



QW - 482
WELDING PROCEDURE SPECIFICATION (WPS)

COMPANY NAME: JG ACERO INDUSTRIES PVT.LTD. NASHIK.

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Welding Procedure Specification No. : JGAIPL/CS/WPS/01 Rev: 1	Date : 07/01/2021
Welding Process(es) : GTAW + SMAW	Type(s) : Manual
PQR NO. : JGAIPL/CS/PQR/01	

JOINTS : (QW – 402)

- Groove Design (Root face, Root spacing, incl. angle)	As per applicable Manufacturing Drawing as referenced in Weld Plan
- Backing : Yes / No (Refers to both Backing & Retainer)	With backing or without backing as per applicable Manufacturing Drawing as referenced in Weld Plan Retainers not used.
- Backing Material (Type) <input checked="" type="checkbox"/> Metal <input type="checkbox"/> Nonmetallic <input type="checkbox"/> Nonfusing Metal <input type="checkbox"/> Others	-Metal/Weld Metal

BASE METALS : (QW – 403)

P. No. 1 Gr. No. 1,2,3 TO P. No. 1 Gr. No. 1,2,3
OR

Specification Type & Grade. _____
TO
Specification Type & Grade. _____

OR

Chemical Analysis _____
& Mechanical Properties _____
TO
Chemical Analysis _____
& Mechanical Properties _____

FILLER METAL : (QW – 404)

Process	GTAW	SMAW
SFA No.	5.18	5.1
AWS (Class)	ER70S2	E-7018
F. No.	6	4
A. No.	1	1
Size of Filler Metal (mm) dia	1.6, 2.0, 2.4, 2.5, 3.0, 3.15 Bare wire	2.5, 3.15, 4 Bare Wire
Filler metal product form	Bare (Solid)	Bare (Solid)
Flux Trade Name/Designation	Not Applicable	Not Applicable
Consumable Insert	Not Applicable	Not Applicable
Range of Deposited	Groove	6 Max.
Weld metal Thk. (mm)	Fillet	Any
Thk. Per pass Max t pass > 1/2 in (13 mm)	NO	NO
Flux Type	Not Applicable	Not Applicable

	GROOVE	FILLET	Range of Deposited	Groove	6 Max.	14 Max.
Base Metal Thk. Range (mm)	1.5 to 20 mm	Any	Weld metal Thk. (mm)	Fillet	Any	Any
Pipe dia (mm)	Any	Any	Thk. Per pass Max t pass > 1/2 in (13 mm)	NO	NO	
Range (mm)			Flux Type	Not Applicable	Not Applicable	
Others: - Not Applicable			Others: - Not Applicable			

POSITION : (QW – 405)

Position(s) of Groove : All	Preheat Temperature (Min.) °C : 15
Weld Progression : Up Hill	Inter pass Temperature (Max.) °C : 150
Position(s) of fillet : All	Preheat Maintenance : Not Applicable

PREHEAT : (QW – 406)

Signature
9/01/2021





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POST WELD HEATTREATMENT(QW-407)

Type : Not Applicable

Temperature Range °C : Not Applicable

Time Range : Not Applicable

GAS : (QW-408)

	Gas(es)	% Comp Mixture	Flow Rate (lit /min)
Shielding	Argon	99.99%	5 -15
Trailing	None	----	----
Backing (For root pass of groove)	None	----	----

ELECTRICAL CHARACTERISTICS : (QW-409)

Type of Current : DC

Polarity : GTAW- SP (Electrode - Ve) , SMAW -RP (Electrode +ve)

Amps(Range) : 80 A to 130A

Volts : 11 V to 30V (For Reference Only)

Tungsten Electrode Size and Type:
2.0,2.4,3.0,4.0mm,2% Thoriated (EWTH) for GTAW

Heat Input : As required.

Mode of Metal transfer : Not Applicable

Pulsing Current : With or Without

TECHNIQUE : (QW-410)

Manual/Automatic : Manual

Contact Tube to work distance (mm) : Not Applicable

String or Weave Bead : String / Weave

Multiple or single Pass per side : Multiple/Single

Orifice or Gas Cup Size ϕ (mm) : 6 to 12.5

Multiple or Single Electrode : Single

Initial and Inter pass Cleaning : Grinding / Wire Brush

Travel Speed (Range) mm/ min : As required

Method of Back Gouging : Grinding

Peening : Not Applicable

Closed to out of chamber : Not Applicable

Electrode Spacing : Not Applicable

Oscillation : Not Applicable

Use of thermal processes : Not Applicable

Others: 1) Surface to be welded shall be free from Grease, Oil Scale & Rust. Cleaning shall be done with wire brush/wheel.

Weld Layers	Process / es	Filler Metal		Current (A)		Voltage Range (V)	Travel Speed Range cm/min	Remarks
		Class	Dia. mm	Amp Range	Type Polarity			
Root Pass & 1 st Run	GTAW	ER70S2	1.6 2.0 2.5	110 to 125 115 to 130 115 to 130	DC EN	*11 to 25	As required	* Voltage Range For reference Only
Rest Passes	SMAW	E-7018	2.5 3.15 4.0	115 to 130 130 to 145 140 to 180	DC EP	*11 to 30	As required	* Voltage Range For reference Only

PREPARED BY

APPROVED BY

REVIEWED BY

WELDING ENGINEER
SPM CONSULTANCY SERVICES

WELDING MANAGER
SPM CONSULTANCY SERVICES

CLIENT

