Introduction to General Safety

Safety is everyone's responsibility, and building a safer and healthier work environment should be management top priority. Following proper safety procedures begins with individuals, and ultimately affects each person in our community. We must all work together to ensure that work environments are safe and healthy.

General rules apply related to health, safety, and the environment (HSE) for every site or company , irrespective of the tasks the workers are responsible for. These rules must always be respected.

1. STATUTORY REQUIREMENTS PERTAINING TO OHS

Labour laws were enacted from time to time to remedy certain ills noticed in the working conditions. In common with many other social legislations, there was a time lag between the appearance of unsafe and unhealthy working conditions and the legislation, which was designed to eliminate them. Enforcement of the provisions of the labour legislation has brought about reduction in hazards in the industry.

Indian Legislation on Occupational Safety and Health (OSH)

The legislations as applicable to OH&S are as follows:

- The Factories Act, 1948 & the State Factories Rules.
- The Gas Cylinders Rules, 1981
- The Petroleum Act, 1934 and the Petroleum Rules, 1976
- The Manufacture, Storage, and Import of Hazardous Chemicals Rules, 1989
- The Hazardous Wastes (Management & Handling) Rules, 1989
- The Central Electricity Authority Regulations, 2010
- The Public Liability Insurance Act, 1991 and the Public Liability Insurance Rules, 1991
- Chemical Accidents (Emergency Planning, Preparedness & Response) Rules 1996
- Noise Pollution (Regulation and Control) Rules, 2000
- The Central Motor Vehicles Rules, 1989
- The Bio-medical Waste (Management & Handling) Rules, 1998
- The Workmen’s Compensation Act, 1923 & Rules, 1924

- The Employees' State Insurance Act & Rules
- The Insecticides Act, 1968 & Rules, 1971
- The Building & Other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996 & Central Rules, 1998.
- The Building & Other Construction Workers' Welfare Cess Act, 1996 & Rules, 1998

2. ORGANISING FOR SAFETY

Many people believe that if we provide a safe workplace with well-guarded machinery, trained operators and workers clearly laid down procedures and vigilant supervision, there cannot be any accident. However, even with these optimum conditions many accidents may take place. Accident prevention basically depends upon the motivation of employees to work safely. It is necessary to create and maintain workers' interest in the importance of safety. This process will cultivate safe working habits among workers and supervisors.

The top management should define, document, endorse and review its OSH policy, which is appropriate to the nature, scale and the hazards and risks of its activities.

Safety Organisation

Safety organisation is the agency employed by management to assign responsibility for accident prevention and to ensure performance under that responsibility. According to the Safety Statutes, it is the duty of the management to provide a safe workplace and instructions on the hazards involved in operations and indicate the safe way of performing the job.

Safety Committees

Under Sec.41-G of Factories Act the occupier shall constitute a Safety Committee consisting of equal number of representatives of the management and workers. Formulation of safety committees is one of the effective management tools for promotion of safety and making the employees safety conscious. The basic functions are:

i) to discuss and formulate safety policies and recommend their adoption by the management
ii) to discover unsafe conditions and practices and determine their remedies.
iii) to work to obtain results by having its management approved recommendations put into practice.

Different safety committees can formed such as central safety committee which is responsible for the organization as a whole; a Sectional Safety Committee for dealing with safety matters at the Section level; Shop/Site level safety committees for to correct unsafe situations and a lot of useful suggestions/ideas will come from the workers.

Safety Information

Safety information can be given through accident analysis, educative materials released periodically and through display of safety posters.

Safety Posters

Safety posters are the most visible evidence of accident prevention at work. Posters are also useful in supporting special campaigns, for instance, wearing protective equipment, maintaining good housekeeping, or offering safety suggestions. Posters promote traffic, home and even pedestrian safety by visual education.

Safety Contests and Suggestion Schemes

There are various types of contest can be conducted based on injury experiences, improvement over past records and non-injury rate contests such as safety slogan, poster, housekeeping, etc. Since accident prevention is closely associated with efficiency, Safety Suggestions help not only in preventing accidents but also in lowering the cost of production project, in improving working conditions and in bettering the health and raising the morale of the workers. Posters and other propaganda should urge workers to suggest good ideas on safety. Due recognition for these suggestions should be given and noteworthy cases should be publicised in the factory establishment on bulletin boards.

Safety Education and Training

Most accidents involve unsafe acts and unsafe conditions - both the results of human failure. When tools and equipment are used improperly, such unsafe acts become major cause of accidents. One method of preventing unsafe acts is to train workers in the proper use of tools and equipment. Similarly, to eliminate unsafe conditions, workers should be trained to establish and maintain a safe working environment. An effective training programme consists of three essential parts: objectives, course outline, and lesson plans.

Safety Training for Supervisors

The immediate job of preventing accidents falls upon the supervisor, not because it has been arbitrarily assigned to him, but because accident prevention and

production control are closely associated with supervisory functions. Human behavior can be influenced by several factors such as developing safe work procedures and insisting on adherence to them, teaching workers facts about the causes of accidents and methods of prevention. These influences are best exerted through a well-planned training programme, which can solve many problems.

3. MATERIAL HANDLING

Crane, Hoist and Lifting Tackles

The Factories Act, 1948 deals with the safety requirement in lifting tackles and require that these should be of good construction, sound material and of adequate strength. These are to be properly maintained and thoroughly examined and certified by a competent person.

The general safety precaution for Cranes, Hoists, Lifting tackles and manual lifting are given below:-

1. Don't use chain as temporary slings
2. Check the Safe Working Load capacity of chain blocks, its supporting structure, ropes, chains, slings etc. before it is used. Also check for any defects.
3. Do not kink or twist a chain no carry it over sharp edges. Also do not lift the load on the point of a hook.
4. Install necessary barricades, warning signs or any other steps necessary to prevent persons walking beneath the load.
5. While lifting a load, keep away as far as practically possible and use guide rope lines.
6. Do not ride a crane, hoist or any other device. There are made for lifting material only.
7. Wear a pair of good cotton / leather hand gloves to minimise injuries to hands while lifting of handling objects.
8. While lifting, moving or carrying pipes, keep hand and fingers out of the end of the pipe. Keep feet and hand away from underneath pipe when it is lowered.
9. Co-ordination is essential while lifting, lowering or carrying objects by two or more men.

Manual Lifting Procedure

During manual lifting, correct application of following basic factors will help in averting injuries resulting from improper handling:-

a. Good lifting posture starts with the feet. The feet must be enough apart to give a balance distribution of weight on both legs. The leading foot should point in the direction of movement. In this position knees can be bent to lower the body vertically.
b. The knees and hips should be bent and the back should be kept as straight as possible with the chin tucked in.
c. Arm should be held as near as possible.
d. Lift should be made smoothly. No jerks or snatches should occur.
e. Dangerous posture and movements of the back should be avoided. Forward and backward bending of back i.e. hollow back posture impart great tension on muscles and ligaments on the convex side and compression on the vertebrae and discs on the concave side. Sudden additional jerk can result from jerky movement.

Conveyors

The mechanical handling methods like conveyors has undoubtedly helped to greater safety by reducing fatigue and eliminating the need to lift awkward loads and so restricting the circumstances in which strained backs, cut hands and injured toes can occur.

There are various types of conveyors in use such as Belt conveyors, Bucket conveyors, Chain conveyors, Roller conveyors, Screw conveyors, Pneumatic conveyors and Gravity conveyors.

Each type having a particular application and hazards associated with them. Even a safely designed conveyor can still cause injuries unless precautions are taken in its operation and maintenance. Some of the general precautions are given below:-

1. All the head and tail pulleys must be kept guarded.
2. Where two or more conveyors are operated together, the controlling device should be so designed that no conveyer can feed on to the stopped conveyor.
3. All pull cords should be maintained in good working condition for stopping the conveyors in case of emergency.
4. In case of remote operation of conveyors, signal lights and sirens should be provided on the conveyors to warn the persons working nearby before the start-up of conveyor.
5. Take precautions against stone falling from overhead conveyors.

6. Do not ride on conveyors. Use crossover to cross the conveyors.
7. Do not touch moving rollers or belt of the conveyors. Conveyor should have automatic and continuous lubrication system so arranged that oiling and greasing could be performed without the oilier coming into dangerous proximity of the moving parts of the conveyors.
8. Before performing any maintenance work on conveyors, follow Work Permit System.

Gas Cylinders

General consideration

1. Cylinders of compressed gases must be handled with care and should not be dropped or thrown and should be fastened securely with chain. Always use cylinder trolleys for transportation.
2. They should be protected from all sources of heat and direct sunlight to prevent undue increase in pressure especially when then contain dissolved or liquefied gases as Acetylene, Oxygen, LPG, and Carbon Dioxide etc.
3. The head of the cylinder is especially liable to damage during storage and transport. It should be protected by the valve protective cap.
4. Cylinders should be properly marked so that no doubt can arise about their contents.
5. Empty cylinder must be marked ‘EMPTY’ and kept apart.
6. Never force connections that do not fit.
7. Never lift a cylinder by its valve. This is extremely dangerous practice and should not be encouraged at all. Valve may come out from the cylinder body causing a back travel of gas cylinder like a rocket.

Storage

Safe storage of workplace materials in specially designed methods creates a more productive workplace because employees will always know where to get the materials they need.

Safe Storage practices.

- All material should be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling, or collapse during storage or transit.
- Structural steel, poles, pipe, bar stock, and other cylindrical materials, unless racked, should be stacked and blocked so as to prevent spreading or tilting.

- Before material is unloaded from a vehicle or removed from storage, the load or pile shall be examined to ascertain if the material has shifted, binders or stakes have broken, or the load or pile is otherwise hazardous to an employee.
- The maximum safe load limit of a floor or roof of a building should be conspicuously posted in all storage areas. The maximum safe load limit shall not be exceeded.
- Storage areas, aisles, and passageways should be kept free of the accumulation of materials that constitutes a hazard to the movement of material- handling equipment and employees.
- A material shall not be stored with any other material with which it could react and cause a hazardous condition.
- Materials that are piled, grouped, or stacked near a roof edge should be stable and self-supporting.
- Storage areas should be kept free from accumulation of materials that constitute hazards from tripping, fire, explosion, or pest harborage. Vegetation control shall be exercised when necessary.
- Materials should not be stored on scaffolds or runways in excess of supplies needed for immediate operations.

4. ELECTRICAL SAFETY

Personnel Safety from Electricity

All electrical equipment present potential danger of fire, explosion and even electrocution if anybody comes in contact with live conductors. Electrical equipment should always be treated with respect.

Following are some of the safety precautions required for dealing with electricity:-

1. Do not touch any bare electric wire.
2. Use tested and certified rubber gloves and insulated tools while handling live lines if you are trained to do so.
3. Do not handle, close, open or repair any electric switch, circuit breaker, receptacle, starters etc. under load unless you are authorised to do so.
4. To know whether there is current in the line or not, do not try to know it by touching or feeling by hand just as we feel hot coal. The mere touch or contact will do to kill a person or to give a shock.
5. Metallic covers and bodies of all electrical machinery, appliances, structure etc. are to be well grounded.

6. Provide guarding envelopes, covers or enclosures for belt driven machines and motor which start all of sudden.
7. Do not leave any bare live parts exposed within easy or ordinary reach of man. In dangerous places provide caution ‘DANGER’.
8. Electricians and Supervisors should be trained for giving artificial respiration and First-Aid treatment for electrical shock
9. Insist on the use of the proper tools for the job for example, no cutting plier to be used for tightening of nut, not a spanner in place of a hammer in place of a cutter, not a chisel in place of a screwdriver and so on.
10. Do not cut or remove ground wire under any consideration until you are directed to do so by proper authority.
11. While excavating earth, stop cutting by a cross bar or spade when you find layers of sand or bricks.
12. Use only whether proof wires and waterproof equipment in outdoors exposed area.
13. Key of locks of main switches, if any, should be placed in a safe and easily accessible location.
14. Use only low voltage (24 volts) electric extension lamp while working inside metallic tank, confined space.
15. Fire bucket filled with clean dry sand, in addition to fire extinguisher suitable for dealing with electric fires, shall be kept in all electrical sub-station and MCCs.
16. Tag or lock main switch before making repairs.
17. All portable equipment must be grounded.
18. Keep all electrical connections tight.
19. Use flameproof cable glands to terminate cables in flameproof equipment like light, motor, plugs in hazardous area.
20. Do not overload or over fuse circuits.
21. No connections, even temporary should be given in hazardous location without observing the relevant procedure laid down for such area.
22. Cable used for portable electrical tools shall have no joints, but where extension cord is required used a plug and socket arrangement. Cable should always be long enough to reach the workplace without strain.
23. As far as possible, electric fires should be extinguished by using Dry Chemical Power / Carbon Dioxide.
24. As a passive protection, electric cables should be coated with fire retardant coating on joints and at the entry and exit of electrical panels / equipment up to a length of one meter minimum in case of horizontal cables and the entire run in case of vertical cables.

5. FIRE PREVENTION AND PROTECTION

Essential Elements for Combustion

Three elements are essential to combustion and its continuation.

These are –

1. Air or Oxygen
2. Ignition temperature or heat and
3. combustible or burnable material

All the three elements are required to be present simultaneously to allow combustion to initiate and to continue it. Hence to control combustion, what is simply needed is to take such steps as are necessary to cut out any one of the three elements.

Steps necessary to cut out the corresponding element in the Triangle

1. Use of water cuts away the heat (cooling).
2. Use of foam cuts away air or Oxygen (smothering);
3. Removal of burnable material or formation of large open spaces or gaps in storages known as “Fire Breaks” would invariably put out a fire or stop combustion (starvation).

Fire Protection

It includes all measures relating to safeguarding human life and preservation of property in the prevention, detection and extinguishment of fires. It is principally a matter of physical arrangements, such as Hydrant System and fire extinguishers.

The protection is usually understood to include fire prevention procedures. Both aim to protect employees, property and continuity of operations.

The effective fire loss control programme has following objectives –

1. To prevent loss of life and personal injury (Rescue)
2. To protect property
3. To provide uninterrupted operations
4. To prevent inception of fire

The fire engineering is a highly developed specialised field in which special engineering disciplines are focused. The solution of many fire protection

problems require the special combination of training and experience of fire protection engineer.

The following factors should be given priorities for effective fire protection in Industry:

1. Fire safe construction
2. Good housekeeping
3. Rubbish disposal
4. Explosive dust free atmosphere
5. Proper storage of raw materials
6. Bare minimum storage of hazardous material at shop floor
7. A clear-cut fire and safety policy from the beginning itself
8. Adequate fire safety training at all levels at periodic intervals so that all workers can co-ordinate in case of any disaster to reduce its ill effects.

All fires are not alike. For example if we put water on petrol, kerosene or flammable solvents which are lighter than water, the fire will not be extinguished but will spread as the water being heavier than these substances will go down and the burning substance will splash. In case of electrical fires if we use water the user will get electric shock as water is a good conductor of electricity.

Classification of Fire

1. **Class 'A' Fires:** To extinguish this fire, cooling effect is primarily used i.e. water. E.g. Paper, cotton, wood like material which burns with heavy smoke (carbonaceous fires).

2. **Class 'B' Fires:** the main principle of extinguishing fire is to smother or blanket the fire so that oxygen / air supply is cut off.e.g. Petrol, kerosene, flammable solvents, paint, varnish etc.

3. **Class 'C' Fires :** Gas fires like LPG, Acetylene etc. where the percentage of oxygen is brought down by quickest possible method e.g. Carbon-dioxide gas, or power type extinguisher is used.

4. **Class 'D' Fires :** Sodium, Potassium, Magnesium like metals which burn at a very high temperature where special technique is used to cover the burning metal by which the oxygen supply is cut off and or the same time the burning metal is coated with a thin layer of extinguishing media thereby avoiding re-ignition.

Fire Extinguishing Media

1. Dry sand and soil

2. Water kept in buckets
3. Asbestos blankets
4. Portable chemical fire extinguishers:-
    a. Soda Acid
    b. Foam
    c. Carbon-Dioxide
    d. Dry powder

It is to be remembered that these fire extinguishers have a very limited extinguishing media and hence their proper selection, use and maintenance is very important.

Detectors & Fire-Fighting Installation

The main job of the detectors is to detect fire. These detectors are normally installed with automatic fire extinguishing systems like fire hydrant, carbon Dioxide, halon, mechanical foam etc. The main job of the automatic fire-fighting installation is:-

i. To detect the fire
ii. To give audible alarm to the fire station staff
iii. To automatically start the fire-fighting systems like fire hydrant and / or flooding system

All the three functions itself indicate its importance and hence its installation, maintenance and testing at fixed intervals is very important. This system eliminates the delay or error of the human being in noticing the fire and triggering the fire fighting system laid down by the organisation.

6.MACHINE GUARDING

Machines are designed to change the shape and form of materials, which the human body cannot do. Whenever man and machine meet, the possibility of accidents is always there. Statistics show that nearly one-third of reportable accidents in factories are due to machinery – whether it is moved by power or operated manually. To safeguard workers who operate and maintain machines, it is necessary to make the machines safe.

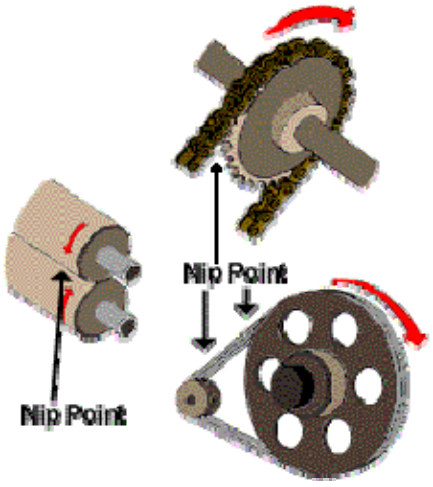
For an accident to take place on a machine, part of a person must be in the danger area and the dangerous part of the machinery must be in motion. The aim of machine guarding is that these two things do not take place at the same time. In other words, a machine guard is a barrier or device to prevent a person or his clothing coming in contact with the dangerous parts of the machinery. One half of the safety problem is to keep the limbs under control when near a moving

part. The other half is to keep the dangerous parts of the machine inaccessible when in motion.

Assessment of Guards

Proper inspection of a machine can reveal the accident producing mechanisms that need to be guarded.Section 21 of factories Act requires that all dangerous parts of machinery must be guarded and the factory management has to comply with this. Management selects, purchases, installs and makes use of machinery and other equipment.
Dangerous parts of machines can be divided into three broad groups:

- Point-of-operation
- Transmission machinery
- Other dangerous parts.



These parts cause injury due to their rotary or reciprocating movement or their cutting and shearing action. Sometimes safety can be achieved by design and construction. The hazard can be completely eliminated or the severity of injury can be reduced.

Basic Requirements Of Guard

- It should provide positive protection and prevent all access to the danger zone during operation. It is not enough for the guard to give only a signal or an alarm to warn.
- It should not unnecessarily interfere with production
- It should be suitable for the job and the machine and work with minimum effort

- It should not weaken the structure of the machine. This may arise when guards are not incorporated in the original design of the machine and are provided later on.
- It should be durable and resist normal wear and shock, and should require minimum maintenance.
- It should not constitute a hazard by itself.

7. WORK PERMIT SYSTEM

A permit to work system is a written document which authorizes one to carry out a specific job in a specific location during a given time interval. It cautions against the danger associated with the job and the precaution that should be taken while carrying out the job.

- It serves as predetermined checklist for various safety precautions to be taken.
- It provides a written record of the operation including the personal who were involved in authorizing and carrying out the operations.
- The permit system, which necessitates carrying out of various tests and safe guards, instill a sense of security from accidents in the minds of crew performing the job.
- The work permit system proved to be one of the most satisfactory methods of ensuring positive control over hazardous operation performed in unfavorable conditions

Work Permit Requirement

Permit is required for the different jobs such as major & minor maintenance work, construction, alteration, process equipment cleaning, entry into confined space, excavation, vehicle entry into hazardous areas, electrical work, any other recognized serious safety or health hazard jobs.

Types of Work Permits

- Work Permit for Hot & Cold Jobs
- Vessel Entry Permit
- Excavation Permit
- Work at Height
- Electrical Work Permit

Ensuring a Successful Work Permit System

A weak work permit system offers little or no protection and may lead to serious consequences. Following are the guidelines for an effective work permit system:

- Ensure that the work permit system is clear to all staff by providing training on the system .Don't allow work to start without a permit.
- Issue permits in a timely manner not too long before the job. Conditions in the work area can change easily within days.
- Design the permit to be job-specific as far as possible so that it is appropriate to the work.
- Ensure that each work permit is clearly written. Poor communication can cause mistakes and accidents and verify that all requirements and conditions are complied with before signing the permit.
- The signer for the permit must have appropriate qualifications. Other signers should include the supervisor of the workers assigned to the job, and the supervisor of the work area, and the workers assigned to the job.
- Before workers sign the permit, make sure that they understand the hazards involved and know the precautions to take. Inform them that the work permit takes priority over any other instructions.
- Also ensure that workers know when the permit expires, and comply with it. This requires supervision, as workers may tend to continue working until the job is completed.
- Distribute several copies of the permit to appropriate personnel. For example, provide one copy for the worksite, one for the authorised signer, and one for the supervisor of the work area.
- Ensure that emergency personnel (Fire, First aid, Rescue, etc.) are advised of the work and its exact location. Devise emergency plans for the job and have rescue equipment ready in the event of an accident.
- Post signs and use barriers in the work area to prevent entry of unauthorised persons, pedestrians and vehicles.
- Implement field checks to ensure that every detail of the permit is being followed. If conditions at the work site change, notify the designated supervisor and stop all work. Cancel the permit and reissue another only when additional safeguards are implemented.
- When the work is completed or the time limit expires, forward the worksite copy to the supervisor of the workers assigned to the job.
- If the work is subcontracted, make sure the contractor is aware of the hazards. Ensure that the contractor understands and complies with the job safety requirements and emergency procedures.
- Don't overuse the work permit system. Issue a permit only when necessary to avoid having it regarded as nothing more than administrative paperwork

8.PERSONAL PROTECTIVE EQUIPMENT

Ground Rules

- PPE is a second line of defence for employees protection. The first line of defence is to eliminate accident-causing situations at the workplace by effective engineering measures.
- PPE does not, and cannot, eliminate hazards at work. As a barrier between the hazards and worker, PPE can help eliminate an injury or reduce its severity.
- PPE should be resorted to only if absolute removal of the hazards in the work environment is impossible or impracticable.
- PPE should confirm to applicable National Standards or international Codes of practice and good engineering practices.

Different Types of PPE available are :

1. **Head Protection :** For the protection head from injuries safety helmet must be worn at all times during work

2. **Eye Protection :** To protect eyes and face against injuries from flying objects, splashing liquids and harmful rays that cannot always be controlled at the source e.g. spectacles, goggles and face shields .

3. **Ear Protection :** Caps and plugs seal the ear canal and muffs cover the external ear the choice depends on the work situation.

4. **Hand Protection**
   Protective gloves must be worn during any operation where there is probability of injury to the hands.

   A. **Gloves suitable for heat :** When handling hot materials or when exposed to excessive heat, Asbestos gloves will give protection.

   B. **Welder's Leather Gloves and Protective Sleeves :** prevent burn from flying sparks, welder should wear welder's gloves and sleeves.

   C. **General Work Gloves :** Leather palmed, cloth-backed gloves are available for work, involving handling of rough material, which may result in minor cuts.

D. Electrically tested high voltage gloves
Employees when working on high voltage electrical equipment or lines must wear these gloves. Gloves must be inspected before use every time.

5. **Leg Protection :** For adequate protection, the footwear chosen should be appropriate for the job, comfortable to wear. The correct choice of the footwear, therefore assumes importance. E.g. Rubber boots for chemical splashes and where it is necessary to work in water, deep mud, or bottom sediment. Asbestos shoes with high ankle should be used for performing work on hot surface.

6. **Skin Protection**
The following should be observed when using protective clothing:

   A. Asbestos cloth suit with full sleeves is the prescribed apparel for those exposed to Heat.

   B. Never wear loose fitting sleeves when working on moving machinery.

   C. While working if an employee gets his clothing saturated with oil, solvents or chemicals, he must change his clothing immediately and was the affected part of body with soap and water. If the skin has been affected, report for medical attention.

   D. When welding or burning, wear the clothing, which protects skin from hot sparks.

7. **Respiratory Protection :** The air we breathe is sometimes contaminated with dust, vapours, toxic fumes, or gases. Various types of respiratory protective equipment are provided which enable us to breathe an uncontaminated atmosphere even in the presence of contaminants.

8. **Fall Protection**

   Safety Belts and Life Line: In general, employees shall wear safety belts to give protection in performing jobs at elevated locations where adequate protection against falling is not available.

Maintenance and Inspection:

Belts must be inspected carefully before each use. Fabric belts must not be used if the outer plies are cut or worn or if there are any signs of chemical damage. All belt hardware must be inspected and replaced if it shows any sign of wear. If the belt is riveted, each rivet should be examined separately. The lifeline must be carefully inspected for any sign of damage or wear. If in doubt, replace the rope. Be sure that the lifeline is securely attached to the D-ring of the belt.

9. Housekeeping

A general impression in most of the person's mind is that housekeeping is sweeping and cleaning. This is not true. Housekeeping is not merely sweeping and it is not solely the responsibility of sweepers. It has lot to do with all of us and with our habits to keep things neat and clean & in orderly manner. In short, industrial housekeeping signifies not only cleanliness but also place for everything and everything in its place.

Every industry loses thousands of rupees, even more by way of throwing waste and by way of creating a need for cleaning it up.

In this context one must remember TWO important facts.

1. Whatever is thrown has a 'VALUE' and it is lost if not put in proper dust / scrap bins.

2. Whatever is thrown on floors has got to be cleaned by someone. (Extra labour, to which payment is to be made).

Results of Good Housekeeping

a. Reduced Operating Costs
b. Increased Production
c. Improved Production Control Conserve Material and Parts
d. Save Production Time
e. Better Use of Floor Space
f. Reduced Fire Hazards

Guidelines in Maintaining Good Housekeeping

1. Appeal to people's pride. Point out how attractive neat area looks. Show how each employee keeping his workplace free from dirt and congestion can benefit. Make your programme as interesting as possible by giving people a chance to participate by recognising their efforts and by conducting an understandable programme.

2. Explain specific employee's housekeeping responsibilities, why such assignments are necessary and how they can be carried out.

3. Make sure that your instructions are complete and are understood. Leave no chance that a person will later say "I didn't know you mean that".

4. Make it easy for people to keep trash off the floor. Make sure trash containers are provided at required locations.

5. Permit nothing to be stored on window ledges or hung from wall, even temporarily.

6. Check equipment that uses coolant to make sure that oil, coolant or water does not leak on the floor. See that absorbents are handy for soaking up spilled liquid.

7. Be sure that flammable solvents / chemicals are kept in approved containers and are labeled properly.

8. Encourage employees to report conditions that contribute to disorder.

9. Review accident records to determine it faulty housekeeping was a contributing factor.

10. Do not permit stacking of material against fire and other emergency equipment.

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