

WPS NO.: XX REV. NO.: IX

QW-482

SUPPORTING PQR'S: XX XX

PROCESSES: FCAW (Flux cored per QW-404.23), SAW

TYPE: FCAW = Semi-Auto; SAW = Machine

Note: FCAW: w/ or W/O PWHT CO2 shielding gas.

Note: SAW: W/O PWHT only; butt welds only (no fillets).

Joint (QW 402)

Backing: May be base metal, weld metal, or chill ring (where permitted).

Beveling: Single or Double bevel for full penetration weld.

BASE METALS (QW - 403): P-NO: 8

P-NO: 8 (ie 304 SS to 304 SS)

Thickness Range: Base Metal:

Groove: FCAW = .0625" - .625 - .674 W/PWHT Fillet: Any

Groove: FCAW = .1875" - 2.0" W/O PWHT Fillet: Any

Groove: SAW = .0625" - .75" Fillet: NA

Deposited Weld Metal: Groove: Same as Base Metal Fillet: Any

Pipe Dia. Range: Groove: Any Fillet: Any

FILLER METALS (QW-404) : F-No.: 6

A-No.: 8

SFA Spec. & Class: FCAW=5.22; E308LT-1 E316LT-1

SFA Spec. & Class: SAW=5.9; ER308(L), ER316(L)

Size of Filler Metal: FCAW = .045 .062; SAW 5/64, 3/32, 1/8

Electrode-Flux (Class) & Trade name(s): Lincoln ST- 100 Flux or Lincoln BLUE-MAX 2000 Flux

Other: Filler metal to match base metal; ie, E308(L) or E316(L) for 304 SS, E316(L) for 316 SS

No Supplemental or powdered filler metal (404.24)

Neutral Flux (404.34)

No recrushed flux (410.64)

POSITIONS (QW-405) :

Position or Groove: FCAW - Any

Position of Groove: SAW - Flat

Position of Fillets: Any

Welding Progression: Uphill

PWHT (QW-407): FCAW When Specified

Temp. Range: 1100 F Minimum

Time Range: 1 Hour/Inch; .25 Hr. min.

Other: Except where lower temp. are permitted by notes.

PREHEAT (QW-406)

Interpass Temp: 350 F Maximum

Preheat Maintenance:

Minimum Temp.: 50 F minimum

SHIELDING GAS (QW-408) : FCAW=CO2

% Composition: 100%

Flow Rate: 20-50 CFH

Gas Backing: None

ELECTRICAL CHARACTERISTICS (QW-409) :

Mode of Metal Transfer (If GMAW or FCAW): FCAW = Globular

Pass	Process	Class	Dia.	Polar.	Amps	Volts	In/Mm
All	FCAW	See Above	.045	DCRP	140/250	24/32	
All	FCAW	See Above	.062	DCRP	160/300	24/32	
All	SAW	See Above	3/32	DCRP	200/700	25/40	10/50
All	SAW	See Above	1/8	DCRP	250/700	25/40	10/50

Technique (QW-410) :

Sting or Weave: String

Gas cup Size: FCAW=.625" or .75"

Oscillation: None

Cleaning: Brush with SS brush or grind with new wheel or wheel that has only been used on SS.

Back Gouging: Grind or Carbon Arc Followed by Grinding with new wheel or wheel that has only been used on SS.

Contact Tube to Work Distance: FCAW = .5" - 1"; SAW = .75" - 1.25"

Multi or Single Pass: Single or Multi Pass

Single or Multi Electrode: Single

Peening: None

Other: No pass shall be greater than .5".

Remarks: This is a combination procedure. Root passes and filler passes can be made with either process interchangeably. 2nd side back gouging and/or interpass cleaning performed as required.