|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Company - | | WPS # - **WPS-D1.1-004** | Rev # - **0** | Date – **11/16/2017** |
| Authorized By – | Date – **11/13/2017** | Supporting PQR(s) – **Prequalified 9.9.1, Figure 9.10 (Heel)** | | CVN Report - **No** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **BASE METALS** | Specification | Type or Grade | AWS Group # | **BASE METAL THICKNESS** | As Welded | With PWHT |
| Base Material | A500 | B | I | CJP Groove Welds | NA | NA |
| Welded To | A500 | B | I | CJP Groove W/CVN | NA | NA |
| Backing Material | NA | NA | NA | PJP Groove Welds | NA | NA |
| Details – Fillet weld, Square Tubing Group I, for fillet welds made in heel angles between 45° and 59° | | | | Fillet Welds | 3/16” - Unlimited | NA |
| **DIAMETER** | NA | NA |

**WELDING PROCEDURE SPECIFICATION**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **JOINT DETAILS** | | | **See Page 2 For Sketch** | | | |
| Groove Type | NA | |
| Groove Angle | NA | |
| Root Opening | 0” – 1/16” | |
| Root Face | NA | |
| **Backgouging** | NA | |
| Method | NA | |
| **POSTWELD HEAT TREATMENT** | | |
| Temperature | NA | |
| Time at Temperature | NA | |
| Other | NA | |
| Weld Layer(s) | | 1 |  |  |  |  |
| Weld Pass(es) | | 1 |  |  |  |  |
| **Process** | | GMAW |  |  |  |  |
| Type (manual, mechanized, etc) | | Semi-Automatic |  |  |  |  |
| **Position** | | Horizontal, Flat |  |  |  |  |
| Vertical Progression | | NA |  |  |  |  |
| **Filler Metal (AWS Spec)** | | A5.18 |  |  |  |  |
| AWS Classification | | ER70S-6 |  |  |  |  |
| Diameter | | .035 |  |  |  |  |
| **Shielding Gas Composition** | | Don will advise – 90/10 likely |  |  |  |  |
| Flow Rate | | Don will advise – 90/10 likely |  |  |  |  |
| **Preheat Temperature** | | 32°F (If material temperature is below 32°F, it is to be brought to 70°F before welding and that temperature is to be maintained while welding) |  |  |  |  |
| Interpass Temperature | | 32°F (If material temperature is below 32°F, it is to be brought to 70°F before welding and that temperature is to be maintained while welding) |  |  |  |  |
| **Electrical Characteristics** | |  |  |  |  |  |
| Current Type and Polarity | | DCEP |  |  |  |  |
| Transfer Mode | | Spray |  |  |  |  |
| Power Source Type (cc, cv, etc) | | CV |  |  |  |  |
| Amps | | 190 - 280 |  |  |  |  |
| Volts | | 22 – 30 (to be adjusted) |  |  |  |  |
| Wire Feed Speed - IPM | | 350 – 600 (to be adjusted) |  |  |  |  |
| Travel Speed | | Time welder to calculate |  |  |  |  |
| Maximum Heat Input | | Calculate using Heat Input = (60 x Amps x Volts) / (1,000 x Travel Speed in in/min) = KJ/in |  |  |  |  |
| **Technique** | |  |  |  |  |  |
| Weld Size | | (Thickness of thinnest member x 1.5) min, 3/8” max |  |  |  |  |
| Stringer or Weave | | Either |  |  |  |  |
| Multi or Single Pass (per side) | | Single |  |  |  |  |
| Oscillation (mechanized, auto) | | NA |  |  |  |  |
| Contact Tube to Work Distance | | 1/2” – 3/4" |  |  |  |  |
| Peening | | None |  |  |  |  |
| Interpass Cleaning | | None |  |  |  |  |
| **Other** | | Z Loss is assumed to be 0 per Table 9.5 |  |  |  |  |

Joint Details and Sketch

(see Figure 9.10 - Heel)

t = Thickness of Thinnest Member

= 1.5t min, 3/8” max

t =

Angle 45° - 59°

Side View