Hoisting Equipment Operator’s Testing Study Guide

FOR THE WRITTEN TEST THE HOISTING EQUIPMENT OPERATOR MUST BE ABLE TO:

• Determine weight of loads by use of simple mathematics and unit weights.
• Know basic rigging:
  • Hardware - wedge sockets, shackles, clips, thimbles, eyebolts, etc.
  • Wire rope - parts of, inspection
• Different types of slings - effects of sling angle
• Effects of center of gravity when rigging a load
• Types of hitches to hold and control loads
• Be able to size slings and hardware given tables
• Safety rules - do’s and don’ts
• Definitions: rated strength, ultimate strength, etc.
• Hand signals:
  • Equipment inspection: pre operation, daily, etc.
• Load Charts: know how to use and interpret to determine capacity, structural strength vs. stability, determine hook height at various radiiuses, pick and carry capacities if any.
• Quadrants of operation and their adverse effects: "working over side", "over rear" or 360°
• Operating procedure near power lines and safe working distance
• Know general safety rules - shock and dynamic loading, swing out, consideration of weather conditions, items which could cause reductions in rated capacity, net capacity vs. gross capacity.
• Know and understand OSHA 1910 General Industry Standard and 1926 Construction Industry Standards pertaining to hoisting and related items.
• Know OSHA laws pertaining to soil excavations, classifications, and sloping/shoring.
• Know “Call Before You Dig” requirements

SUGGESTED TECHNICAL READING/STUDY MATERIAL:

• Training & Inspection Resource Center
  9428 Old Pacific Hwy, Woodland, WA 98674
  Telephone: (order desk) (888)567-8472  (info line) (360)225-5858  FAX: (360)225-5666
  www.tirc.net
• ASME/ANSI B30 STANDARDS (specifically B30.9, B30.26, B30.23, B30.20, ASME B30.10)
  American Society of Mechanical Engineers
  22 Law Drive, Box 2900, Fairfield, New Jersey 07007-2900
  Telephone: 1-800-843-2760   FAX: (973)882-1717
• ISO (International Standards) 7135, 10567, 10567.2
  www.iso.org
(Suggested Technical reading/study material cont.)

- OSHA Regulations (CFR) 1926.550 Construction 1910.180 General Industry
  Local OSHA Area Offices
  www.osha.gov
- SAE International (hand signals)
  400 Commonwealth Drive, Warrendale, PA 15096
  Telephone: (724)776-4841  FAX: (724)776-0790
  www.sae.org
- “Call Before You Dig”
  2040 Whitney Ave., Hamden, CT 06517
  Telephone: 1-800-922-4455
  www.cbyd.com