

# MFG 285 : GTAW III

---

## Transcript title

GTAW III

## Credits

3

## Grade mode

Standard letter grades

## Contact hours total

60

## Other hours

60

## Prerequisites

MFG 283.

## Recommended preparation

MFG 100.

## Description

GTAW welding complete joint penetration welds of 2" and 6" pipe in 6G position.

## Learning outcomes

1. Demonstrate safe practices in the MATC Welding Lab using GTAW processes at an expert level.
2. Weld thin and thick wall 2" mild steel pipe in 6G (expert) position with GTAW process to AWS D1.1, API 1104, and multiple ASME Codes/Standards. Weldments will be done in multiple edge configurations, progression and weld types.
3. Weld thin and thick wall 6" mild steel pipe in 6G (expert) position with GTAW process 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 at an advanced level in accordance with AWS D1.1, API 1104, and applicable ASME Code/Standards.

## Content outline

GTAW  
2" mild steel pipe  
Sched 10  
grooved butt welds  
carbon/stainless filler  
6G  
Test x1 Practice x10  
2" mild steel pipe  
Sched 80  
grooved butt welds  
carbon/stainless filler  
6G  
Test x1 Practice x10

6" mild steel pipe  
Sched 10  
grooved butt welds  
carbon/stainless filler  
6G  
Test x1 Practice x10  
6" mild steel pipe  
Sched 80  
grooved butt welds  
carbon/stainless filler  
6G  
Test x1 Practice x10

## 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.