

MFG 271 : SMAW I

Transcript title

SMAW I

Credits

3

Grade mode

Standard letter grades

Contact hours total

60

Other hours

60

Prerequisites

MFG 107.

Description

Includes SMAW butt welding of mild steel plate in all positions with and without backing as well as various configurations and progressions.

Learning outcomes

1. Demonstrate safe practices in the MATC Welding Lab using SMAW processes at an intermediate level.
2. Demonstrate appropriate set up, maintenance, and use of SMAW equipment for intermediate weldments.
3. Weld common (intermediate) butt joint assemblies using SMAW processes to AWS D1.1, API 1104, and multiple ASME Codes/Standards. Weldments will be done in multiple edge configurations, progression and weld types.
4. Apply visual and destructive examination principles and practices in accordance with AWS D1.1.

Content outline

SMAW Reading/Terminology
SMAW
butt weld with backing
1F, 2F, 3F, 4F
various configurations
different progressions as needed
multiple weld types
x2
SMAW
butt weld without backing
1F, 2F, 3F, 4F
various configurations
different progressions as needed
multiple weld types
x2
Weldments
joints
design
inspection

Industry Drawings
interpretation of symbols
fabrication requirements
general industry requirements
material handling and callouts

Required materials

This class requires the purchase of safety equipment, reference books, measurement equipment, and tools.

Grading methods

Assessment for this course may include, either online or in person, written assignments, homework, timed tests, take home tests, oral presentations, and demonstrations of manual skills acquisition as needed to confirm achievement of the course outcomes.