

COMPETENCY PROFILE

GMAW I - GAS METAL ARC WELDING

BTC: WLD 120 (4 credits)

Introduction to GMAW basics, including proper welding technique, system elements, machine set-up and operation. Correct and safe handling use of bottled shielding gases, wire selection and troubleshooting are covered.



- Demonstrate safe and effective welding and shop working practices.
 - Demonstrate use of proper welding-related terminology.
 - Demonstrate proper equipment set-up and trouble-shooting techniques.
 - ✓ Proper polarity selected
 - ✓ Proper work clamp placement used
 - ✓ Safe handling of compressed shielding gas bottles is demonstrated
 - ✓ Compressed gas bottle is properly secured
 - ✓ Regulator is correctly installed and set at proper flow rate
 - ✓ Correct shielding gas is being used
 - ✓ Gas is turned "on" for welding
 - Demonstrate that proper welding wire is being used for welding material selected.
 - Demonstrate proper roller size used in wire feeder.
 - Demonstrate ability to change wire, rollers, tips, diffusers, nozzles, and set proper tension on rollers for welding.
 - Demonstrate ability to set proper welding parameters (voltage and wire feed speed).
 - Demonstrate understanding of simple layout and fit-up practices on 1/4" mild steel plate.
 - Demonstrate competency in GMAW techniques with solid wire on mild steel in the Flat Fillet position:
 - ✓ Weld deposited with complete fusion
 - ✓ Bead shape is slightly convex and uniform in appearance
 - ✓ Weld is free from slag, undercut, cracking & porosity
 - ✓ Proper overlapping with a uniform appearance
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College Textbook Reference:

Welding Principles and Applications; Sixth Edition; Larry Jeffus

This document is to certify that this student has completed the required coursework as defined by the Whatcom County Tech Prep Articulation Agreement and has demonstrated mastery for college credit. Further information about any aspect of this program may be obtained by contacting the school and instructor named on this profile.