

CRANES AND DERRICKS

DUTIES OF THE COMPETENT PERSON:

- Direct assembly/disassembly of cranes (must also be a qualified person or be directed by a qualified person- known as the A/D director) [1926.1404 (a)]
- Inspect the crane visually for apparent deficiencies in 14 specific items prior to each shift or during the shift [1926.1412 (d)(1)]
 - Make a determination if any deficiencies found constitute a safety hazard and, if so, take it out of service until corrected [1926.1412 (d)(2)]
- Inspect the crane visually each month as in the shift inspection and document and sign the inspection report [1926.1412 (e)]
- Inspect wire rope for apparent deficiencies prior to each shift, including observations of running and standing rope [1926.1413 (a)(1)]
 - Make a determination if any deficiencies found in the wire rope constitute a safety hazard and, if so, take it out of service until replaced or the deficiency is localized [1926.1413 (a)(4)]
- Determine if it is safe for an operator to leave the equipment unattended and implement measures necessary to restrain the boom hoist and telescoping, load, swing and outrigger or stabilizer functions [1926.1417 (e)]
- Determine, without an engineering analysis, if the anchors for fall arrest systems and positioning device systems do not meet the requirements of 1926.502 (d)(15) (fall arrest) or 1926.502 (e)(2) (positioning) [1926.1423 (g)(2)]

When hoisting personnel using cranes:

- Determine if the new route for hoisting personnel presents any new safety factors so that the trial lift does not have to be repeated prior to hoisting personnel [1926.1431 (h)(2)]
- Determine if the safety devices and operational aids are activated and functioning properly, that nothing interferes with the equipment or personnel platform, that the lift will never exceed 50 percent of rated capacity and that the load radius has been accurately determined prior to a trial lift when hoisting personnel [1926.1431 (h)(3)]
- Conduct a visual inspection after a trial personnel lift to determine if the trial lift produced any adverse effects or exposed any defects [1926.1431 (h)(4)]
- Inspect the personnel hoist during the trial lift while it is loaded and a few inches in the air to make sure it is secure and properly balanced [1926.1431 (h)(5)(i)]
- Determine, prior to hoisting personnel [(1926.1431 (h) (5)(ii))]:
 - If the hoist ropes are free of defects as required by 1926.1413 (a)
 - If multiple part lines are not twisted around each other
 - If the primary attachment is centered over the platform
 - If all ropes are properly seated on drums and in sheaves, if the load rope is slack

- Inspect the platform and rigging after proof testing for any defects and, if deficiencies are found, make sure they are corrected and the test is repeated and passed; personnel hoisting is not allowed until the competent person has determined that the proof test has been successfully passed [1926.1431 (j)(3) and (4)]

Supplemental requirements for specific types of cranes/derricks:

- Direct **multiple-crane/derrick lifts** (must be both a competent and qualified person or a competent person assisted by one or more qualified persons) [1926.1432 (b)(1)]
- Determine if it is safe to enter an area during the self-erection of **tower cranes** [1926.1435 (b)(2)]
- Determine if a **derrick** hoist has passed the load test, before it is used [1926.1436 (e)(2)(iv)(c)]
- Verify proper operation without a hook load and load test a new or reinstalled **derrick** prior to initial use; the derrick cannot be used until the competent person has determined it has passed the load test [1926.1436 (g)(2) and (3)]
- Supervise **derrick** operations [1926.1436 (o)]
- Determine if wind is a factor to be considered in operation of **floating cranes/derricks and land cranes/derricks on barges** and, if so, check wind speed and direction [1926.1437 (e)(3)]
- Perform shift and monthly inspections of **floating cranes/derricks and land cranes/derricks on barges** [1926.1437 (h)(3)]

WHAT THEY NEED TO KNOW:

- Requirements of the crane standard and their roles [1926.1430 (d)]
- How to inspecting cranes, derricks and wire ropes
- How to document monthly inspections
- How to check fall protection anchors
- How to inspect safety devices and operational aids
- How to conduct trial lifts and proof tests before hoisting personnel
- How to check the capacity is not exceeded for personnel lifts
- How to direct multiple crane lifts
- How to verify proper operation of a derrick
- How to check for wind hazards for floating derricks

WHEN THEY SHOULD STOP WORK:

- When deficiencies are found in the crane or derrick during a visual inspection
- When deficiencies are found in wire ropes during an inspection
- When inspections, trial or proof lifts of personnel show deficiencies
- When fall protection or positioning anchors are insufficient
- When it is unsafe to enter an area during self-erection of tower cranes
- When equipment is left unattended and safety hazards exist

- When a derrick fails a load test
- When wind presents a hazard for floating cranes/derricks