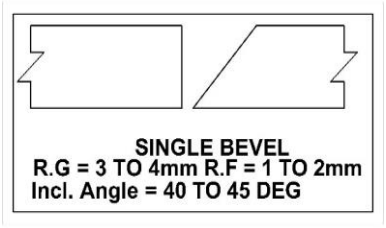
VISHAL ENTERPRISE & VRISHAL ENGINEERING PVT.LTD. GROUP OF COMPANIES

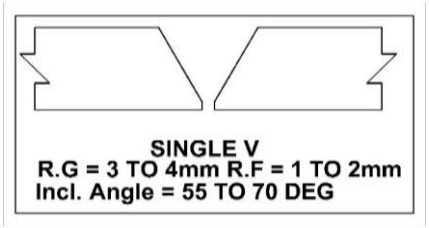
WELDING PROCEDURE SPECIFICATION

(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	
AWS SPECIFICATIONS	SMAW:SFA 5.1
AWS CLASSFICATION	E 7018

POSITION	
PQR TEST PLATE POSITION	2G,3G & 4G
QUALIFIED POSITION FOR GROOVE	ALL
VERTICAL PROGRESSION	UPHILL

POST WELD HEAT TREATMENT
NA

PREHEAT/INTERPASS TEMPERATURE (As per table 5.8 of AWS D1.1)			**PREHEAT METHOD**
THICKNESS	≤ 38	>38 to 65	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	
INTERPASS TEMPERATURE, Max.	**250°C**		

SHIELDING GAS	
TYPE OF GAS	NA
COMPOSITION	NA
FLOW RATE (LPM)	NA
GAS CUP SIZE	NA

TECHNIQUE	
STRING OR WEAVE BEAD	STRING / WEAVING
MULTIPASS OR SINGLE PASS	MULTIPASS
NUMBER OF ELECTRODE	SIGNLE
CONTACT TUBE TO WORK DISTANCE	NA
PEENING	NA
INTERPASS CLEANING	GRIND / WIRE BRUSHING
TACK WELD TECHNIQUE	NA
TACK LENGTH	REFER NOTE 1

ELECTRICAL CHARACTERISTICS	
TRANSFER MODE(GMAW)	NA
SHORT CIRCUITING	NA
CURRENT	DC
POLARITY	DCEP
OTHER	NA

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	APPROVED BY
NAME	SHIVANG DIWAKAR	HARDIK PRAJAPATI
SIGNATURE		
DATE	23.12.2024	23.12.2024