|  |  |  |  |
| --- | --- | --- | --- |
| 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