

Material Handling

Definition:

- Material handling simply means movement of material from one place to another place by means of workmen or mechanical aid.
- It includes movement of material between departments like storage, warehouse, production and other departments. Movement from one organization to another organization is considered as transportation, But loading, unloading and movement of material within premises of area is considered as material handling.
- In simple words, It is to be considered when movement of material in limited area within premises.

Types of Material Handling

Mainly there are 2 types:

1. Manual.
2. Mechanical.

1 Manual Material Handling

In Manual material handling, all movement totally dependent on workmen. It is carried out by workman alone or in group with the help of ;

- Hooks,
- Carts,
- Wheel trucks, etc.



i Manual Material Handling

Activities given below to be considered under manual material handling:

- Lifting.
- Carrying.
- Delivering.
- Emptying.
- Filing.
- Loading.
- Unloading.
- Carrying.
- Holding.
- Pushing.
- Pulling.
- Stooping etc..

2 Mechanical Material Handling

It means usage of machine in material handling.

It is carried out with the help of lifting tools and tackles as mentioned below;

- Different types of Cranes, Winch, Pulley Block, etc.
- Transporters like conveyors, power trucks, Rollers, etc.
- Slings, Rope, Hooks, Shackles, etc.



ii Mechanical Material Handling

Where material handling used?

It is almost everywhere in surrounding;

Some of examples are :

- Aerospace industry.
- Construction industries.
- Chemical And Pharmaceuticals Industry.
- Auto Mobile Industries.
- E-Commerce industry.
- Manufacturing industries and many more.

These are only few examples, even we at home doing it by means of one or another.

Some common Hazards of material Handling:

- Type of material to be handled has his own hazards (For e.g. chemicals).
- Improper behaviour of workmen.
- Excessive Load,
- Improper Lifting.
- Unsafe Gripping.
- Improper Placing.
- Unsafe Stacking.
- Not wear PPE.
- Improper body posture.
- Horse playing.
- Overloading.
- Incompetency.
- Excessive Speed.
- Design of equipment.
- Wrong selection of equipment.
- Insufficient space.
- Inadequate skills.
- Untrained workmen.
- Improper placement of material.
- Electrical hazards as working with machines.
- Unguarded machinery.
- Poor maintenance.
- No testing of equipment.
- Faulty equipment.

Possible consequences may arise due to hazards of Material Handling;

- Striking against.
- Struck by.
- Caught Between.
- Falling.
- Slipping.
- Cuts, pinch, fractures etc.
- Musculoskeletal Disorder due to bad posture for prolongs time.
- Human Injury.
- Production loss or financial loss.
- Legal preceding in case of fatality or major accident.
- Fire.

How to avoid consequences that arise due to Material Handling? What are control/preventive measures?

- Engineering controls.
- Administrative controls.
- Reporting of Near Misses/Incident and it's communication.
- Job safety analysis and Hazard Identification and Risk Analysis , which plays a crucial role.
- Regular inspection, audits, etc.
- Training, skill up gradation on regular basis.
- Proper space availability and it does optimize utilization.
- Pre planning of activities and work method standardization.
- Implement best ergonomic practices.
- There are many more we can list out.

