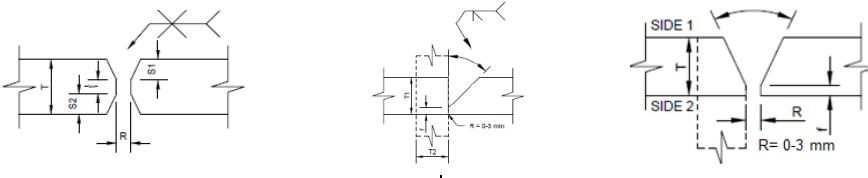


POLAR POCKET WPDS						Pocket-POLAR-05		0	April 17, 2025											
						WPDS No.		Rev.	Date											
 Seaspan Vancouver Shipyards Co. Ltd.								Applicable Standard(s)	Lloyds Register - Rules for the Manufacture, Testing and Certification of Materials 2022											
Process/Mode		Electrode (Wire) Classification				Brand Name(s)		Manufacturer(s)												
1	FCAW/Semi-Auto FCAW/Auto(Moggy)	AWS A5.20 E71T-1C/9C-J		LR Grade: 4Y40S		Dual Shield Prime 71 LT H4		ESAB												
Material Designation	Base material 1		Base material 2		Min. Preheat / Interpass Temp.	50°C for root and hot pass, fill/cap to be as per VSY preheating procedure														
	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																	
Nominal Pipe Size	500mm and above		500mm and above		PWHT	N/A														
Thickness or Dia	3mm to 100 mm		3 mm to 100 mm		Max. Interpass Temp.	180°C														
Nominal Pipe Size	500mm and above		500mm and above		PWHT	N/A														
Welding Position	All ex. Vd				Joint Design	Butt single Bevel/Vee														
<p>Groove angle = 40-70° Root Gap= 0-3mm Root face= 0-3mm</p> 																				
TYPICAL JOINT PREPARATION					TYPICAL JOINT PREPARATION															
COMPLETE JOINT PENETRATION		Welding Layer		JOINT TYPE	Back Purge	N/A		Contact Tip to Work Distance	9.5-20 mm											
<input type="checkbox"/> Back-gouged to sound metal		multi-layer			BUTT	Backing type		N/A												
		Welded onto backing			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 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 type="checkbox"/>	TEE	Tungsten Electrode		N/A Ø	Gas Flow		16-25 LPM									
Method of steel preparation		Oxy fuel/Plasma cut Grinding Milling		<input type="checkbox"/>	EDGE	No. of electrodes		1			34-53 CFH									
BM Thickness, T(mm)	Layers / Passes	Position	Electrode Size (mm)	Welding Process	Power Mode	Consumable	Amperage	Voltage	WFS (IPM)	Travel Speed (mm/min)	Heat Input ¹ 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	All	All Ex. Vd.	0.9-1.6	FCAW Moggy	CV DC+	AWS A5.20: E71T-1C/9C	110 - 420	16-38	190-500	110 - 750										
<p>Note 1: Heat Input (kJ/mm) = [V x A x 60] / [Travel Speed (mm/min) x 1000]</p> <p>Note 2: Amps and volts are to be set by the amp/volt meter</p> <p>Note 3: 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.</p> <p>Note 4: Travel angle = 5-10° Pull, For vertical up position/progression slight push should be used.</p> <p>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.</p> <p>Note 6:</p> <table border="1"> <tr> <td>Base Metal THK (mm)</td> <td>3 ≤ T < 24</td> <td>24 < T ≤ 100</td> </tr> <tr> <td>Root Heat Input (kJ/mm) Hand</td> <td>1.5 - 3.2</td> <td>1.5 - 3.8</td> </tr> <tr> <td>Hot/Fill/Cap (kJ/mm) Moggy</td> <td>0.5 - 2.1</td> <td>0.5 - 2.7</td> </tr> </table>												Base Metal THK (mm)	3 ≤ T < 24	24 < T ≤ 100	Root Heat Input (kJ/mm) Hand	1.5 - 3.2	1.5 - 3.8	Hot/Fill/Cap (kJ/mm) Moggy	0.5 - 2.1	0.5 - 2.7
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										Engineer Stamp										
Bug-O Weave Setting	Dwell(L&R): 0-1.0				Weave width: 0-18															
	Weave No.: #1 for G2 position #1 and #3 for other positions				Weave speed: 0-50															
Reference WPS No.	FC-CS-G-01 (Rev. 2)																			