

STRUCTURAL TIG WELDING (INTERMEDIATE)

**Weld carbon steel work pieces
using the gas tungsten arc welding
process in all positions.**

US 243058 Level 3 (25 Credits)

**Describe and explain the gas tungsten arc
welding process.**

- Components of the gas tungsten arc welding equipment are identified correctly, in terms of manufacturer`s specifications.
- The importance of correct assembly of the gas tungsten arc welding equipment, and the consequences of incorrect assembly, is explained with reference to manufacturer`s requirements.
- Terms and definitions used are consistent with generally accepted welding terminology in accordance with national/international welding standards.

**Select, assemble and conduct pre-
operational checks of gas tungsten arc
welding equipment.**

- Verification, identification and selection of gas tungsten arc welding equipment as per job requirements.
- Identification and rectification of hazards related to the welding process in accordance with standard work site practices.
- Pre-operational checks are carried out in accordance with manufacturer`s specifications.
- A safe worksite is created to prevent damage to equipment and injury to people.
- Weld and gas flow parameters including polarity are established to satisfy job requirements.

Prepare workpieces prior to welding.

- Workpieces prepared prior to welding as specified on drawing and worksite practices.
- Dimensions and alignment checked as specified on drawing.
- Workpieces assembled in position in accordance with drawing specifications.
- Safety precautions adhered to.
- Inspect workpiece prior to welding.

Weld workpieces.

- Despite the minimum material thickness as specified in the range statement, learners have to display sufficient competency for groove welding.
- Welding consumables are used as per job requirements.
- Workpiece welded in down hand position.
- Safety precautions adhered to during welding process.
- Workpiece cleaned after welding as per worksite practices.
- Potential causes for welding defects/imperfections are identified prior to welding and action taken to meet job requirements.

Inspect welded workpiece for defects.

- Post-cleaning of welded joint is performed.
- Welded workpiece conforms to job specifications.
- Inspection methods and procedures selected are conducive to specifications.
- Documentation completed as reflected in worksite practices.

**Care for and store welding consumables
and equipment.**

- Tools and equipment are cared for as per manufacturer`s specifications and stored as per worksite practices.
- Welding consumables stored in accordance with worksite practices.

COURSE DURATION: 7 - 10 DAYS