Washington State Construction Crane Certifiers

• Mobile Cranes (Lattice / Hydraulic / Fixed)
• Articulating Cranes
• Tower
• Maritime Crane Certification

Experienced certifiers throughout Washington State

• More than 110 years of combined crane experience

Phone: 1-360-428-5888
Federal OSHA Proposed Crane Rule

- First Draft was published and comments were taken by OSHA from stakeholders in 2009.
- Revisions: Final Crane rule is proposed to be out by July 2010.
- WA State must be “at least as effective”.
- WA State will address differences in Phase II.
Nationally Recognized Standards

- The American Society of Mechanical Engineers (ASME)
  - Updated frequently
  - Active Committee’s
  - Respond to questions
  - Provide interpretations
ASME Crane Related Standard Examples

- B30-2 – Overhead and Gantry Cranes
- B30-3 – Construction Tower Cranes
- B30-4 – Portal Tower and Pedestal Cranes
- B30-5 – Mobile and Locomotive Cranes
- B30-9 – Slings
- B30-10 – Hooks
- B30-17 – Overhead and Gantry Cranes
- B30-20 – Below the Hook Lifting Devices
- B30-26 – Rigging Hardware
- B30-29 – Self-Erecting Tower Cranes
ASME B30.5 Activity

- Most recent update – 2007 – Published March 7, 2008
  - Newly defined responsibilities for:
    - Crane Operator
    - Crane Owner
    - Crane User
    - Lift Director
    - Site Supervisor
  - Responsibilities left the same:
    - Crane Manufacturer
    - Inspector
    - Signal Person
ASME B30.5 Issue

“The operator shall be responsible for those operations under his direct control.” – 1968 ASME B30.5

“Each operator shall be held responsible for those operations under the operator’s direct control.” – 1989 ASME B30.5

“The operator is the captain of the ship.”

Deniability = Lack of Planning = Accidents
ASME B30.5 – Crane Operator

- Directly controls the crane’s functions
  - Responsible from the hook to the wheels
  - Pass Physical Qualifications
    - Vision, Hearing, Strength
    - Substance Abuse Test
  - Pass Written Exam for Specific Crane Type
    - Defines 10 different crane types
  - Demonstrate ability to read / write in the language of the crane manufacturer’s manuals
  - Pass Operational Test for Specific Crane Type
ASME B30.5 – Crane Owner

- Has custodial control of a crane by virtue of lease or ownership
  - Provide a crane that meets the specific job requirements defined by the Crane User.
  - Provide additional technical information when requested by Crane User.
  - Provide field assembly, disassembly, operation, maintenance information.
  - Establish inspection, testing and maintenance program.
  - Using qualified personnel for maintenance, inspection, repair, transport, dis/assembly.
ASME B30.5 – Crane User

- Arranges the crane’s presence on a worksite and controls its use there.
  - Comply with regulations and manufacturer information.
  - Using qualified people as supervisors for crane activities.
  - Ensuring the crane is in proper operating condition prior to initial use at worksite.
  - Verifying the crane has the necessary lifting capacity.
  - Using personnel who are qualified.
  - Ensuring the operator is made aware of adjustments or repairs that have not yet been completed.
  - Ensure all personnel involved are aware of their responsibilities, assigned duties, and the associated hazards.
  - Ensure the inspection, testing and maintenance programs specified by the crane owner are followed.
ASME B30.5 – Lift Director

- Directly oversees the work being performed by a crane and the associated rigging crew.
  - Being present at the jobsite during lifting operations.
  - Ensuring the area needed for crane operations has been prepared before operations commence.
  - Ensuring personnel involved understand their responsibilities, assigned duties, and associated hazards.
  - Addressing safety concerns and is responsible if he overrules those concerns.
  - Appointing the signal person(s) and ensuring they are qualified.
  - Ensuring compliance when working near power lines or lifting personnel.
  - Ensuring the load is properly rigged.
  - Ensuring precautions are implemented in special lifting operations.
ASME B30.5 – Site Supervisor

- Exercises supervisory control over the work site on which a crane is being used and over the work that is being performed on that site.
  - Ensuring that a qualified person is designated as the lift director.
  - Ensuring that crane operations are coordinated with other jobsite activities that will be affected by or will affect the lifts.
  - Ensuring the area for the crane is prepared:
    - Access roads
    - Sufficient room for assembly/disassembly
    - Operating area that is suitable for the crane with respect to levelness, surface conditions, support capability, proximity to power lines, excavations, etc…
  - Ensuring crane operators are qualified
  - Ensuring the rigging crew is supervised by a qualified person
  - Ensuring crane maintenance is performed by a designee.
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Pre-Planning – The Better Solution

- Ability to make changes
- Cost of making Changes

Planning | Purchasing | Construction | Completion
Pre-Planning – The Benefit

- Planning
- Purchasing
- Construction
- Completion

- Ability to make changes
- Cost of making Changes
How does this effect cranes?

- Site Constraints
  - Space
  - Ground Conditions
  - Lifting Paths

- Crane Sizing
  - Know the “defining lift”

- Hook utilization
Before Pre-Planning…

- Check your contracts
  - ASME responsibilities need to be allocated.
  - Scope of work may require different contracts.

- Pre-Qualify
  - Two interesting facts about crane companies.
  - Know what KING, KIRO and KOMO are going to know.
    - Perform web searches
    - Look up citation history
    - Evaluate EMR history
    - Qualify Lift Directors as you would subcontractor Superintendents

- Verify the information
Documentation

- Require documentation before the job happens
  - Scope – who is who?
  - Lift Plan
  - Lift Director Documentation
  - Operator Certification
  - Crane Certification
  - Rigger Documentation
  - Signal Person Documentation
  - Rigging Certification
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