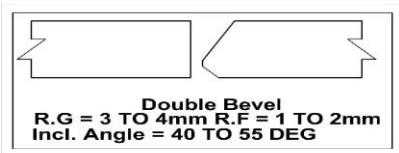
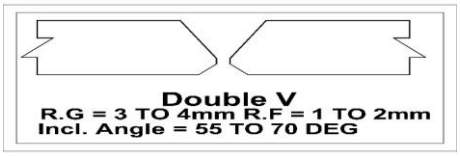
VISHAL ENTERPRISE & VRISHAL ENGINEERING PVT.LTD. GROUP OF COMPANIES

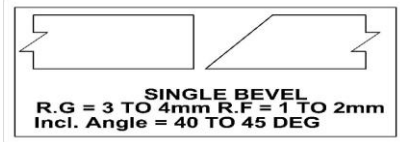
WELDING PROCEDURE SPECIFICATION
(As per AWS D1.1)

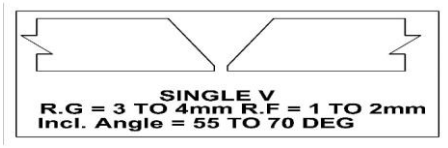
WELDING PROCEDURE SPEC. NO. : VEPL/WPS/01	**REV NO. 01**	**DATE : 28.07.2022**
SUPPORTING PQR NO.: VEPL/PQR/01	**REV NO. 00**	**DATE : 12.02.2019**
WELDING PROCESS: SMAW		**TYPE: MANUAL**

JOINT DESIGN	
GROOVE DESIGN	AS PER FIGURE
BACKING	NO ROOT / YES FOR REST
BACKING MATERIAL	BASE / WELD METAL
ROOT SPACING	3 - 4 mm
ROOT FACE	1-2 mm
GROOVE ANGLE	AS PER FIGURE









BASE METALS	
MATERIAL SPEC.	A516 Gr70/60, A573 Gr.70, A283 Gr.C, A106 Gr.B, A105, A53Gr B, IS2062 E350 / 250 or Equivalent
TEST PLATE THICKNESS	20 mm
QUALIFIED THICKNESS	3 mm to 40 mm
FILLET	Any

FILLER METALS	
AWS SPECIFICATIONS	SFA 5.1
AWS CLASSFICATION	E 7018

POSITION	
QUALIFIED POSITION FOR GROOVE	ALL
VERTICAL PROGRESSION	UP-HILL

POST WELD HEAT TREATMENT	
NA	
SHIELDING	
FLUX DETAILS	NA
ELECTRODE FULX (CLASS)	NA
FLUX TYPE	NA
GAS	NA

PREHEAT/INTERPASS TEMPERATURE (AS PER TABLE 3.2 OF AWS D1.1)		
THICKNESS	≤ 38	>38 to 50
PREHEAT TEMPERATURE	21°C	65°C
INTERPASS TEMPERATURE	**250°C**	

PREHEAT METHOD
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

TECHNIQUE	
STRING OR WEAVE BEAD	STRING / WEAVE
MULTIPASS OR SINGLE PASS	MULTIPASS
NUMBER OF ELECTRODE	SIGNLE
CONTACT TUBE TO WORK DISTANCE	NA
PEENING	NO
INTERPASS CLEANING	GRIND / WIRE BRUSH
TACK WELD TECHNIQUE	SAME AS WITH ROOT PASS
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 (Min. - Max.)
		CLASS	DIA. mm	TYPE OF POLARITY	AMPS				
ROOT PASS	SMAW	E7018	2.50	DCEP	70-100	22-28	50	30 Min	2.5 Max
HOT PASS	SMAW	E7018	2.5 / 3.15	DCEP	100-140	22-28	50	40 Min	2.5 Max
REST	SMAW	E7018	3.15 / 4.00	DCEP	140-180	22-28	50	50 Min	2.5 Max

NOTE :
1) 100 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	**ASHISH NAGANI**	**HARDIK PRAJAPATI**
SIGNATURE		
DATE	**28.07.2022**	**28.07.2022**

VISHAL ENTERPRISE QA/QC