
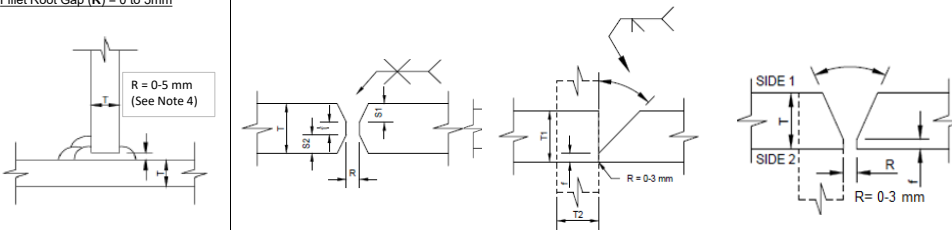

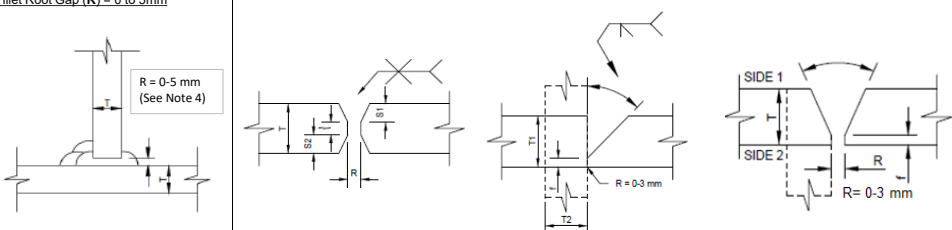


POLAR POCKET WPDS										Pocket-POLAR-01		0	April 17, 2025	
										WPDS No.		Rev.	Date	
<div><div></div><div>Seaspan Vancouver Shipyards Co. Ltd.</div></div>										Applicable Standard(s)		Lloyds Register - Rules for the Manufacture, Testing and Certification of Materials 2022		
Process/Mode		Electrode (Wire) Classification					Brand Name(s)		Manufacturer(s)					
1 FCAW/Semi-Auto(Hand)		AWS A5.20 E71T-1C/9C-J-H4   LR Grade: 4Y40S					Dual Shield Prime 71 LT H4/C1		ESAB					
Material Designation	Base material 1			Base material 2			Min. Preheat / Interpass Temp.	As per VSY Preheat and Interpass Temperature Requirements for Welding						
	EH 36 and all lower grades excluding A,B, D and E (Note 5)			EH 36 and all lower grades excluding A,B, D and E (Note 5)										
Delivery Condition(s)		All except QT			All except QT									
Thickness or Dia		3 to 100 mm			3 to 100 mm			Max. Interpass Temp.		180°C				
Nominal Pipe Size		500mm and above			500mm and above			PWHT		N/A				
Welding Position		* All positions excluding Vertical down					Joint Design		Fillet, Butt single/double Bevel/Vee TKYX, CJP&PJP					
Fillet Leg Size = 4.2 to 140mm Fillet Root Gap (R) = 0 to 5mm										Groove angle = 40-70°				
														
TYPICAL JOINT PREPARATION														
COMPLETE JOINT PENETRATION		Welding Layer		JOINT TYPE		Back Purge		N/A		Contact Tip to Work Distance		9.5-20 mm		
<input checked="" type="checkbox"/> Back-gouged to sound metal		multi-layer		<input checked="" type="checkbox"/> BUTT		Backing type		N/A						
<input type="checkbox"/> Welded onto backing		One/Two side		<input checked="" type="checkbox"/> CORNER		Welding Technique		Stringer/Slight Weave		Interpass Cleaning		Grinding and Wire Wheel		
<input type="checkbox"/> Welded from one side without backing		Gun travel angle		<input checked="" type="checkbox"/> LAP		Max. Bead Width		18mm		Shielding Gas		100% CO2		
<input type="checkbox"/> Welded both sides w/o back-gouging		Pull w/ slight push on Vu		<input checked="" type="checkbox"/> TEE		Tungsten Electrode		N/A   Ø:		16-25 LPM		16-25 LPM		
Method of steel preparation		Oxy fuel/Plasma cut   Grinding   Milling		<input checked="" type="checkbox"/> EDGE		No. of electrodes		1		Gas Flow		34-53 CFH		
BM Thickness, T(mm)	Layers / Passes	Position	Electrode Size (mm)	Welding Process	Power Mode	Consumable	Amperage (A)	Voltage (V)	WFS (IPM)	Travel Speed (mm/min)	Heat Input <sup>1</sup> kJ/mm			
3 ≤ T ≤ 100	Root	All Ex. Vd.	1.2,1.4	FCAW Hand	CV DC+	AWS A5.20: E71T-1C/9C	130 - 250	19 - 25	170 - 300	55 - 140	See Note 6			
3 ≤ T ≤ 100	Hot/Fill/Cap	All Ex. Vd.	0.9-1.6	FCAW Hand	CV DC+	AWS A5.20: E71T-1C/9C	110-430	16 - 38	170 - 500	100 - 650	See Note 6			
Note 1: Heat Input (kJ/mm) = [V x A x 60] / [Travel Speed (mm/min) x 1000]														
Note 2: Grind joint and adjacent surfaces to bright metal prior to welding to remove all traces of paint, primer, scale, rust, moisture and any other contaminants. Wire brush, grinding to be used for interpass cleaning.														
Note 3: Travel angle = 5-10° Pull, For vertical up position/progression slight push should be used.														
Note 4: Where the root gap R exceeds 3 mm but does not exceed 5 mm, the fillet leg length should be increased by R-2 mm.														
Note 5: Welding of the normal strength hull structure steel to normal strength hull structure steel (Grade A,B,D and E) using Dual Shield Prime 71LT is subject to special agreement with Lloyds Register.														
Note 6:		Base Metal THK (mm)		3 ≤ T < 24		24 < T ≤ 100								
		Root Heat Input (kJ/mm)		1.5 - 3.2		1.5 - 3.8								
		Hot/Fill/Cap (kJ/mm)		0.5 - 2.0		0.6 - 2.7								
										Engineer Stamp				
Reference WPS No.										FC-CS-G-01 (Rev. 2)				

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