

*Crane operators receive special training to operate the overhead lift system safely, but those working on or observing from the ground should understand the hazards related to cranes and use safe work practices. Almost 30 percent of fatal injuries in the construction industry involve the use of cranes.*

### Hazards

Every company using cranes should be aware of three common safety hazards:

1. Accidental contact with energized power lines
2. Overloading crane capacity
3. Falling objects striking ground workers due to faulty rigging, maintenance operations or tie-down straps

### General Precautions

- Move cranes into the needed position when the area is free of workers.
- Make sure cranes are positioned so the boom or bucket doesn't swing over workers.
- When workers must be in the fall zone to handle a load, the load must first be rigged by a qualified rigger.
- Shut off power line current if possible, and make repeated visual checks of your position in relation to power lines.
- Rope off or barricade the swing area of the crane and clearly mark it with warning signs.
- Avoid raising the boom too high.
- Avoid the quick release of the load on a near-vertical boom.
- Make sure boom stops are in place to keep the crane from flipping backward.
- Rig hoisted materials to prevent unintentional displacement, and use hooks with self-closing safety latches.



- Center the top block over the load to prevent load swinging.
- Position the boom to avoid long side-pulls, and use tag lines to limit swinging when you move a load horizontally.
- Turn the crane slowly and smoothly to keep the boom from twisting.
- Use properly shored outriggers to prevent tilting, which can cause a side-bend in the boom.
- Make sure you have sufficient counterweight to prevent tipping.
- Inspect your crane daily, including the brakes, clutch, boom splices and braces.
- Post a traffic controller on crowded sites.

Continued

### Take Precautions on the Ground

- Stay out from under crane booms, buckets and suspended loads, and watch for falling objects.
- Wear a hard hat if you're working anywhere near a crane.
- Watch your hand and arm placement to keep from being pinched between the sling and the load and from between the sling and the hook.
- Wear gloves to protect your hands.
- Never attempt to adjust or turn a load while it's suspended.
- Never enter a roped-off or barricaded area near a crane.
- Anticipate a crane's swing radius when a lifting operation is taking place.

### For Additional Information

EMC Insurance Companies: [www.emcins.com](http://www.emcins.com)

- Safety by Industry – Contractors

Occupational Safety & Health Administration:  
[www.osha.gov](http://www.osha.gov)

- Crane, Derrick, and Hoist Safety