

other flammable material. Explosives should not be exposed to the direct rays of the sun

Storage should be arranged so that the oldest explosives will be used first

Ammonium nitrate requires special precautions including stacking limitations, air space, and ventilation. No oils or hydrocarbons are to be permitted near ammonium nitrate

Packages of explosives should always be opened at least 50 ft from the magazine. Only wood wedges and wood, fiber, rawhide, zinc, babbitt metal, or rubber mallets should be used to open cases of explosives

Blasting caps or detonators of any kind should never be kept in the same magazine with other explosives

Explosives and blasting supplies should always be kept in the magazines, never in any place where animals, unauthorized persons, or children can get at them. Many children have been killed or crippled because they have obtained detonators from unwatched or unguarded sources

Shipping and Receiving

The supervisor of the shipping and receiving room must be aware of Department of Transportation (DOT) Regulations and labels. Hazardous or flammable materials must be properly labeled and identified. Bills of lading or shipping must identify the item

Floors, ramps, and aisles

Floors in warehouses, storerooms, and shipping rooms must be level. Unevenness of floors may lead to the toppling of piles of stored materials

Safe floor load capacities and maximum heights to which specific materials may be piled should be posted conspicuously. Where bulk material, boxes, or cartons of the same weight are regularly stored, it is good practice to paint a horizontal line on the wall indicating the maximum height to which the material may be piled

The strength of floors should be checked before the use of power trucks is adopted. Floor load capacity should be determined by a structural expert from the architectural data, the age and condition of the floor members, the type of floor, and other pertinent factors

Wherever materials are stored or trans-

ported, the surface of floors, platforms, and ramps should be kept in good condition. Breaks should be repaired immediately, and the area around doorways and elevator entrances should particularly be watched

Ramps should have nonskid surfaces. When ramps are used for hand trucking, a nonskid foot strip may be laid in the center, or in the center of each lane for two-way traffic. Ramps should have handrails and, where there is heavy trucking, substantial curbs. A separate pedestrian lane, divided from the truck lane by a handrail, is a good idea for ramps used by both pedestrians and trucks

Good housekeeping contributes to safety in handling of material, whether by hand or mechanically. A fall by a person carrying an object might result in more serious injury than it would if his hands were free

Mirrors, placed at blind intersections, help to prevent collisions (Fig 24-15). Warning signs and signals at such locations also serve as useful reminders, particularly to operators of power equipment. Doorways and entrances to tunnels and elevators may be similarly protected

Mobile equipment used in storage areas should be equipped with backup warning devices

Aisles should be wide enough to enable employees to move about freely while handling material or removing it from bins, racks, or piles, and to allow safe passage of loaded equipment. Aisleways and unloading areas should be clearly marked with white paint or black and white stripes (See American National Standard Z53.1). Trucks not in use, material, and other objects should not be allowed to stand in or extend into aisles

Aisles leading to sprinkler valves and fire extinguishing equipment should be kept clear. Materials should not be piled closer than 18 in to sprinkler heads. Closer spacing may reduce the effectiveness of heads in event of fire. For overly large, closely packed piles of combustible cases, bales, cartons, and similar stock, up to 36 in of clearance should be provided (See NFPA Standard No. 13)

Lighting

General illumination of warehouses and storage rooms should follow American Na-