



Abstract of an Accident

92-8

ACCIDENT TYPE: Crane tipped over during lift
INJURY: None
TYPE OF WORK: Lifting bakery oven over wall
EQUIPMENT: 35 ton hydraulic crane
SAFETY EQUIPMENT: Outriggers were used, load indicator was not used

DESCRIPTION OF THE ACCIDENT:

A 35 ton mobile hydraulic crane positioned on one side of a 20 foot wall was used to lift a bakery oven from the other side of the wall to the same side of the wall as the crane. The oven measured 12'X12'X14.5'. The crane boom was extended 62 ft. at an angle of 57 degrees giving a working radius of 30 feet. With this configuration the load chart indicated a maximum lifting capacity of 15,545 pounds. The crew did not know the weight of the oven but knew that two similar smaller ovens had been lifted 3 days previously. The project foreman (not a member of the crane crew) estimated the weight to be 10,000 to 12,000 pounds. The operator lifted the oven over the wall, swung to the right and, when the load was 10 ft. from the ground, the crane tipped stopping with the boom resting on top of the oven. The mishap investigation revealed that the oven actually weighed 22,000 pounds.

DIRECT CAUSES:

The load exceeded the rated capacity of the crane in the boom configuration used for this lift.

CONTRIBUTING CAUSES:

- A load indicating device was not used.
- Other methods such as engineering calculations were not used to determine the weight of the load.
- The crew was not instructed to contact their supervisor for instructions prior to lifting a load of unknown weight.

LESSONS LEARNED:

- A load indicating device should be used when lifting a load of unknown weight.
- If a load indicating device is not available, other precise methods should be used to determine the weight of the load (e.g., engineering calculations, documentation such as bills of lading, instruction manuals, etc.)
- Crane crews should contact their supervisor for instructions when faced with unusual or unknown circumstances.

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