

## Objectives: Course CA-005 FUNDAMENTALS OF RIGGING

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### Terminal Objective

This course is designed to provide the attendee with the BASIC knowledge and skills to identify unsafe conditions while using rigging hardware with wire rope, chain and synthetic slings. It also serves as the pre requisite for CA-006B Rigging Trainer Development Course.

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### Enabling Objectives:

1. Identify the correct definition of working load limit.
2. Recognize the two ASME B30 standards that require training.
3. List at least 5 things that should be included in a rigging plan.
4. Identify when "Rigging Hardware" requires inspection, per ASME B30.26.
5. Identify which OSHA standard addresses rigging for general industry.
6. Identify which OSHA standard addresses rigging for construction.
7. Identify correct sling operating practices per ASME B30.9.
8. Identify protection of sling requirements per ASME B30.9.
9. Recognize the fundamental principles for good load control.
10. Recognize the importance of knowing the weight of the load.
11. Identify which slings carry the greatest share of the load, when multiple legs are attached to a load.
12. Calculate vertical share of the load when center of gravity is in the middle.
13. Recognize basic rigging triangle facts.
14. Recognize where the horizontal sling angles are located in a rigging triangle.
15. Determine how to calculate the load angle multiplier for slings.
16. Calculate sling tension when the center of gravity is in the middle of the load.
17. Recognize proper application of hooks and latches as addressed in ASME B30.10, OSHA and Crosby recommendations.
18. Recognize proper application of screw pin, bolt type shackles, and master links as addressed by ASME B30.26 and Crosby recommendations.
19. Recognize proper application of eyebolts and hoist rings as addressed by ASME B30.26 and Crosby recommendations.
20. Recognize ASME B30.26 and ASME B30.10 periodic inspection frequency requirements for hardware and hooks used in normal service.

21. List at least four disqualifying reasons to remove rigging hardware from service per ASME B30.26.
22. Recognize maximum wear allowed for rigging hardware per ASME B30.26.
23. Identify the design factor for wire rope, chain and synthetic slings per ASME B30.9.
24. Identify maximum size object in the eye of a wire rope sling an synthetic webbing sling per ASME B30.9
25. Recognize the capacity of wire rope, chain and synthetic slings when used as choker and basket hitches.
26. Recognize the minimum D/d ratio for wire rope and chain basket hitches per ASME B30.9.
27. Identify the correct chain recommended by OSHA and ASME for overhead lifting.

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*End of Objective List*