Course Outline

Gas Tungsten Arc Welding (Safety and Technology)

HFC Course Code: CIMWD-120
Course Topic: Gas Tungsten Arc Welding (Safety and Technology)

Recommended Textbook: Welding: Principles and Applications 7th Edition

Course Description:

Covers theory and operation of gas tungsten arc welding equipment. Emphasizes safety protocols, machine settings, and filler metals.

Course Topics

1. Safety
2. GTAW welding machine
3. Filler metals

Course Objectives

1. Demonstrate proper safety practices for the Gas Tungsten Arc Welding process.
2. Prepare the Gas Tungsten Arc Welding machine for a given metal type and thickness.
3. Select the proper filler metal for a given weldment using the Gas Tungsten Arc Welding process.

Course Performance Based Objectives

1. Without the use of class notes, recognize Gas Tungsten Arc Welding machines based on a list of multiple choice or true/false answers.
2. Without the use of class notes, differentiate between GTAW machine set-ups for steel, stainless steel, and aluminum based on a list of multiple choice or true/false answers.
3. Without the use of class notes, identify GTAW welding torch assembly based on a list of multiple choice or true/false answers.
4. Without the use of class notes, differentiate between GTAW types and preparation of tungsten electrodes based on a list of multiple choice or true/false answers.
5. Without the use of class notes, identify GTAW start methods based on a list of multiple choice or true/false answers.
6. Without the use of class notes, recognize GTAW basic flat welding techniques based on a list of multiple choice or true/false answers.

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Lectures

1. Gas Tungsten Arc Welding
2. Set-up
3. Tungsten electrodes and Filler metals
4. Techniques

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