

AWS Structural Welder Qualification Test

“AWS QC7” National Certification Program

Using Welding Procedure Specification (WPS) per
American Welding Society D1.1 Code

Eastern Maine
Community College
Great College. Smart Choice.

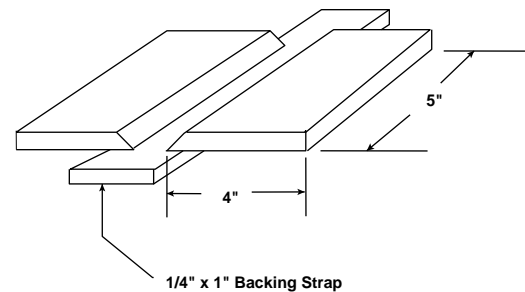
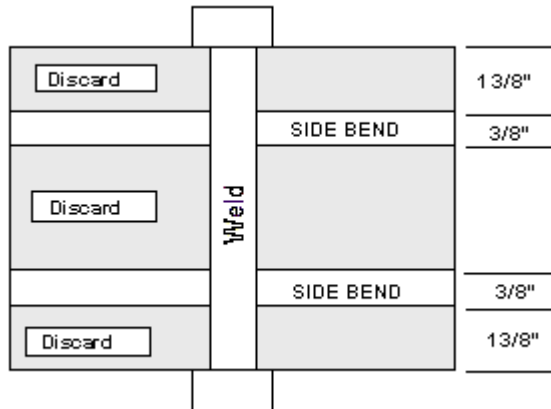
Technical
Career &
Transfer Education

Welding Test Center

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<http://www.weldingtestcenter.org>

Test #: **D1-SM-F4-P-A-U** - Shielded Metal Arc Welding (SMAW) - E7018

1" Unlimited Thickness Test (positions: 3G-vertical & 4G-overhead or 1G flat option)



- Plate material: A36 - 1" x 5" stock cut into 4" lengths with a 22 ½ degree bevel.
- The plates and backing should be ground and cleaned of any mill covering a minimum of 1" front and back and are then gaped 1/4" apart and tacked on the ends where the backing (1/4" minimum x 1" x 9") meets the plate.
- The welder decides which position they want to do first and may begin after an initial inspection. Time limit is 1 ½ hours per position (material prep, fit-up and tack and any warm up practice is not counted in the 1 ½ hours).
- Root pass may be welded with 3/32" or 1/8" diameter E7018 electrode. Fill and cover passes are welded with 1/8" diameter E7018 electrode
- Power brushing is allowed.
- Grinding is allowed except on the cover passes which will be visually inspected.

The visual inspection consists of the following:

- ✓ Weld metal on cover passes must be a minimum of flush with plate and no more than 1/8" reinforcement.
- ✓ Bead width should be no more than 3x the core diameter of the electrode.
(Example: 1/8" E7018, maximum bead width = 3/8")
- ✓ Undercut shall not exceed 1/32" (if undercut is greater than 1/32" an extra pass is allowed but caution should be taken to avoid repeating the problem on this extra pass)

1" Plate Test Joint details

