

# Material Handling Devices

## GENERAL DISCUSSION

Demonstrate mechanical devices used for material movement that are employed in your workplace. Take advantage of the experience of the workers by asking them to demonstrate the devices properly. Obviously there are materials on the job that cannot be moved by hand. Whenever possible, material-handling tools should be used. They enable you to move heavy objects rapidly and with less effort. Levers, inclined planes, jackscrews, and block and tackle are some of the simpler devices.

But there are other devices that you use on the job every day--devices that are sometimes taken for granted.

### Hand Trucks

Many types of hand trucks are used throughout industry, including wheelbarrows, dolly trucks and two-wheeled hand trucks. Two-wheeled hand trucks are used for lifting and transporting heavy and bulky objects for short distances. When using these trucks, make sure the load is placed carefully. Your view should be unobstructed.

Two-wheeled trucks and wheelbarrows should be equipped with knuckle guards to help prevent hand injuries. These guards can be made of canvas, leather or rubber belts.

Cylinder trucks are used for moving compressed air cylinders; the cylinders should be handled carefully and secured to the truck with bands, chains or straps.

A three-wheeled hand lift truck should always be centered under the skid it carries so that good balance is maintained. This truck should be pulled; pushing is limited to maneuvering. Leave the handle in the up position to control tripping hazards.

Hand pallet trucks are designed for moving pallets; they should also be pulled. The handle should be down only to jack the skid.

### Powered Industrial Trucks

Powered industrial trucks move material quickly and easily and save work and time. If you're selected as a lift truck operator you should know how to operate the trucks carefully and safely and react correctly to every situation. Pay attention to maximum load limits never overload. Back the truck down a ramp, but keep the load in front when you're going uphill. Check to see that your path is clear before backing. Remember, pedestrians have the right of way.

Make sure your truck is inspected thoroughly before starting it and report any malfunctions to your supervisor. Check your brakes, steering, controls, forks, hoist, warning devices and lights before and after each shift.

Tilt the forklift masts back when you're driving the lift and keep your head, arms and legs inside. Keep the forks about 4 to 6 inches above the ground. Do not use your forklift as an elevator for co-workers. Drive on the right side under normal conditions; avoid quick starts, quick turns and jerky stops. Come to a complete stop therefore reversing direction and watch the distance between other vehicles.

Sound your horn when approaching a blind corner or when workers may not see you. Reduce your speed when the driving surface is slick or rough.

Check clearances when loading or unloading a truck bed and know the weight capacity and condition of the bed. Besides having regard for company rules, you, as a forklift operator, should operate your machine properly, efficiently and alertly.

## **Conveyors**

Generally, conveyors used in industry are roller, belt, screw, bucket, chain, overhead trolley, portable, mobile, tow, or assembly types. It is important that powered conveyors be guarded with wire mesh enclosures or railings in order to keep you and others away from moving parts.

Avoid riding on conveyors, except those that incorporate platforms and control rooms for operating personnel. Conveyors should have conveniently located warning devices and emergency stop controls. When maintenance is being performed, the power should be shut off and the switch locked.

Rollers or pulleys at the ends of belt conveyors should be guarded to prevent fingers and hands from being drawn into pinch points. A shield guard or housing should enclose each end and all other areas at floor level where you could come in contact with moving parts.

Screw conveyors should be completely covered and equipped with removable inspection covers and an interlocking guard, so that when a section of cover is removed the screw automatically stops.

Wheel conveyors should be equipped with side railings, installed high enough to extend beyond the tops of the wheels. The pinch points between the bottoms of the hoppers and the wheels present hazards that can be avoided by providing shunts or side-belt conveyors for unloading containers.

## **Cranes and Derricks**

Only thoroughly trained persons are permitted to operate cranes. The rated load must be plainly marked on each side of the crane and the crane must never be overloaded.

Never work or stand underneath a crane that is moving material. If you're the operator, do not swing loads over workers. Keep hoisting chains and ropes free from kinks. Do not wrap chains or ropes around loads use a load block hook with a sling. Operators should make sure the sling clears all obstacles.

Both the operator and the signaler should understand standard hand signals for boom cranes. Crane operators should never remove their hands and feet from the controls while a load is suspended. All cranes should be inspected thoroughly by persons familiar with all engineering aspects of the cranes.

## **GENERAL SAFETY REVIEW**

This is a time to review all safety concerns, not just today's topic. Keep your notes on this page before, during and after the safety meeting.

Are you aware of any safety hazards from any other crews? Point out any hazards other crews are creating that this crew should know about. Tell the crew what you intend to do about those hazards.

Do we have any other safety business? Discuss any past issues or problems. Report any progress of investigations and action taken.

Have there been any accidents near misses or complaints? Discuss any accidents, near misses, and complaints that have happened since the last safety meeting. Also recognize the safety contributions made by members of the crew.

Please remember, we want to hear from you about any health and safety issues that come up. If we don't know about problems, we can't take action to fix them.

## **ENDING THE MEETING**

Circulate Sign-Off Form.

Assign one or more crew member(s) to help with next safety meeting.

Refer action items for follow-up.

Do you have any Safety Recommendations?

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Do you have any Job Specific Topics you would like us to discuss?

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## **Comments**

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