
PROGRAM OUTLINE

WELDER THREE

(effective March 31/2017)

Program Outline

Welder Three

Shielded Metal Arc Welding (SMAW)

Select electrodes for SMAW

Use the SMAW process on low carbon steel plate and pipe

Semi-Automatic Welding and Automatic Welding

Use the GMAW-P Process

Use combined GMAW, FCAW and MCAW processes

Gas Tungsten Arc Welding (GTAW)

Use the GTAW process for ferrous metals

Use the GTAW process for aluminum

Basic Metallurgy

Describe mechanical and physical properties of ferrous and non-ferrous metals

Describe common ferrous, non-ferrous, reactive metals and their weldability

Describe the grain structure of metals

Describe aluminum, aluminum alloys and their weldability

Welding Drawings, Layout and Fabrication

Read and interpret drawings

Interpret and apply mechanical drawings and layout components

Fabricate weldments

Costing and estimating

Quality Control and Inspection

Describe basic welding quality control and inspection requirements

Perform inspections and testing procedures

Describe the scope of welding supervisor and inspector responsibilities

Standards, Codes, Specifications and Welder Qualifications

Identify applicable standards, codes, specifications and jurisdictional bodies

Describe compliance with weld procedure specifications (WPS) and data sheets