



VISHAL ENTERPRISE & VRISHAL ENGINEERING PVT.LTD. GROUP OF COMPANIES

WELDING PROCEDURE SPECIFICATION

(As per AWS D1.1)

WELDING PROCEDURE SPEC. NO. : VEPL/WPS/006		REV NO. 01	DATE : 23.12.2024						
SUPPORTING PQR NO.: VEPL/PQR/006		REV NO. 00	DATE : 08.09.2022						
WELDING PROCESS: FCAW		TYPE: SEMI-AUTOMATIC							
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 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	SFA 5.20			2G,3G & 4G					
AWS CLASSIFICATION	E71T-1C			ALL					
POST WELD HEAT TREATMENT		PREHEAT/INTERPASS TEMPERATURE (As per table 5.8 of AWS D1.1)		PREHEAT METHOD					
NA		THICKNESS	≤ 38	>38 to 65					
		PREHEAT TEMPERATURE	10°C	65°C					
SHIELDING GAS		INTERPASS TEMPERATURE, Max.	250°C						
TYPE OF GAS	CO2			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					
COMPOSITION	100%			TECHNIQUE					
FLOW RATE (LPM)	10-20			STRING OR WEAVE BEAD					
GAS CUP SIZE	NA			MULTIPASS					
ELECTRICAL CHARACTERISTICS		NUMBER OF ELECTRODE							
TRANSFER MODE(GMAW)	NA			SIGNLE					
SHORT CIRCUITING	NA			15-25 mm					
CURRENT	DC			NA					
POLARITY	DCEP			GRIND / WIRE BRUSHING					
OTHER	NA			SAME AS WITH ROOT PASS					
PASS OR WELD LAYER	WELDING PROCESS	FILLER METALS		CURRENT					
		CLASS	DIA. mm	TYPE OF POLARITY					
ROOT PASS / BACK CHIP	FCAW	E71T-1C	1.20	DCEP	130-200	20-30	50	100-180	2.5
HOT PASS	FCAW	E71T-1C	1.20	DCEP	130-200	20-30	50	100-180	2.5
FILL UP	FCAW	E71T-1C	1.20	DCEP	130-220	20-30	50	120-180	2.5
CAPPING	FCAW	E71T-1C	1.20	DCEP	130-220	20-30	50	120-180	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				APPROVED BY					
NAME	SHIVANG DIWAKAR			HARDIK PRAJAPATI					
SIGNATURE									
DATE	23.12.2024			23.12.2024					