Check Floor Load Capacities

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A woman was recently treated at a hospital following an on-the-job accident. However, she wasn't the one injured. She had suffered shock after witnessing a fatal mishap when a floor collapsed and a man was crushed to death.

The accident occurred when an 18-ton machine was being delivered and the floor of the loading dock gave way and the machine and an employee, along with a winch truck, plunged into a parking lot below. The dock floor was constructed of wood with a two-inch layer of concrete, but it still wasn't designed to handle that type of load.

Floor capacity had not been entirely overlooked; however, as the floor where the machine was to have been placed had been reinforced, but the loading dock had been ignored.

It was to have been a happy occasion, according to the owners of the firm. They had waited some time before being able to purchase the new machinery. But, of course, the tragedy marred the event.

The lesson to be gained from this incident is that accurate data on floor load capacity is a must. If this information isn't already available from building plans, a structure analysis by a qualified engineer may be needed. Remember that rough estimates of floor load capacities are dangerous.

Overloading of floors usually occurs when new equipment of machinery is purchased or when heavy loads of unequal weight distribution are being stored. Heavy truck traffic is another common overload hazard.

What many people don't take into consideration on the job is that buildings are often designed to handle uniform loads and that concentrated loads then create a safety problem.

A concentrated load puts twice the stress on supporting members as a uniform load of the same weight. This is why most heavily concentrated loads, such as machinery, are placed directly above beams and girders rather than on joists or slabs.

So concentrated load capacities as well as uniform load limits should be determined beforehand by a qualified person, and signs stating approved floor loads should be exhibited on walls in conspicuous places.

There are safety precautions that can be taken before materials are piled and stored on

a surface. If the same type of material is to be regularly kept on the floor, a line should be painted on the wall to indicate the maximum height to which material can be piled and not exceed floor load capacity.

Obviously, floors of buildings are not the only source of overload hazards. As in the case of the fatal accident previously mentioned, loading docks and similar areas should be checked for load capacities. Wooden platforms should be checked regularly for loose planking, decay, and weakened supporting members.

Surfaces of concrete platforms may become worn and cause trucks to swerve dangerously toward the edge of the dock or at other employees. So platform damage should be reported so that it can be repaired or the platform resurfaced.

Be sure to report any defects spotted on floors or platforms. Follow instructions concerning piling and loading of materials, and do not exceed the designated load limits of floors and other surfaces. If you have any doubts concerning load capacities, check with your supervisor.

DON'T BET YOUR LIFE ON A GUESS OR A VISUAL CALCULATION!