

# **COURSE SYLLABUS**

## **SIGNALMAN FOR IRONWORKERS**

### **Course Description:**

This course is designed to provide the Iron Worker student with training in signaling any type of hoisting equipment using both hand and voice signals.

### **Course Objective:**

The objective of this course is to enable a student to select and demonstrate the correct signal for each hoisting task.

### **Learning Outcome:**

Upon successful completion of this course, the student will be able to:

- Perform the correct hand signal to make a successful lift
- Perform the correct voice command using the three elements in the following order:
  1. function and direction
  2. distance and/or speed
  3. function stop
- Understand the correct operating procedures when operating near electrical power lines in accordance with ASME B30 3-3.4.3, (a) through (f)

### **Target Audience:**

This course is mandatory for any Ironworker who wishes to possess an Ironworker Signalman card. Upon completion a qualification card can be printed from the IWATS.

### **Length of Course:**

This course is designed to be offered with a minimum of 15 hours of training. The course will have both classroom instruction and hands-on training.

## **Course Materials:**

- Ironworker Cranes (reference manual)
  - Unit 2 – Objectives 1 through 11
  - Unit 3 – Objectives 1 through 8
  - Unit 4 – Objectives 1 through 5
  - Unit 6 – Objectives 1 through 11
  - Unit 7 – Objectives 1, 3, 9, 11, and 13
  - Unit 8 – Objective 13
- Ironworker Cranes (student workbook, same units as above)
- Ironworker Cranes (instructor guide, same units as above)
- ASME B30.5-2007
  - Section 5-3.3.5, (a) through (e)
  - Section 5-3.4.5
  - Section 5-3.4.5.2, Figure 18, a through d and Table 2

## **Course Assignments:**

There will be assignments for each unit of instruction. Students will complete these assignments prior to and/or during class as determined by the instructor. Skill practice will be completed as part of appropriate units. Most skill practice will be completed in the lab or shop area/or outside in a work area.

## **Course Grading Criteria:**

To successfully complete this course, the student must successfully complete all of the assignments sheets, and demonstrate the required Hand and Voice Signals skills in the lab or shop. This is a PASS/FAIL test.

## **Course Schedule:**

The sessions are scheduled at the discretion of the instructor as long as a minimum of 15 hours are given, including a final test.

## **Topics:**

Types and Configurations of Mobile Cranes (Unit 2 Crane Manual)  
Objectives 1 through 11

Principles of Crane Operation (Unit 3 Crane Manual)  
Objectives 1 through 8

Quadrants of Crane Operations (Unit 4 Crane Manual)  
Objectives 1 through 5

Crane Capacity Factors (Unit 6 Crane Manual)

Objectives 1 through 11

Pre-lift Planning and Setup (Unit 7 Crane Manual)

Objectives 1, 3, 9, 10, 11, and 13

Mobile Crane Operating Procedures (Unit 8 Crane Manual)

Objective 13

Standard Voice Signals (ASME B30.5-3.3.5 (a) through (e))

Operating Near Electric Power Lines (ASME B30.5-3.4.5.1, (a) through (d))

Required Clearance for Normal Voltage in Operation Near High-Voltage Power Lines (ASME B30.5-3.4.5.2, Figure 18, a, b, c, d and Table 2)