# TK LLC - Pike Road

10613Troy Hwy, Pike Road, AL 36064

## ASME - Welding Procedure Specification (WPS)

WeldOffice WPS

| | | | | | |
|---|---|---|---|---|---|
| WPS record number | 25283A | Revision | | Qualified to | ASME Section IX |
| Date | 10/10/2025 | | | Company name | TK LLC - Pike Road |
| Supporting PQR(s) | 25276A | | | | |
| Reference docs. | | | | | |

| | |
|---|---|
| Scope | Groove, no PWHT (As-welded) |
| Joint | Joint details for this welding procedure specification in:<br>JOINTS section of this WPS, Production drawings, Engineering specifications, Reference documents |

### BASE METALS (QW-403)

| | | | |
|---|---|---|---|
| Type | Carbon steel (P1) | P-no. 1 | Grp-no. 1 |
| Welded to | Carbon steel (P1) | P-no. 1 | Grp-no. 1 |
| Backing: | When required | P-no. | Grp-no. - |
| Retainers | | | |
| Notes | | | |

### THICKNESS RANGE QUALIFIED (in.)

| | As-welded | | With PWHT | |
|---|---|---|---|---|
| | Min. | Max. | Min. | Max. |
| Complete pen. | 0.188 | 1 | - | - |
| Impact tested | - | - | - | - |
| Partial pen. | 0.188 | 1 | - | - |
| Fillet welds | - | - | - | - |

### DIAMETER RANGE QUALIFIED (in.)

| | As-welded | | With PWHT | |
|---|---|---|---|---|
| | Min. | Max. | Min. | Max. |
| Nominal pipe size | no min. | no max. | - | - |

### FILLER METALS (QW-404)

### THICKNESS RANGE QUALIFIED (in.)

| | SFA | Classification | F-no. | A-no. | Chemical analysis or Trade name | As-welded | | With PWHT | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Min. | Max. | Min. | Max. |
| FCAW | 5.20 | E71T-1C | 6 | | SF-71 | no min. | 1.2 | - | - |
| Sup. filler | - | - | - | - | - | - None - | | | |

### WELDING PROCEDURE

| | | | |
|---|---|---|---|
| Welding process | | | FCAW |
| Type | | | Semi-automatic |
| Minimum preheat/interpass temperature | | (°F) | 50 |
| Maximum interpass temperature | | (°F) | 400 |
| Filler metal size | | (in.) | 0.045 |
| Layer number | | | All |
| Position | | | - |
| Weld progression | | | Uphill |
| Current/polarity | | | DCEP (reverse polarity) |
| Waveform control | | | Not Used |
| Energy | | (J) | |
| Power | | (J/s) | |
| Amperes | | | 205 |
| Volts | | | 24 |
| Travel speed | | (in./min) | 6 - 9.03 |
| Maximum heat input | | (kJ/in.) | 49.2 |
| Wire feed speed | | (in./min) | 425 Reference |
| Arc transfer mode | | | Spray |
| Shielding: | Gas type | | Argon 75% / CO2 25% |
| | Flow rate | (cfh) | 35-55 |
| Trailing: | Gas type | | |
| | Flow rate | (cfh) | |
| Backing: | Gas type | | |
| | Flow rate | (cfh) | |
| String or weave | | | Stringer or Weave |
| Orifice/gas cup size | | | Any |
| C.T.W.D | | (in.) | 0.5 - 1.0 |
| Multi/Single pass per side | | | Single or multiple passes |
| Maximum pass thickness | | (in.) | 0.375 |
| Weld deposit chemistry | | | |
| Notes | | | |