

OSC 12
Ohio Safety Congress & Expo

WELL AT HOME. SAFE AT WORK.

153 Implementing the Crane Standard for Construction - We Have to do WHAT?

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Wednesday, March 28, 11 a.m. to Noon

Ohio Bureau of Workers' Compensation

Implementing the Crane Standard for Construction

WE HAVE TO DO WHAT?

Steve Kinn
Safety Director
Donley's

BACKGROUND

- **Based** on the final publication of the Crane and Derrick Advisory Committee (CDAC)
- The new rules went into effect November 2010
 - Somethings phased in...

WHAT'S INCLUDED?

- Inspection criteria
- Fall protection
- Signal person qualification and use of qualified riggers
- Power line safety (really big)

WHAT IS INCLUDED?

- Ground conditions
- Authority to stop operations
- Operational aids
- The really big one – Operator qualifications

WHAT'S INCLUDED?

- Hoisting personnel
- Tower cranes
- Wire rope
- Multiple crane lifts
- Design, construction and testing

WHAT IS A CRANE?

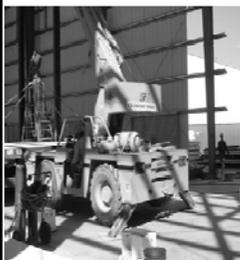
- Cranes on rails
- Crawler cranes





WHAT IS A CRANE?

- Locomotive cranes
- Carry-deck cranes





WHAT IS A CRANE?

- Rough terrain cranes
- Commercial truck mounted cranes





WHAT IS A CRANE?

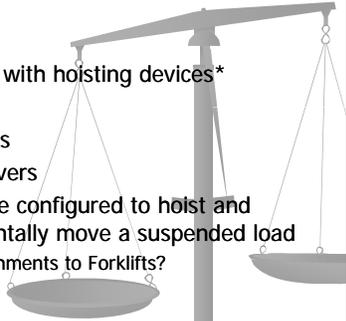
- Boom trucks





WHAT IS A CRANE?

- Derricks
- Tower cranes
- Mechanic's trucks with hoisting devices*
- Pedestal cranes
- Side boom tractors
- Dedicated pile drivers
- Any other machine configured to hoist and lower, and horizontally move a suspended load
 - What about attachments to Forklifts?



WHAT IS NOT A CRANE?

- Excavators
- Concrete pumps
- Wheel Loader
- Track Loader
- Power Shovel
- Dummy in a bucket
- Forklifts***
 - except when configured to hoist and lower (by means of a winch or hook) and horizontally move a suspended load.
- Digger derricks*




WHAT IS NOT A CRANE?

- Tow trucks*
- Vehicle mounted work platforms
- Self-propelled elevating work platforms
- Stacker cranes
- Mechanic's trucks with hoisting devices*




WHAT IS NOT A CRANE?

- Come-a-longs and chain falls
- Dedicated drilling rigs
- Gin poles for communication tower work
- Tree trimming




CRANE SETUP

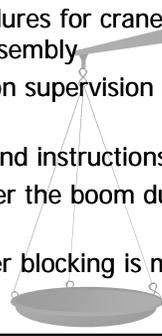
- Ground conditions and supporting material
- Must be ensured to be adequate by the GC/CM or other controlling entity – where there is no controlling entity, requirements shall be met by the employer





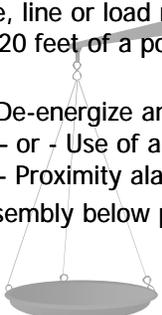
CRANE SETUP

- Lengthy procedures for crane assembly/disassembly
- Specifications on supervision knowledge and authority
- Crew training and instructions
- No person under the boom during pin removal
- Proper outrigger blocking is mandatory



POWER LINES

- No part of crane, line or load may be able to reach within 20 feet of a power line during setup.
 - Exceptions: De-energize and ground power lines – or - Use of a dedicated spotter – or - Proximity alarms*
- Assembly/disassembly below power lines is prohibited



POWER LINES

- Must identify work zone and either mark boundaries, use range limiting devices or range control warnings
- Must determine if any part of crane, line or load could get within **20 feet** (if less than 350kV) of a power line – **50 foot clearance for all lines over 350kV**
 - If yes, must either de-energize and ground; or
 - Maintain 20 foot clearance, or
 - Use Table A.

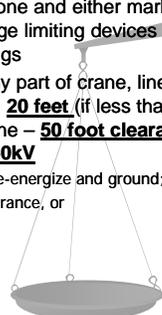
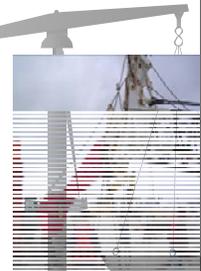



TABLE A

Voltage (kV)	Minimum clearance distance (feet)
Up to 50	10
50 to 200	15
200 to 350	20
350 to 500	25
500 to 750	35
750 to 1000	45
Over 1000	as established by line owner

INSPECTION CRITERIA

- Documented!!!!
 - Each shift (daily or more often)
 - Monthly
- Annual comprehensive
- After modification, repairs or adjustment



INSPECTION CRITERIA

- Severe service
 - Shock load, corrosive atmosphere, etc.
 - Inspect exposed items/conditions
 - Document
- Not in regular use
 - Idle more than three months
 - Monthly inspection must be performed
 - Document

OTHER CRANE CHANGES

- Wire rope inspection
- Safety devices
- Operational aids
- Fall protection
- Operator certification
 - No physical examinations or mandatory drug testing requirements
 - Re-certification must be completed every five years
 - Four acceptable methods of certifying employees



OPERATOR CERTIFICATION

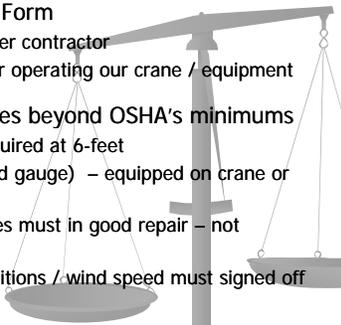
- Certification by an accredited crane operator testing organization
- Qualification by an audited employer program
- Qualification by the US military
- Licensing by a government entity??

SIGNAL-PERSON QUALIFICATION

- Qualified evaluator must conduct the training
- Training requirements:
 - Know, Understand and be competent in application of signals.
 - Have basic understanding of crane operation and limitations, including the crane dynamics involved in swinging and stopping loads and boom deflection from hoisting loads.
- Must be able to effectively communicate to crane operator (i.e., english-english, spanish-spanish, etc.)
- Written or verbal test AND Practical Test!!!

DONLEY'S CRANE POLICY AND PROCEDURES

- Equipment Usage Form
 - Hoisting for another contractor
 - Another contractor operating our crane / equipment
- Donley's policy goes beyond OSHA's minimums
 - Fall protection required at 6-feet
 - Anemometer (wind gauge) – equipped on crane or portable
 - Operational devices must in good repair – not temporary fixes
 - Daily ground conditions / wind speed must signed off daily



Anemometer FAIL!



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