ATLT-2500: RIGGING INSPECTOR CERTIFICATION

Cuyahoga Community College

Viewing: ATLT-2500 : Rigging Inspector Certification

Board of Trustees:
2015-12-03

Academic Term:
Spring 2019

Subject Code
ATLT - AIT-Lifting Technologies

Course Number:
2500

Title:
Rigging Inspector Certification

Catalog Description:
Introductory course covering the OSHA and ASME requirements for the visual inspection of alloy chain slings, metal mesh slings, wire rope slings, synthetic slings, round slings, and rigging hardware within the rigging industry. Includes the basic understanding of terminology, OSHA 1910.184, ASME B30.9 ASME B30.26 and application of these standards.

Credit Hour(s):
3

Lecture Hour(s):
3

Requisites

Prerequisite and Corequisite
Departmental aproval: admission to Lifting Technologies apprenticeship program.

Outcomes

Course Outcome(s):
Discuss the fabrication, physical properties, and application of alloy chain slings, metal mesh slings, wire rope slings, synthetic slings, and round slings

Objective(s):
1. Explain the two types of alloy chain sling fabrication (mechanical and welded)
2. Explain metal mesh slings.
3. Explain the various types of wire rope slings (swage slings, bridles, 7 Parts, hand spliced)
4. Explain the various types of synthetic slings
5. Explain the two types of round slings (single and twin path)
6. Explain the various types of rigging hardware

Course Outcome(s):
Discuss the requirements stated within OSHA 1910.184, ASME B30.9, and ASME B30.26.

Objective(s):
1. Understand the removal from service requirements for each type of sling.
2. Understand the tagging and identification requirements for each type of sling.
3. Understand the construction, installation, operation, inspection, and maintenance of rigging hardware.
4. Understand the definitions within OSHA 1910.184, ASME B30.9, and ASME B30.26
5. Understand the safe operating practices for each type of sling.
6. Differentiate the inspection requirements for each type of sling.

Methods of Evaluation:

1. Participation
2. Assignments
3. Quizzes & Exams
4. Practical application projects

Course Content Outline:

1. Alloy chain slings
    a. Components
    b. Fabrication
    c. Design Factor
    d. Rated Load
    e. Proof test requirements
    f. Identification
    g. Effects of environment
    h. Inspection
    i. Removal
    j. Repair
    k. Operating practices
2. Metal Mesh slings
    a. Components
    b. Fabrication
    c. Design Factor
    d. Rated Load
    e. Proof test requirements
    f. Identification
    g. Effects of environment
    h. Inspection
    i. Removal
    j. Repair
    k. Operating practices
3. Wire rope slings
    a. Components
    b. Fabrication
    c. Design Factor
    d. Rated Load
    e. Proof test requirements
    f. Identification
    g. Effects of environment
    h. Inspection
    i. Removal
    j. Repair
    k. Operating practices
4. Synthetic slings
    a. Components
    b. Fabrication
    c. Design Factor
    d. Rated Load
    e. Proof test requirements
    f. Identification
    g. Effects of environment
    h. Inspection
    i. Removal
    j. Repair
    k. Operating practices
5. Round slings

a. Components
b. Fabrication
c. Design Factor
d. Rated Load
e. Proof test requirements
f. Identification
g. Effects of environment
h. Inspection
i. Removal
j. Repair
k. Operating practices

6. Rigging Hardware
   a. Types and Materials
   b. Design Factor
   c. Rated Loads
   d. Proof test requirements
   e. Identification
   f. Effects of environment
   g. Training
   h. Inspection
   i. Removal
   j. Repair
   k. Operating practices

Resources

Rossnagel, Higgins, and McDonald. *Handbook of Rigging for Construction and Industrial Operations.* 4th ed. Boston, MA: McGraw Hill, 1998.

Wire Rope Technical Board. *Wire Rope Sling User's Manual.* 3rd ed. Alexandria, VA: Wire Rope Technical Publishing, 2007.

Leach, Robert. *Rigger's Bible.* Revised Edition. Springfield, MO: Roark Printing, 1995.

Resources Other

1. https://www.asme.org
2. https://www.osha.com
3. https://www.wstda.com
4. https://www.mazzellacompanies.com

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