

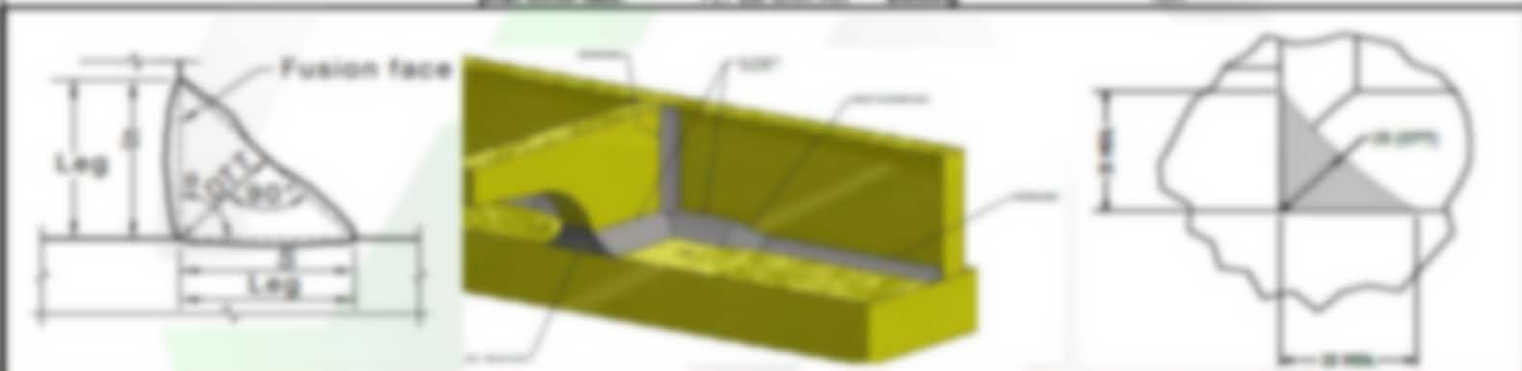
WELD PROCEDURE SPECIFICATION / QUALIFICATION RECORD

PROJECT TITLE: EX5400 TRACK FRAME FP FILLET PROFILING
DESCRIPTION: Multi Run Fillet Weld Applied with FCAB Process
PROCEDURE TYPE: SPECIFICATION (WPS) RECORD (PQR)
COMPLIANCE CODE: ASME B31.3 2014 FP
WPS No: NSI-WPS-F-2102 **PQR Ref No:** NSI-PQR-008



WELDING PROCESS		GENERAL SPECIFICATION			
WELDING PROCESS:	FLUX cored	MATERIAL SPECIFICATION:	ASME B31.3	STEEL TYPE No:	304
TYPE (AUTOMATIC):	MANUAL	WELDABILITY GROUP No:	5	RANGE QUAL:	F (thick $1/16$ to 1/2)
POLARITY:	Electrode positive +	THICKNESS (I):	1/16 to 1/2 (max)	DIAMETER (D):	3/32
WELDING POSITION:	Flat 90° both angle	COMBINED JOINT THICKNESS:	1/16 to 1/2 (max)	THERMAL TREATMENT	
WELDING POSITION:	3F 90° FB	PREHEAT (°):	150	MAX INTERPASS (°):	300
MODE OF TRANSFER:	SPRAY	P.W.A.T.:	<input type="checkbox"/>	CONTROLLED COOLING:	
BEAD TECHNIQUE:	String Bead	HEAT RATE:	30° F/in/Sec	Decrease of 10° F/in 30min until atmosphere temp is met, use of Insulation blankets recommended	
INTERPASS CLEAN:	Hand postmach grind	WELD TEMP:	NA		
SLIC STOCK OUT:	None	WELD SPEED:	NA		
BACKGROUNDE WELD:	NA				

WELDING GASES & FLUXES	JOINT DESIGN				
Gas Mixture/Type:	ARCO 62	Joint Type:	FILLET WELD	Edge Preparation:	As Per Draw/Match Good
Gas Flow Rate (min):	10-15 L/min	Preheat Joint No:	F1	To Table:	E3
Gas Flow Rate (max):	10-15 L/min	Root Gap (mm):	NA	Root Face (mm):	3mm
Nozzle Diameter:	15mm	Throat Thick (mm):	25mm	Leg Length (mm):	25mm
Shield Gas Flow:	NA	Post weld heat:	7.5 Sec from cool	Beating:	NA



WELD JOINT TOLERANCES	BEAD PLACEMENT TOLERANCES	TOE & SURFACE TOLERANCES
Fillet weld throat thickness (RTT) is a minimum 25mm. Only apply required amount of weld build up to achieve size following welding.	Final bead 'Temper bead' applied over final capping bead edging the parent metal. 3-5mm from contact with the parent metal.	Tolerance for toe angle of 90° and from radius.

WPS No.	CODE	PROC.	TRADE NAME	CLASSIFICATION	SIZE	WPS No.		WPS No.		WPS No.		WPS No.	
						WPS	WPS	WPS	WPS	WPS	WPS		
ALL	A	3F	Industrial Fabrication	B-149	1/16 to 1/2	24	27	208	209	210	407	0.05	1.75

TESTING REQUIRED	Test Type	VISUAL	WPS	WPS/RTT	TRADE	WPS/RTT	CHEMISTRY	MECHANICAL	METROLOGICAL	OTHER
Essential		NA	NA	NA	NA	NA	NA	NA	NA	NA
Test by										
Report										
Result										

TEST PLATE IDENTIFICATION (Post Release only)

WELDER: _____ DATE WELDED: _____ FACILITATOR: _____
 WELDER ID: _____ LOCATION: _____
 WELDER ID: _____ COUNCIL IDENTIFICATION: _____

NOTES:
 Start 1' steps within the weld joint area to be avoided where practical. Steps within the joint shall be ground to a 4:1 taper prior to re-weld.
 Interpass peening recommended to reduce residual stress build up from weld solidification shrinkage. Taps, needle rollers are not adequate peening tools.
 Upon completion of final capping run bead, place a "Temper" bead on top of the final bead within 3-beam proximity of the parent metal to reduce residual stresses in the heat affected area.

PREPARED BY: James Derry Qualification: ASME B31.3 2014 FP WELDER CERTIFIED Doc release date: 20/10/20

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