcement of safety laws and regulations can be effected through various labour inspectorates, mines inspectorates, factory inspectorates and even other agencies.
2. Research, development and testing. The various state services including labour inspectorates should have adequate laboratory and other facilities in the directions of research, development and testing which should include testing of materials and equipments, assessment of working conditions including noise pollution and various other monitoring processes like air-pollution control and monitoring. Even the manufacture of proper machine guards, equipments and their quality controls can be handled by various public authorities and social organisations.
3. Safety organisations and associations. Safety organisations and associations could be state sponsored or even manned by social organisations. The functions of these safety organisations and associations are to promote safety in industries as for example national safety council having its headquarters in Bombay is engaged in promoting safety in industries in a number of ways. In other countries too like U.S.A., U.K., Australia etc. safety councils and safety associations are doing yeomen's service in the direction of safety management.

4. Cooperation among the inspectorates management and workers. Utmost cooperation is warranted among inspectorates, management and workers to create a congenial atmosphere where the provisions of safety norms could be maintained by proper interaction between the said constituent partners responsible for safety.
5. Advisory and educative role of state services. The state services have shoulder responsibility in disseminating the knowledge and norms of safety through its labours inspectorate in the forms of safety booklets, safety leaflets, safety posters, safety reports etc. for accidents preventions. In India this task is performed by government departments government sponsored organisations, national safety council etc.
6. Setting up of model state- owned industries. Certain state-owned industries could be set up as ideals so for industries safety management is concerned. These industries can be so perfectly development taking due consideration of industrial safety, that these can act as models to be followed by private industries entrepreneurs. These organisations can be even provide expertise to those private industrial establishment who seek help in safety management.
7. Audio visual aids in safety management. The government sponsored organisations, the private industrial establishment and other social activities can develop programmes to includes the safety management ethos among the workers and the public by arranging suitable exhibitions, establishing museums, advertising through media, holding safety workshops, observing safety weeks and through other safety related activities.

### **Responsibilities of International Bodies/Organisation in the Field of Safety**

In the earlier days the following international bodies were responsible for the promoting and maintaining safety in undertakings:

1. International Industrial Accidents Congress. Its first meeting was held in 1889 at Paris.
2. International Association for Legal Protection of Workers. It started functioning in 1898. International bulletin on labour legislation was published in 1902. International industrial accident statistics was compiled in the early 20th century.
3. International Workers Conference. Its first meeting was held in 1916.
4. International Labour Organisation (I.L.O). It started functioning in 1919.

However, in the recent years, International Labour Organisation (I.L.O) has played a very significant role in promoting safety in industries globally. Among the major activities of I.L.O. the following are of interest.

## **Safety Activities of the I.L.O.**

Industrial safety finds an insignificant and unimportant position in the early years of I.L.O. Industrial hygiene was discussed along with other topic in the first session held in 1919. The minimum age for working in an industry was prescribed which was a step towards safety. Prior to 1923, handling of poisonous chemicals was discussed and various conventions and recommendations were suggested in this regards. Further breakthrough occurred in 1923 with first international conference of labour statistics in which recommendations related to classification and rate of industrial accidents were framed. The first safety handbook was published in 1924. A journal on industrial safety survey first appeared in 1925 (later it was rechristened as journal of occupational safety and health in 1951). A correspondence committee on accident prevention was formed in 1925. Experts from several countries were drawn to advise the committee in the matters of safety. The safety convention had its inception in 1929 and was followed by several other conventions. In 1937 experts were drawn from different fields for drafting safety provision for coal mines. Industrial committees started meetings in 1945.

In 1949 another landmark decision in this direction was taken by incorporating the moral code of safety regulation for industrial establishments. International occupational safety and health information centre (also abbreviated as C.I.S.) a non- profit making body under the banner of I.L.O. started functioning in 1959 with the purpose of disseminating information etc. to further the cause of occupational safety and health on a global basis. Notably, with the adoption of the latest conventions and recommendations related to safety, health and working condition in 1981, new chapters were added to the various safety arenas. These conventions and recommendations have in its ambit the prevention of occupational hazards as well as improvement of the working environment. A tripartite approach encompassing formulation, implementation and periodical review of national policy regarding occupational safety, health and working environment has been suggested in the above conventions.

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## **1.6 Organization and Management for Safety**

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### **Concept of Safety Management**

The concept of safety management o more precisely speaking industrial safety management is concerned with the elimination of unsafe acts and unsafe condition through proper planning, directing , organising,motivating, communicating and controlling for the overall well-being of

the personnel engaged in industries. Proper managerial and operational activities are envisaged for the prevention of accidents as well as occupational diseases. The measures to be taken should take due account of preventing injuries and occupational diseases by adopting ways and means which should be appropriate less cumbersome and less costly.

### **Objectives of Safety Management**

The main objectives of safety management are as follows :

1. To solve safety problems and to take up safety programmes in joint consultation and cooperation with all involved in the matter namely workers, management, consultants etc.
2. To reward those persons who have shown their excellent performance in the field of safety. The rewards may be in the form of monetary incentives, in the form of certification etc.
3. To see that safety equipment and devices are not inconvenient and cumbersome and any lacuna in this respect must be removed forthwith.
4. To properly explain the safety rules and norms to the workers thus dispelling doubts from their minds.
5. To see that attitude of the safety officers or supervisors towards the workers is that of co-operation and not coercion.

All the above stipulations regarding safety come under the category of positive safety management. Positive safety management thus eliminates to a large extent the negative side of safety by suitably inculcating a positive attitude towards safety for all concerned with stress on rewards and minimise punishment as far as possible.

### **Approaches to Safety Management**

These are three distinct schools of thoughts so far as the philosophy or the approach to safety management is concerned. These approaches are as follows :

1. Employee-centered approach.
2. Work-centered approach.
3. A combination of the above two approaches i.e work-cum-employee -centered approach.

I. Employee - centered approach. Mr. H.W. Heinrich, the pioneer in the field of safety management, propounded this concept or approach. This approach aims at creating safety consciousness among employee basically through the elimination of wrong psychological

attitudes. Control of unsafe behaviour and consequent development of safe behaviour among line managers and workers forms the main theme in this system of approach. The problem of safety is viewed from the point of view of the attitudes and behaviour of the people concerned with safety. In this approach it is the onus of the managers to make endeavours so that the people involved in safety can work in a democratic manner through mutual cooperation and joint consultation.

II. Work - centred approach. This basically aims at elimination of physical hazards and attaches only secondary importance to the psychological environment or conditions of the workers. This approach has an innate autocratic style of functioning. Manager's contributing to this approach put more emphasis on improving of poor performance of machines and their designs,rectifying the unsafe layouts, introduction of safe tools,restrictive rules and procedures.

III. Employee - cum- work-centered approach. This approach is an amalgamation of the two approaches hitherto described. This is a modern approach hitherto described. This is a modern approach to safety management in which the basic elements of the two approaches are found galvanised. The advancement of engineering and technology and the psychological perceptions of the workers in a democratic set up have been suitably mingled together to develop the concept of employee-cum-centred approach.

### **Comparison of the Work-centered Approach and Employee- centered Approach**

The two approach are being compared with respect to certain salient features as follows:

Point of Comparison	Employee- centered approach	Work - centered approach
Basic cause of accident	Unsafe act	Unsafe condition
Nature of safety problem	Human problem	Engineering problem
Style of Functioning	Democratic	Autocratic
Stress on condition of work	Psychological	Physical
Method of safety promotion	Educative and motivative	Legal
Emphasis on safety through	Altitude of workers and more obligations	Cost consciousness and economy
Main thrust areas	Job performance and job enrichment	Job specification experts and automation

## **Motivating Factors for Safe Behaviour**

The following factors constitute motivating factors for the safe behaviours :

1. Genetic factors/hereditary factors.
2. Situational factors.
3. Environment factors.

Apart from these factors the present behaviour of an employee is the outcome of two parameters namely (i) Past factors and (ii) Current factors. Genetic factors, situational factors and environment factors are elaborated as follows:

I. Genetic factors/hereditary factors. A sound health, robust built, the colour of eyes etc. are greatly influenced by heredity. These genetic factors do influence the behaviour of the workers to a great extent. It may be mentioned that safe behaviour of a worker may be largely depends on sound health conditions.

II. Situational factors. Various situational factors like harsh and domineering behaviour of the management or supervisors towards workers, excessively long duration of work, the nature and type of motivation adopted by the management towards the workers etc. could be responsibility for unsafe behaviour by workers in workplaces. Unfavourable situational factors if any may inhibit the possibility of accidents.

III. Environment factors. Various environment factors can be summarised as follows:

- A. Influence during embryonic stage. During the period, the child remains in the womb the behaviour and the lifestyles and other addiction (e.g. Narcotics, drugs etc) of a pregnant mother can cause individual difference in the behaviors of the offspring.
- B. Childhood and family background. Childhood experience leave certain indelible imprints on the tender mind of the child. The goals, the constraints, the rewards, the punishment, the motivations during childhood days exert a tremendous influence on the future behavioural patterns. In addition to this, the family background also shapes and influences individual behavioural patterns. Acquisition of skills, acumen, alertness etc. may be imbibed through a proper family background.
- C. Early training and education. Interactions with fellow students, teachers and others in the schools do contribute to personality development, development of scientific outlook, elimination of superstitions and dogma. All these traits combined, help to eliminate unsafe behaviour.
- D. Interaction with social groups and the prevailing working environment. Interaction

with social groups as well as the prevailing working environment have tremendous influence in shaping the personality and attitude of workers. The behaviour of an individual can be subjected to a restraining effect due to the presence of a dominant social group and a congenial working environment.

E. Predominant beliefs and cultural practices. Certain beliefs, dogma etc. can lend support to inevitability of accidents. This gives rise to fatalism, which must be dispelled from the minds of workers. Workers may have the notion that accidents are unavoidable and bound to happen even if proper safety measures are adopted. This sort of pessimism may compel the workers to reconcile with their fate and destiny without taking any recourse to precautionary measures.

### **Personality Traits, Belief System and Safety**

L. Shaw and H. Sichel in their investigation and studies of accident proneness in 1971 have identified various personality traits/characteristics which account for safe behaviour of the individuals. According to L. Shaw and H. Sichel the personality traits and their impact on safety are mentioned as follows :

1. Good personality from the point of view of safety, comprises of persons with such traits like peaceful, controlled, passive, careful, even tempered and calm.
2. Fair personality from the point view of safety comprises of persons with such traits like reserved, pessimistic, quite, lively and easy going.
3. Poor personality from the point of view of safety comprises of persons with such traits like rigid, anxious, talkative, responsive, moody, sober.
4. Bad personality from the point of view of safety, comprises of persons with such traits like aggressive, impulsive, optimistic, active, restless, excitable.

In the light of the above finding, the services of expert psychologists can be available to identify the personality types. The undesirable personality types i.e poor and the bad type can be easily weeded out at the time of selection of workers and, in case of employed workers these types i.e. poor and the bad types may be kept under strict watch and control to prevent any unsafe behavior on their part.

Another pioneer work in this direction of accident proneness studies has been carried out by O.J. Harvey on the basis of belief systems. This concept of belief system as system I, system II, system III, system IV.

**System I.** Individuals falling under system I are characterised by orthodoxy and rigidity in approach; as a result, these people stick to rules and norms, and their religious

and political beliefs are so firm that they are peeved at the slightest deviation from their avowed belief. They bank traditions, supernaturalism and are averse to changes. In this system father's positions in the family happens to be more dominant than that of the mother. These individuals view the world in a simplistic way. Such individuals bereft of scientific outlook and reasoning, Hence, these individuals bereft of esteem without any proper reasoning. Hence, these individuals bereft of scientific outlook and reasoning and with questionable safe behaviour find it difficult to accept safety rules and policy.

**System II.** Individuals falling under system II are characterised by less orthodoxy and rigidity as compared to individuals falling under system I.

Strong negative attitude towards tradition and institution is a salient feature of the individuals of system II. In this system the individuals are apprehensive of putting their trust and reliance upon persons of authority and power and deprecate the bossism of powerful persons where they are in a subservient (nominal) status. In this system the role of mother is more dominant as compared to father, as a result frequent conflicts pop up specially involving children. However, their partial attitude is demonstrated by their behaviour when they acquire power and misuse the same with impunity.

These negative beliefs often get them embroiled in controversies with subsequent alienation from others. Hence with these beliefs firm in their mind these individuals of system II are considered as employees having elements of risk so far as safety is concerned.

**System III.** Individuals falling under III are characterised by their acts and beliefs. Their dependence on persons of high status and power etc. is one of their salient features. The overprotection provided to them during their early upbringing by the mother as well as extreme dependence on persons of high status and power shape their attitudes and beliefs towards life. It is easy to deal with this type of individuals (having amiable nature) so far as safety is concerned.

**System IV.** Individuals falling under system IV are characterised by their open-minded, flexible and pragmatic beliefs and approaches. They are quite at variance with the people of system I as well as system II since they (i.e. system IV individuals) possess no obsessions or bias for or against rules. The main thrust in this type is to attain the objectives in a smooth way with least of turmoil. This needs an adjusting frame of mind coupled with beliefs and standards based on their reasoning and direct experience. However the family plays an important role in the sense that free thinking is encouraged and no beliefs is imposed upon these individuals. Out of the four systems individuals of system IV happen to be easiest to deal with so far safety management is concerned.

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## 1.7 Safety Programme Formulation

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Safety programme consists of a combination of such functions primarily intended to minimise the number of injuries and contain hazards so that the goal of industrial safety is achieved. Thus any safety programme basically deals with the identification of hazards coupled with the means to contain or minimise such hazards.

Safety programmes can be classified as preventive or maintenance safety programmes. Preventive safety programmes is basically a long-term tactics after a thorough and judicious planning and investigation. The basic theme is prevention of accidents through formation of safety organisations at various levels, rectification of flaws in the system of design and layout, maintenance of coordination between management and workers. This type of programs seeks improvements in the training and education system of the personnel and tries to locate defects in the analysis of cause of accidents.

The maintenance safety programme is a post-accidents programme of short duration. Nothing is pre planned in this system but emergency and temporary arrangement of ad hoc type are made to cater the needs of safety on the basis of priority and emergency.

### Contents of a Safety Programme

Contents of safety programme may comprise of the following :

1. A typical organisational system. The system refers to an open type system where interactions between various departments, trade unions, government etc. are involved. Further the system is organic by nature in the sense that it contributes toward stability, growth and maturity.
2. The basis of the programme. The programme should be based on certain philosophy and policy. This philosophy and policy in general should be reflected in the execution of the programme itself.
3. Risk specification and hazards. All known process risk must be suitably defined and classified. Similarly all known hazards specially major hazards must be suitably defined and classified. The above exercise will be quite helpful in allocating particular tasks to suitable persons.
4. Allocation and controls of tasks. For all safety programmes allocation of specific task or jobs as well as their controls play a very important role in safety programmes. This includes not only controls including suitable maintenance procedures.
5. Performance control. Performance controls plays a very vital role in safety

programmes. This includes both in- sites and off- sites exercise, safety audits, hazard analysis (HAZAN), inspection methods, investigations on accidents, loss preventions schemes , risk evaluation and control, medical investigation and services etc. encompassing some of the areas of performance control. The authority and responsibility for the above exercise should be vested with experts whose names should also be clearly indicated in the content of safety programme.

6. Maintenance of norms and standards for various procedures and operations etc. The designs, layout, storage, handling, installation, repairs and maintenance, housekeeping etc come under the purview of maintenance of norms and standards for various procedures and operations. This includes machinery, electricals, illuminations, chemicals, protective clothings and portable equipments. Protection against fire fighting improvement in working conditions, environmental controls and monitoring, maintenance of proper hygiene and welfare of the workers all are include in this context. Proper control is warranted both from the point of view of operations as well as design and selection of materials/equipment.
7. **Information system** : Authentic and pertinent information should be supplied at all levels. Necessary data and information pertaining to technical, medical, statistical etc. in connection with safety management must be readily available. The information services should be cooperative so that necessary informations are available to the concerned personnel with ease. Communication gap is extremely undesirable in connection with information system.

Information system have to be tackled at two stages namely that of problems analysis and decision making. The components of problems analysis are as follows :

1. **Identification of basic problems and priorities:** The basic problems have to be sorted out at the first instance . The problem arising out of the failure of a particular programme, any safety campaign etc. may point to some innate flaw somewhere in the information system. Hence problem analysis has to be taken up with due care and attention that is the problem must be identified and a comprehensive list of all such problem must be drawn up. Moreover, since all the problems may not be simultaneously taken up for solution , therefore, certain problems may need immediate attention whereas certain other problems may not be that of an urgent nature. Hence listing of the problem in order of their priorities has to done to ensure smooth and effectives functioning of any problem.

2. **Statements of the problems in the exact terms** : The problems must be describes in exact terms so the the objectives is crystal clear before the eyes of the analysers.

Collection of data and information is must in this direction. Both facts and opinions are to be collected and properly listed. The data and information should be collected judiciously and without any bias.

**3. Exploration of all possible causes :** On the basis of the informations collected the next step is to identify the possible causes. THE causes can range from lack of training and understanding to failure of working procedure and engineering mechanisms. Hence exploration of all possible causes should be judiciously done through elimination of such causes found to be redundant.

**4. Formulation of a testable hypothesis :** After all the possible causes of accidents have been sorted out, the next step of formulation of a testable hypothesis starts. This implies that the proposition should be exact such that the hypothesis suggested in unequivocal and verifiable. The hypothesis must pinpoint the specific causes and should not be vague in any way.

**5. Analysis of the exact problem :** The problems analysis is a difficult task and must be entrusted to experienced, unbiased and unprejudiced analysts. The testable hypothesis is based on certain assumptions as such in order to know the real causes a problem analysis has to be resorted to. The entire scenario including the chain of events; the history of the persons concerned as well as the working procedures must be assessed while testing a hypothesis involved in the problems analysis. If the whole gamut of things cannot be verified the method of random sampling has to be resorted to.

The decision-making stage should consider the following :

**1. Development of alternative proposals or approach:** This can be achieved through group discussions with initiations from the group leader. All alternatives or new ideas should be recorded. Participants in the group discussion should be encouraged to put forwards their ideas without criticizing the ideas of others. A suitable time slot for discussion on various alternatives solutions should be earmarked during group discussions. New alternatives and ideas can be developed by allocating some times(say an hour) to brainstorming activities during the sessions.

**2. Selection and implementation of action:** The selection of the appropriate action coupled with its proper implementation is a very important aspect of decision making. The best or the optimum solution can be found out only after complete screening of the various alternatives taking due account of the criteria, objectives and constraints. The implementation process must take into account the acceptability of the actions to be taken after proper discussions with the people to be affected by such actions. Unilateral actions can give rise

to grievances and lack of understanding among the workers and the management. In order to achieve a smooth implementation of actions all suggestions, criticisms, innovative ideas etc. must be sympathetically considered to avoid unnecessary confrontations. Some sections of the workers may be obsessed with imaginary and irrational approaches as regarding certain actions. Hence it is imperative on the part of the management to dispel doubts from the mind of all concerned.

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## **1.8 Organising and Safety**

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### **Concept of Organising**

Organising is the process of identification and categorisation of the tasks to be performed by suitable delegation powers, responsibility etc. as well as establishing coordination between people so as to result in utmost efficiency and smooth functioning related to various activities. This implies that the coordination is sought at all levels in addition to building up of an efficient authority in the entire organisational set-up.

Organising demands a meticulous observance people to carry out or measures:

1. Employment of knowledgeable and experienced people to carry out important jobs or task.
2. Clearly defining the relationship between the various group or individuals at same or different levels.
3. Clear identification of the tasks so that the goal or the objectives may be attained without confusion.
4. To allocate functions with proper subdivisions as the jobs to be performed taking due account of responsibility and credibility of the persons concerned.
5. Proper facilities are to be provided so that people can discharge their duties quite faithfully.
6. Last but not the least the delegation of authority or power should be vested upon proper people specially those having proven track-record and an unblemished previous performance.

### **Organisational Systems in Context to Safety**

Generally speaking the line manager shoulders the main responsibility of safety management in an organisation. However, the safety department as well as the safety specialist have their definite roles in safety management as both of them advise and provide

due assistance to the line managers in the matters of safety. Since the line manager has to perform his duties and arduous tasks, it is not expected of him to shoulder the whole gamut of responsibility involved in the safety management. With the safety literatures growing in volume by leaps and bounds every year and the introduction of new safety techniques, the line manager becomes extremely burdened if he has to look after the whole arena of safety. Hence creation of separate safety department fortified with safety specialist is warranted under the changed circumstances in industries.

The safety specialist under special circumstances can be entrusted with line authority in a restricted sense in case of emergencies and special delegation powers can be vested to the specialist by the managers themselves. The safety specialist is expected to inculcate the value and importance of safety in the whole system through persuasion and timely advice.

### **Role of Safety Department**

The role safety department in an organisation should be viewed in the light of the following:

1. Place of safety department in an organisation, and
2. Organisational structure of the safety department.

**1. Place of Safety Department in an Organisation :** The place or safety department in the organisation could be conceived in the following ways:

- A. Direct channel of communication could be established between the safety director and the top management. This implies that the safety director may be directly placed under the managing director or the general manager.
- B. The channel of communication between the safety director and the top management through the line manager having direct access to the top management.
- C. The safety director may be placed under such persons (as for examples personnel manager etc.) who wields enough power and influence in the organisation itself. In this case the personnel manager should have be good rapport with the line officer.
- D. The safety director may be placed under such a boss who has real interest in the safety matters as for example the production manager.

**2. Organisational Structure of the Safety Department :** This organisational structure of the safety department depends upon two factors namely the size of the organisation in the terms of small or large and the territorial location of the organisation. The territorial location may also be referred to as geographical location.

### **Organisational Structure in Small Undertakings**

These undertakings being small do not engage a full-time safety expert. Sometimes the safety responsibility may be shouldered by a qualified, experienced and safety trained foreman to cater for the health and medical needs. A physician and a nurse assisted by para-medical staff can be engaged on a part-time basis. A few personnel may be trained to render first-aid services to cope with any minor injury and ailments.

### **Organisational Structure in Large Undertakings**

In case of large undertaking where there is a single large plant, a centralised safety department is desirable where safety specialists have to be engaged on a full-time basis. In this case a director of safety may be installed under whom various safety managers dealing with safety may be installed under whom various safety managers dealing with safety planning, safety maintenance, safety inspection, safety research etc. have to perform their duties sincerely. However, in an organisation of the multi plant type characterised by scattered operations, a decentralised safety department may be the right choice. In this system the general manager may be installed under whom a personnel manager may be placed. The personnel manager may become the incharge of the safety department. Various safety managers of the safety department may operate under the personnel manager. A workshop superintendent may be placed under a safety manager. Finally a foreman and safety officer might operate under the workshop superintendent. Under the same general manager, a production manager may function. A number of workshop superintendents may operate under the production manager. Furthermore, a foreman and a safety officer might be placed under each workshop superintendents. Thus in the above context decentralisation is achieved since the safety activities are performed through separate and distinct streams.

### **Territorial Organisational Structure**

In case of organisation characterised by scattered operation in farflung regions, a proper strategy to cope with such situations is warranted. In this arrangement the production manager and the personnel manager work under the same general manager. Different regional deputy general managers. Different regional deputy general managers are deputed under the production manager. The deputy managers may look after the work of different territories or regions as for example eastern regional deputy general manager are deputed under the production manager. The deputy managers may look after work of different territories or regions as for example eastern region, northern region, southern regions, western regions. Foremen and safety officers work under these regional deputy managers. In order

to synchronise all the activities of the various territorial regions, a safety department at the headquarters is necessary. The top management frames safety policies which should be followed by the various regional and local units. A regional manager assisted by foremen and safety officers should have to freedom to chalk out and implementation general safety plans. It is the onus of the chief safety personnel at the headquarters that the general safety policy is being followed at all locations. He should also provide assistance and necessary directions to uphold the safety policy.

Safety Responsibilities and Functions Of Various Functionaries task of and Departments in an Organisation

Functions and responsibilities of different functionaries regarding safety in an organisation are as follows:

### **Head of the Safety Department Director**

The head of the safety department/safety director is vested with the onerous task of solving safety problems by offering judicious and sustainable solutions as well as promotions of safety at various levels. Basically the head of the safety department has to enforce safe practice and to remove or put check on hazards.

The major functions and responsibilities of the safety director can be summarised as follows:

1. Synchronizing all safety activities related to all departments as for example medical department, fire department, engineering department etc.
2. Regular inspection by himself or through the staff to ascertain and ensure that the safety practises and procedures are being followed in conformity with the relevant standards and acts. Necessary correcting or remedial measures are to be taken in case of any infringement safety procedures, standards, act etc.
3. The design of any new equipment (including safety equipment) has to be duly approved.
4. Controlling directing formulating in the administrative as well as advisory capacity for accident prevention policy and programmes.
5. Closely co-operating and monitoring the training programmes in safety.
6. Maintaining accident records system through staff and devices ways and means for non-recurrence of accidents.
7. Help to include the concept of safety through programmes, safety week, safety training, safety seminars etc.

8. Maintaining suitable liaison and rapport with the safety consultants or professional with exchange of information so as to keep abreast of the latest in safety. This may include research and development (R&D) effort.
9. Fixing up standards for personal protective equipment and other safety devices to be used by the working personnel.
10. To recommend safety measures in connection with new constructions,renovations or repairs.
11. Delegation of certain powers to officers under him to streamline the proper functioning of the safety department.
12. Submission of safety reports periodically to superior officers to make them aware of the status of safety in general.

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## **1.9 Functions and Responsibilities of Safety Supervisors**

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The following are the major functions and responsibilities of safety officers/safety supervisors :

1. To comply with the safety laws,norms and standards.
2. To promptly investigate regarding the cause and the nature of accidents as well as to identify accident prone workers.
3. To inculcate the spirit of safety among workers by launching safety campaigns in the forms of observing safety weeks and through other audio-visual aids including arranging contests, talks and seminars on safety.
4. To coordinate and motivate the safety educational and training programmes among workers.
5. To collect and maintain data and information regarding frequency and severity of accidents.
6. To formulate suitable safety policies and programmes.
7. To identify hazardous tasks and processes as well as hazardous zones in the workplaces with suitable demarcation of such zones.
8. To keep in readiness fire fighting squads,medical support and first aid help for the personnel.
9. To inspect, supervise or investigate all new constructions,new procedures,installation of new equipment from the point of view of safety.

10. To adopt remedial or corrective measures to contain hazards.
11. To report regularly on safety performance as well as accident trends.
12. To ensure that personal protective equipments are in working condition and being used by workers in hazardous situations.
13. To help the safety committee normally as a secretary.
14. To formulate and select suitable remedial and corrective measures in order to contain or minimise unsafe procedures and practices and hazards of various nature.

The functions and responsibilities of different departments regarding safety in an organisation are as follows :

A) Fire Department. Separate fire department are found in large plants. The function and responsibilities of the fire department are as follows:

1. To inspect fire-fighting equipments and to see that they are in working condition.
2. To arrange mock fire-fighting drills from time to time in addition to fire protection surveys.
3. To abide by the latest fire- fighting codes and fire prevention norms.
4. To update review and enforce the fire detection and fire control system in addition to training and educational programmes on fire prevention and fighting.

B) Safety Department. The functions and responsibilities of the safety department are as Follows:

1. To arrange for education and training on safety for the personnel. This includes proper motivation to the workers coupled with inculcating the spirit of safety among them.
2. To maintain adequate safety standards conforming to safety laws as envisaged by central, state and local authorities.
3. To improve and promote the safety system and to advise on safety management. This includes safety campaigns,safety communication system, safety research and development programmes etc.
4. To assess review and grant approval to safety norms,procedures and policies related to plant safety and occupational safety.
5. To carry out safety inspections and surveys and accident inspections pertaining to safety.
6. To identify unsafe conditions and act and try to suggest suitable measures for the

amelioration of the condition of workers affected by these conditions or acts.

C) Maintenance Department. The functions and responsibilities of the maintenance department are as follows :

1. To arrange for medical check- ups at regular intervals for the personnel.
2. To assess the physical capabilities of the workers taking due account of the job requirements.
3. To conduct frequent medical examinations of employees and to assess work injuries, illness(both severe and chronic) so that the general health of the workers does not deteriorate and lead to serious health problems.
4. To start medical treatment with promptness in case of all injuries and to inculcate the spirit of personal hygiene among workers so that small injuries and wrong habits do not escalate the problem to uncontrollable dimensions.
5. To conduct occasional medical surveys in order to assess the working conditions and working environment under which the workers have to operate.

E) Engineering and Design Department. The following are the functions and responsibilities of the engineering and design department :

1. To design such equipment, tools and equipment which are safe enough to work with. This is physical requirement pertaining to workers.
2. To design such plants,tools and equipment which cater for psychological demands of the employees taking due account of convenience, easy workability etc. Ergonomics plays an important role in this case.
3. To take due precautions during actual working and operations involving hazardous machines and jobs thereby ensuring safety t workers to a great extent.

F) Transport Department. The following are the functions and responsibilities of the transport department:

1. To thoroughly inspect vehicles and garages at regular intervals. A report to this effect should be submitted to the safety department.
2. To replace or repair all defective vehicles so that accidents can be averted.
3. To keep the garages clean, free from dirt,oils and greases to avoid slipping and skidding.

G) Inspection Department. The following are the functions and responsibilities of the inspections department:

1. To report regularly to the safety department.
2. To list defective tools and machinery, their location and type in various department and send the information promptly to all concerned.

### **Purchase Department**

The following are the functions and responsibilities of the purchase department :

1. To purchase such materials, tools, plants, equipment etc. which are not substandard or defective.
2. To ensure that the purchased goods, articles, machines etc. do not infringe safety norms. In any case the concept of safety should not be compromised with economic considerations or constraints.