

Prerequisites: This course shall have no formal pre-requisite. The individual should have no history of a disabling medical condition, which may be sufficient reason for disqualification.

Course Length: 3-4 hours – Course length shall vary depending on the number of delegates. Total course time includes breaks.

Class Size: The maximum number of delegates that may be trained and tested per instructor shall be thirty-five (35) in the classroom session and twenty (20) in the practical session. A second instructor shall be added for the practical session once the participation exceeds twenty (20) and exercises will be divided into groups.

Course Objective

- Provide delegates assigned to operate industrial Air Winches the necessary skills to safely perform their jobs.
- Provide delegates with recommended industry practices to allow safe work with Air Winches.
- Delegates should be able to demonstrate the necessary skills during practical examination and demonstrate knowledge during written examination.

Course Design

- Power Point© / Lecture / Audio Video / Visual Aids
- Demonstrations
- Practical Exercises

Successful Course Completion

- Requires a minimum score of 75% or better.
- Grades shall be calculated by dividing the number of questions answered correctly by the total number of exam questions.
- Delegates will have no more than thirty (30) minutes to complete the exam.
- Successful completion of practical session is mandatory.

Course Content Summary

- Classroom
- Practicals

Breaks: 10 minutes (approximately every hour)

Lunch: 1 Hour (if applicable)

Course Outline

About Air Winch

- Why Training?
- Common Air Winch Applications

- Definitions
 - Qualified Operator
 - Qualified Inspector
 - Qualified Rigger
 - Pre-Use Inspection
 - Red Zone
- Air Compressor Terms
 - Pounds Per Square Inch (PSI)
 - Absolute Pressure
 - Cubic Feet Per Minute (CFM)
 - Standard Cubic Feet Per Minute (SCFM)
 - CFM/PSI Example
- Operator Requirements
- Roles and Responsibilities
 - Facility Manager/Yard Manager/Offshore Manager
 - First Line Supervisor/Superintendent
 - Winch Operator
 - Signal Person
 - Personnel Working Near Equipment

Air Winch Safety

- Safety Devices
- Personal Protective Equipment (PPE)
- Barricading the Work Area
- Air Winch Installation Requirements
 - Pre Installation Requirements
 - Securing Air Winch
 - Power Supplies
- Air Compressors
 - Installation
 - Requirements
 - Test Certificates
 - Air Supply Information
 - Calculating Air Flow
- Snatch Block
 - Requirements
 - Snatch Block Examples
 - Selection
- Proper Sheave/Wire Rope Requirements
 - Sheave Inspection
 - Wire Rope Spooling
 - Spooling Examples
 - Wire Rope Maintenance

- Wire Rope Alignment Techniques

Air Winch Inspection

- Pre-Use Inspection
 - General Air Winch criteria/examples
 - Wire Rope
 - Synthetic Web Slings
 - Polyester Round Slings
 - Inspection Form Example
- Function Test

Air Winch Operation

- Winch Capacity
- Winch Speed
- Winch Operation
 - Pre Operations
 - Post Operations
 - Winch Brake
 - Winch Operations Example
 - Load Control/Tag Lines

Hand Signals

- Signal Person Requirements
- Hand Signal Review

Practical Session

Practical training shall utilize an air winch, various slings, loads & rigging techniques.

Practical shall verify that the delegate has the ability to complete the following:

- Select and wear appropriate PPE during practical training
- Inspect and identify damaged hardware/rigging gear
- Select the appropriate hardware/rigging gear to complete required lifts
- Communicate with the operator using proper hand signals
- Use tag lines properly to control loads
- Select the appropriate rigging techniques to complete the required lifts
- Place load(s) in appropriate locations (outside of walkways)
- Maintain hand/body position absent from hazards (pinch points)
- Prevent anyone from standing under a suspended load
- Safely work with others as a team
- Store hardware/rigging gear properly following its use

Training Center Provided Material



Air Winch Safety

Course Outline



- PPE
- Rigging Material

Delegate Requirements

- Air Winch shall be provided by the customer at a customer location
- Must possess good physical health as the practical training is physical demanding.

Reference Material / Documents

Recommended Industry Practices

API RP 2D 7th Edition

OSHA Construction Rigging