

# GENERAL CRANE/CABLE/RIGGING INFORMATION

## GENERAL CRANE OPERATIONS

### *(Key Engineering Controls and Work Practices)*

- Ensure that a competent person inspects all machinery and equipment before and during each use, to confirm that it is in a safe operating condition. A competent person is able to recognize existing and predictable hazardous conditions and has the authority to take prompt corrective measures to eliminate the hazardous conditions.
- If observed during an inspection, ensure that deficiencies are repaired and defective parts are replaced before machinery and equipment is used.
- Post any recommended operating speed, rated load capacities, or other instructions near the operator.
- Position cranes on firm and level surfaces; use outriggers as needed.
- Consult the crane load chart and do not exceed the rated capacity of the crane and rigging for the planned lift.
- Use the hand signals prescribed by ANSI for the type of crane being used; post an illustration of the signals at the job site.
- Ensure that the pathway is clear before executing a lift.
- Maintain at minimum a 10-foot working clearance from power lines rated at 50 kV or less; increase this clearance by 0.4 inches for each 1 kV above 50 kV; where it is difficult for the operator to maintain the desired clearance by visual means, designate a person to observe clearance of the equipment and give timely warning for all operations.
- Ensure that reciprocating, rotating, or other moving parts or equipment are guarded if capable of being contacted by employees.
- Do not make any additions or modifications to the crane without written approval from the manufacturer.
- When a mobile crane is mounted on a barge, ensure that the rated load of the crane is not exceeded, a loading chart is provided, and that the crane is positively secured.
- Ensure that floating cranes and derricks used for wet debris removal meet the applicable design, construction, installation, testing, maintenance, and operation requirements set by the manufacturer.

## CABLE WEAR

### *(Key Engineering Controls and Work Practices)*

- Ensure that the cables of the crane were inspected within the past year by a competent person.
- Take wire rope out of service when any of the following conditions exist:
  - In running ropes, six randomly distributed broken wires in one lay or three broken wires in one strand in one lay.
  - Wear of one-third the original diameter of outside individual wires.
  - Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure.
  - Evidence of any heat damage from any cause.
  - In standing ropes, more than two broken wires in one lay in sections beyond end connections or more than one broken wire at an end connection.

## RIGGING EQUIPMENT

### *(Key Engineering Controls and Work Practices)*

- Inspect rigging equipment for material handling prior to use on each shift and as necessary during its use to confirm that it is safe; ensure defective rigging equipment is removed from service.
- Ensure that rigging equipment is not loaded in excess of its recommended safe working load.
- Ensure that rigging equipment, when not in use, is removed from the immediate work area so as not to present a hazard to employees.
- Ensure that lifting accessories are marked to indicate the safe working loads and are proof-tested prior to use to 125 percent of their rated load.
- Ensure that rigging equipment is not shortened with knots or bolts or other makeshift devices.
- Pad or protect rigging equipment from the sharp edges of their loads.
- Ensure that rigging equipment is not shock loaded.