

# SAFETY MANAGEMENT SERVICES

# CONSTRUCTION SAFETY BREAKS

NAME: \_\_\_\_\_

DATE: \_\_\_\_\_

LOCATION: \_\_\_\_\_

YOUR SAFETY CONCERNS: \_\_\_\_\_

DISCUSSION LEADER: \_\_\_\_\_

\_\_\_\_\_

## Today's Topic: Cranes and Overhead Wires

There are many dangerous situations on a construction site, but operating hoisting equipment close to overhead wires is more than just dangerous, it's a matter of life and death!

### Discussion: What hazards are associated with cranes and overhead wires?

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### The Risks: Electrocutation

There are times where we have to operate cranes near high voltage power lines. This creates the very serious threat of electrocution to not just the crane operator, but anyone else working in the area. If the proper precautions are not taken, death or serious injury can occur.

### Solution: Maintain Safe Distances

Keep cranes a safe distance from power lines. For lines rated 50 kV or below, minimum clearance between the lines and machines or loads must be 10 feet plus 0.4 inch for each 1 kV. over 50 kV., or twice the length of the line insulator, but NEVER less than 10 feet.

Use a qualified signal-person when the crane is within boom's length of a line. The signal- person must warn the operator when the machine is approaching the lines, since the operator may not be able to accurately judge the distance. The signal-person should have no other duties while the machine is working near the power line.

Do not rely on ground rods for safety. They provide little or no protection. People touching the crane or load will still draw enough current to kill, even with the best ground rods in place. In addition, don't rely on proximity warning devices, hook insulators, insulating boom guards, swing limit stops, etc., as each has serious limitations.

Except for the operator, keep all personnel away from the crane when working near power lines. Don't allow anyone to touch the load, crane, or crane hook until the signal-person indicates that it is safe to do so. Exercise caution when working near overhead lines having long spans. These tend to swing laterally in the wind and contact can occur.

Use caution when moving cranes. Uneven ground can cause the boom to weave or bob into lines. Ensure that a route is plainly marked when cranes must travel beneath power lines. 'Rider' poles should be erected on each side of the crossing approach to guarantee that the boom will be lowered to a safe position. Avoid using tag lines except when it is possible for the load to spin into the power line. All types of rope can conduct electricity.

## Always shut down power to overhead lines if possible!

At what distance should a signal person be used?

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What is the minimum safe distance to maintain between a crane and power line?

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