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. Over large, closely packed piles of combustible cases, bales, cartons, and similar stock, up to 36 in of clearance should be provided (See National Fire Protection Association, 60 Batterymarch St, Boston *Sprinkler Systems* Standard No 13 Also published by National Board of Fire Underwriters)

Lighting

General illumination of warehouses and shipping rooms should be at least 10 foot-candles for rough bulky material, 20 foot-candles for medium materials, and 50 foot-candles for fine materials requiring care * Special lighting should be provided for operations requiring greater illumination All lighting fixtures and wiring should be in accordance with the requirements of the NFPA's *National Electrical Code.*

Ladders and bridge plates

If possible, fixed ladders** of iron or steel should be installed wherever ladders must be regularly used At no time should employees be permitted to climb on stock piles or edges of bins or racks Such prohibition can be enforced, however, only if the correct equipment, and enough of it, is provided for employee use

Employees should not ride rolling ladders from one bin to another Rails and rollers should be kept in good condition so that the ladder can be easily moved A safety clamp should keep the ladder on the rail, and a safety stop should be placed at the rail's end

Bridge plates*** should be designed to carry four times the heaviest expected load, and the carrying capacity should be plainly marked on them They should be wide enough to permit easy maneuvering of hand or power trucks

Bridge plates should be designed and maintained so that when they are in secure position the ends will have substantial contact with the dock (or loading platform) and the carrier to prevent the plates from rocking or sliding when they are being used.

The sides of bridge plates should be turned up at right angles, or otherwise designed to prevent trucks from running over the edge

Bridge plates should have a nonskid surface to prevent employees and trucks from slipping They should be kept clean and free of oil, grease, water, ice, and snow.

Handholds, or similar means, should be provided on bridge plates to facilitate safe handling Where practicable, fork loops or lugs should be fitted to the plates so that they can be handled by fork trucks Another method for lifting steel bridge plates uses a low-voltage magnet hung from the forks of a forklift truck and powered by the truck's battery

To prevent foot injuries when bridge plates are handled manually, they should be lowered or slid into place and not dropped Enough men should be assigned to the job to permit safe, easy handling

Bridge plates must be secured in position They should be either anchored down or equipped with devices to prevent their slipping off the platform or the car threshold (Fig 17-16)

Bridge plates not in use should be stored in a safe place provided for the purpose In some cases, heavy plates may be stacked by power trucks

Positive protection should be provided to prevent railroad cars from being moved by engines or car pullers while bridge plates are in position and men are working across them Standard blue flags for daytime and blue lights for night work should be used to warn train crews Local railroad author-

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*Illuminating Engineering Society, 1860 Broadway, New York City "Recommended Levels of Illumination" Table, *Illuminating Engineering Society Handbook,* 3rd ed Also see Chapter 14's section "Lighting and Use of Color," and Illumination Table in Chapter 45

**American Standards Association, 10 East 40th St, New York City *Safety Code for Fixed Ladders* A14 3 Also see Chapter 15's section "Ladders "

***Also known as dock plates, dock boards, gangplanks, and bridge ramps. Information given here applies whether bridge plates are used for hand or power trucks