POLAR POCKET WPDS

Pocket-POLAR-03	0	April 17, 2025
WPDS No.	Rev.	Date

Seaspan Vancouver Shipyards Co. Ltd.

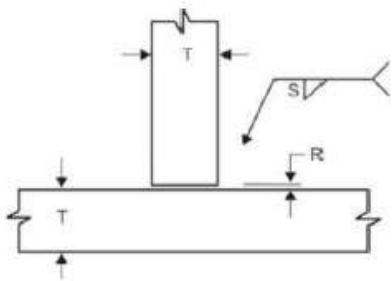
Applicable Standard(s): Lloyds Register - Rules for the Manufacture, Testing and Certification of Materials 2022

	Process/Mode	Electrode (Wire) Classification	Brand Name(s)	Manufacturer(s)
1	FCAW/Auto(Moggy)	**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 exlcuding A,B,D, and E (Note 6)	EH 36 and all lower grades exlcuding A,B,D, and E (Note 6)		
Delivery Condition(s)	All except QT	All except QT		
Thickness or Dia	**3 mm - 24 mm**	**3 mm - 24 mm**	Max. Interpass Temp.	**150°C**
Nominal Pipe Size	**500mm and above**	**500mm and above**	PWHT	**N/A**
Welding Position	**All positions excluding vertical down**		Joint Design	**Fillet**

Fillet Leg Size = 4 to 8mm (see Note 6)

Fillet Root Gap (R) = 0 to 5 mm



TYPICAL JOINT PREPARATION

COMPLETE JOINT PENETRATION	JOINT TYPE			
☐ Back-gouged to sound metal	☐ BUTT	Back Purge	N/A	Contact Tip to Work Distance: 9.5-20 mm
☐ Welded onto steel backing	☐ CORNER	Backing type	N/A	
☐ Welded form one side without backing	☒ **LAP**	Welding Technique	Stringer/Slight Weave	Shielding Gas: 100% CO_2
☐ Welded both sides w/o back-gouging	☒ **TEE**	Max. Bead Width	18mm	
☐ Welded onto other than steel backing	☐ EDGE	Tungsten Electrode	N/A	Gas Flow: 16-25 LPM
		Cleaning	Grinding and Wire Wheel	30-50 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 ≤ 24	All	All ex. Vd	1.2 - 1.6	FCAW **Moggy**	CV DC+	AWS A5.20: E71T-1C/9C	200 - 310	20- 30	255 - 438	161 - 380	**0.8 - 1.9**

Note 1: Heat Input (kJ/mm) = [V x A x 60] / [Travel Speed (mm/min) x 1000]

Note 2: Welding joints and adjacent surface to be free from all contaminants, welding over shop primer is permitted in accordance with Note 5.

Note 3: Travel Angle = 5-10° Pull, For vertical up position/progression slight push should be used.

Note 4: Shop Primer: Interplate 937 (Manufacturer: International) maximum dry film thickness: 20 µm as per manufacturer recommendation.

Note5: 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.

Note6: 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.

			Engineer Stamp
Bug-O Weave Setting	Dwell(L&R): 0 - 1.0	Weave width: 0 - 18	Vancouver Shipyards Co. Ltd. #1002295 PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA Dr. P. BABAGHORBANI # 43695 2025-04-17
	Weave Pattern No.: #1 for 2G / #1 & #3 for other	Weave speed: 0 - 50	
Reference WPS No.	FC-CS-F-04 (Rev.0)		