

## BIE SAFETY ADVISOR

On August 9, 2010, the Occupational Safety and Health Administration (OSHA) issued a final rule establishing requirements for cranes and derricks used in construction work. OSHA is proposing corrections and amendments to the final standard for cranes and derricks. The standard has a large number of provisions designed to improve crane safety and reduce worker injury and fatality. The proposed amendments include the following:

- Correct references to power line voltage for direct current (DC) voltages as well as alternating current (AC) voltages;
- Broadens the exclusion for forklifts carrying loads under the forks from "winch or hook" to with a "winch and boom";
- Clarifies the use of demarcated boundaries for work near power lines; and
- Resolves an issue of "NRTL-approved" safety equipment (e.g., proximity alarms and insulating devices) that is required by the final standard, but is not yet available.

In addition to these changes, OSHA is addressing the crane operator certification and qualification requirements. Currently the standard requires employers to ensure that crane operators were certified by November 10, 2014. Additionally employers have added duties under the standard to ensure that crane operators are trained and competent to operate the crane safely. The Agency is proposing to extend the deadline for operator certification by three years to November 10, 2017, and to extend the existing employer duties for the same period.

After publishing the final rule, several entities informed OSHA that crane operator certification was insufficient for determining whether an operator could operate their equipment safely on a construction site. After hosting several public meetings discussing this issue, OSHA decided to propose extending the enforcement date for the employer to ensure competent and safe crane operation and operator certification. During the three-year extension, OSHA will examine and determine how to address this issue systematically.

Much of the debate is over the difference between certification and qualification. Though an operator may have a certification to operate a certain class or type of crane, this does not necessarily ensure that the operator is qualified to run the particular crane owned by his/her employer. As this is typically one of the most expensive pieces of equipment found on construction sites, it would be in the owner's best interest to know that the operator has the knowledge and skills needed to operate their equipment safely and protect this valuable company asset.



# Monthly Toolbox Talk

## Working with and around Cranes

### Basic Crane Set-up

An individual who meets the criteria for both a competent person and a qualified person must direct all crane assembly/disassembly operations. The A/D director must take the following precautions to protect against potential hazards associated with the operation, including, but not limited to:

- Site and ground conditions must be able to support the equipment during assembly/disassembly.
- Blocking material must be the correct size, amount, and condition. The blocking must be stacked so as to sustain the loads and maintain stability. The cribbing under each float should be 3-times larger than the area of the float itself.
- The effect of wind speed and weather on the equipment must be taken into account. Check the operator's manual for limitations and operating ranges when winds are present.
- The outriggers or stabilizers must be either fully extended or, if manufacturer procedures permit, deployed as specified in the load chart.
- The outriggers must be set to remove the equipment weight from the wheels, except for locomotive cranes. This provision does not apply to stabilizers.

### Working around overhead power lines

Electrocutions caused by a crane, load, or load line contacting a power line have caused numerous fatalities. Procedures need to be developed to prevent equipment from making electrical contact with power lines; and protect workers in the event that such contact occurs. Therefore, the first step you must take when planning to operate a crane on a site where a power line is present is to identify the crane's work zone and use that work zone to determine how close it could come to the power line. The two general accepted options to ensure the crane does not encroach upon overhead power lines include:

1. Ensure the equipment (crane, load, load line, or rigging) could not get closer than 20 feet to the line even if the crane is operated at its maximum working radius.
2. Establish a work zone by establishing boundaries (using flags or a device such as a range limit device or range control warning device) that are more than 20 feet from the power line and prohibit the operator from operating the equipment past those boundaries.

### Work Area Control

Protecting the swing radius of the crane will prevent employees who work near a crane from being struck or crushed by the crane's rotating superstructure. To prevent employees from entering this area, you must:

- Train each employee assigned to work on or near the equipment in how to recognize struck-by and pinch/crush hazard areas posed by the rotating superstructure.
- Erect and maintain control lines, warning lines, railings, or similar barriers to mark the boundaries of the hazard areas.
- Before an employee goes into the hazard area, the employee (or someone instructed by the employee) must ensure the operator is informed that he/she is going to that location.

### Ground Personnel Qualifications

- Employees in the fall zone who are engaged in hooking, unhooking, or guiding the load, or are connecting a load to a component or structure are required to be qualified riggers and trained.
- Any employee required to signal a crane must be qualified and a copy of their qualifications must be available on the jobsite.

