

WELD PROCEDURE SPECIFICATION / QUALIFICATION RECORD

PROJECT TITLE: PC1250 Bucket Lifting Lug
DESCRIPTION: 30 Position, 32mm 250 Grade Plate
PROCEDURE TYPE: SPECIFICATION (WPS) RECORD (PQR)
COMPLIANCE CODE: AS/NZS 1554.1:2014 SP 49
WPS No: PQR Ref No: OMTA-PQR-01



WELDING PROCESS		MATERIAL SPECIFICATION	
WELDING PROCESS:	Flux cored	MATERIAL SPECIFICATION:	AS/NZS 1554.1:2014 300
TYPE (AUTOMATIC):	MANUAL	WELDABILITY GROUP No:	5
POLARITY:	Electrode positive +	STEEL TYPE No:	4
WELDING POSITION:	VERTICAL UP Tack @ 45-75°	THICKNESS (mm):	32mm
WELDING POSITION:	30	RANGE QUAL:	32mm-65mm
MODE OF TRANSFER:	SPRAY	COMBINED JOINT THICKNESS:	65mm
WELD TECHNIQUE:	Stringer	DIAMETER (mm):	50
INTERMEDIATE CLEAN:	Needs Postweld heat	THERMAL TREATMENT	
SLAC STICK OUT:	12-15mm	PREHEAT (°C):	75
BACKGROUSE WELD:	N/A	MAX INTERPASS (°C):	300
		POST HEAT:	<input type="checkbox"/>
		CONTROLLED COOLING:	
		HEAT RATE:	N/A
		WELD TEMP:	N/A
		WELD SPEED:	N/A
		WELD PERMITS:	N/A
		Decrease of 20° for 32mm with atmosphere temp is not	

WELDING GASES & FLUXES		JOINT DESIGN	
Gas Mixture/Flux type:	Ar + 2% CO ₂ + 2% Si	Joint Type:	DOUBLE BEVEL BUTT Edge Preparation:
Gas Flow Rate (liters):	10-12 Liters/min	Preheat Joint No:	1-C-5 To Table 51
Nozzle Diameter:	15mm	Root Gap (mm):	1.5mm
Preheat Gas Flow:	N/A	Root Face P1 (mm):	1.5mm
		Root Face P2 (mm):	1.5mm
		Lead Length (mm):	N/A
		Post-weld heat:	Yes, from TLT Setting
			N/A



JOINT TOLERANCES	BOND PLACEMENT REQUIREMENTS	FINISHING NOTES
Double Bevel butt weld, Type 5 for 300 with no underfill	The root face must be correctly aligned, continuous monitoring and monitoring of weld to maintain location requirements throughout	Test plate shall achieve distortion of no greater than 0.1%. But weld reinforcement is to ground flat after finishing completed for weld

WELDING SYMBOLS	CONFORMANCE LEVELS											
	WPS	WPS	WPS	WPS	WPS	WPS	WPS	WPS	WPS	WPS	WPS	WPS
AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS
AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS

TESTING REQUIRED	Test Type	VISUAL			TENSILE	BOND TEST	CORROSION	HARDNESS	ULTRASONIC	OTHER
		WPS	WPS	WPS						
Externally	Visual	WPS	WPS	WPS	N/A	N/A	N/A	N/A	N/A	N/A
Externally	Impact	WPS	WPS	WPS						
Externally	Hardness	WPS	WPS	WPS						
Externally	Other	WPS	WPS	WPS						

TEST PLATE IDENTIFICATION (PQR Release only)

WPS NO: JS-PQR-01 DATE WELDED: 26/06/2021 FACILITY: J. Darnley
 WELDER: Mark LOCATION: 1111 Engineering Facility Mudgee
 WELDER ID: Mark COLUMN DIMENSIONS: 2 x 32mm Wide x 100mm Long x 32mm Thick 250G Plates

NOTES:

Tack welding shall meet the same parameter requirements as specified within.
 Plate assembled at 90° to base prior to commencing welding, bond placement noted achieved square alignment upon welding completion.
 Back grinding of root run to sound metal performed by mechanical grinder with 3mm cut disk.
 Surface grinding of full weld reinforcement performed prior to applying 15mm fillet weld.

PREPARED BY: James Darnley Qualification: AS2214 WELD SUPERVISOR (2017) Date release date: 20/06/2021

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REQUIRED EXTENT OF TESTING - TABLE 4.7.1

100% Visual Inspection



100% Magnetic Partical Inspection



1 x Macro Inspection

