

PROCESS:	SMAW (Shielded Metal Arc Welding) Manual
BASE METAL:	Carbon Steel ² , M-1 or P-1, Group 1 or 2 to M-1 or P-1, Group 1 or 2
BASE METAL THICKNESS RANGE:	Groove Weld: 3/16 through 3/4 in. Fillet Weld: 3/16 in. minimum
WELD METAL THICKNESS RANGE:	Groove Weld: 3/16 through 3/4 in., plus reinforcement Fillet Weld Leg: 3/16 through 3/4 in.
MAXIMUM WELD BEAD THICKNESS:	1/4 in.
BACKING:	Yes
BACKING MATERIAL:	Carbon Steel ² , M-1 or P-1, Group 1, 2, or 3
ALLOWABLE JOINT DESIGNS:	See Figure 1
WELDING POSITIONS:	All
VERTICAL WELDING PROGRESSION:	Up
NOTCH TOUGHNESS:	Not Qualified for Notch Toughness Applications
PREHEAT TEMPERATURE:	50°F minimum, 350°F maximum
INTERPASS TEMPERATURE:	50°F minimum, 350°F maximum
PREHEAT TEMPERATURE MAINTENANCE:	Continuous or special heating not required
POSTWELD HEAT-TREATMENT:	None (not qualified for PWHT)
TECHNIQUE:	Beads: Stringer or weave Peening: No Cleaning: Joint shall be dry prior to welding Initial Cleaning: Mechanical or chemical Interpass Cleaning: Mechanical only
SINGLE OR MULTIPLE ELECTRODE:	Single
SINGLE OR MULTIPLE PASS:	Either
FILLER METAL SPECIFICATION:	ANSI/AWS A5.1 ASME SFA 5.1 AWS/ASME ² A Number 1, F Number 4
PULSED POWER WELDING:	No
CONSUMABLE INSERT:	No
WELDING PARAMETERS:	

BEADS	FILLER METAL*		CURRENT Type and Polarity	AMPERES Groove and Fillet
	Classification	Dia. (in.)		
Tack Root Fill	E7016	3/32	DCEP	65/110
		1/8	DCEP	110/150
		5/32	DCEP	140/200
Tack Root Fill	E7018	3/32	DCEP	70/115
		1/8	DCEP	115/165
		5/32	DCEP	150/220

*Note: Care of the electrodes prior to use shall be as recommended by the electrode manufacturer to ensure that the low hydrogen characteristics are maintained.

² As detailed in AWS B2.1 and ASME Section IX.