

		<b>VISHAL ENTERPRISE &amp; VRISHAL ENGINEERING PVT.LTD. GROUP OF COMPANIES</b>							
<b>WELDING PROCEDURE SPECIFICATION</b> (As per AWS D1.1)									
WELDING PROCEDURE SPEC. NO. : VEPL/WPS/005				REV NO. 01		DATE : 23.12.2024			
SUPPORTING PQR NO.: VEPL/PQR/005				REV NO. 00		DATE : 08.09.2022			
WELDING PROCESS: SMAW				TYPE: MANUAL					
JOINT DESIGN									
GROOVE DESIGN		AS PER APPROVED AFC DRAWING (For PQR : Single V)							
BACKING		NO FOR ROOT / YES FOR REST							
BACKING MATERIAL		BASE / WELD METAL							
ROOT SPACING		3 - 4 mm							
ROOT FACE		1-2 mm							
GROOVE ANGLE		AS PER APPROVED DRAWING / WELD BOOK							
BASE METALS									
MATERIAL SPEC. & GROUP		IS2062 E350 Gr.BR/C or IS2062 E250 Gr.BR/B0/A or Equivalent							
TEST PLATE THICKNESS		25 mm							
QUALIFIED THICKNESS		3 mm to Unlimited							
FILLET		Any							
NOTE: WELD DESIGN WILL BE CONSIDERED AS PER THE APPROVED DRAWINGS ONLY.									
FILLER METALS				POSITION					
AWS SPECIFICATIONS		SMAW:SFA 5.1		PQR TEST PLATE POSITION				2G,3G & 4G	
AWS CLASSIFICATION		E 7018		QUALIFIED POSITION FOR GROOVE				ALL	
				VERTICAL PROGRESSION				UPHILL	
POST WELD HEAT TREATMENT				PREHEAT/INTERPASS TEMPERATURE (As per table 5.8 of AWS D1.1)			PREHEAT METHOD		
NA				THICKNESS		≤ 38		PREHEAT SHALL BE CHECKED AT A DISTANCE OF 3" OR 3 TIMES THE THICKNESS WHICHEVER IS GREATER FROM THE WELD TOE AND THROUGH THE THICKNESS	
				PREHEAT TEMPERATURE		10°C      65°C			
SHIELDING GAS				INTERPASS TEMPERATURE, Max.		250°C			
TYPE OF GAS		NA		TECHNIQUE					
COMPOSITION		NA		STRING OR WEAWE BEAD				STRING / WEAIVING	
FLOW RATE (LPM)		NA		MULTIPASS OR SINGLE PASS				MULTIPASS	
GAS CUP SIZE		NA		NUMBER OF ELECTRODE				SIGNLE	
ELECTRICAL CHARACTERISTICS		TRANSFER MODE(GMAW)				CONTACT TUBE TO WORK DISTANCE		NA	
SHORT CIRCUITING		NA		PEENING				NA	
CURRENT		DC		INTERPASS CLEANING				GRIND / WIRE BRUSHING	
POLARITY		DCEP		TACK WELD TECHNIQUE				NA	
OTHER		NA		TACK LENGTH				REFER NOTE 1	
PASS OR WELD LAYER	WELDING PROCESS	FILLER METALS		CURRENT		VOLTS (V)	ELECTRODE RUNOUT LENGTH MINIMUM (mm)	TRAVEL SPEED mm/min (Min.)	HEAT INPUT kJ / mm (Max.)
		CLASS	DIA. mm	TYPE OF POLARITY	AMPS				
ROOT PASS / BACK CHIP	SMAW	E 7018	2.5 / 3.15	DCEP	70-120	21-27	50	71-130	2.5
HOT PASS	SMAW	E 7018	2.5 / 3.15	DCEP	70-120	21-26	50	71-130	2.5
FILL UP	SMAW	E 7018	3.15 / 4.0	DCEP	90-170	22-28	50	100-150	2.5
CAPPING	SMAW	E 7018	3.15 / 4.0	DCEP	90-170	22-28	50	100-150	2.5
NOTE : 1) 50 mm OR 4 times the thickness whichever is less, with a min. throat size of 6mm - 2 Pass maximum 2) Pre-heating shall be strictly followed for tacking also 3) Weaving should not exceed 2.5 times of electrode									
		PREPARED BY SHIVANG D WAKAR				APPROVED BY HARDIK PRADJAPAT			
NAME									
SIGNATURE									
DATE		23.12.2024				23.12.2024			