

## 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 radiuses, 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](http://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](http://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](http://www.osha.gov)

- SAE International (hand signals)

400 Commonwealth Drive, Warrendale, PA 15096

Telephone: (724)776-4841      FAX: (724)776-0790

[www.sae.org](http://www.sae.org)

- "Call Before You Dig"

2040 Whitney Ave., Hamden, CT 06517

Telephone: 1-800-922-4455

[www.cbyd.com](http://www.cbyd.com)