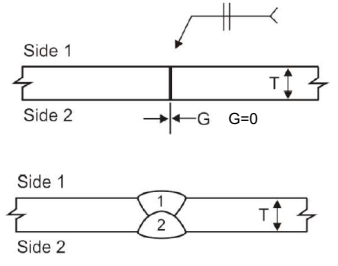
POLAR POCKET WPDS	Pocket-POLAR-07	0	April 17, 2025
	WPDS No.	Rev.	Date

seaspan SHIPYARDS	Seaspan Vancouver Shipyards Co. Ltd.	Applicable Standard(s)	Lloyds Register - Rules for the Manufacture, Testing and Certification of Materials 2022

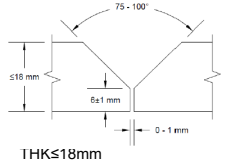
	Process/Mode	Wire/Flux Classification	Brand Name	Manufacturer
1	SAW	**AWS A5.23 : F7A4-EA1-A2**	**Lincolnweld L-70 / 888**	**Lincoln Electric**

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 toughness grades	EH 36 and all lower toughness grades		
Delivery Condition(s)	All except QT	All except QT		
Thickness or Dia	**6mm - 100 mm**	**6mm - 100 mm**	Max. Interpass Temp.	**180°C**
Nominal Pipe Size	**150mm and above**	**150mm and above**	PWHT	**N/A**
Welding Position	**1G**		Joint Design	**Butt Square, Single/Double Bevel/Vee**

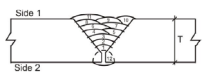
EP-217



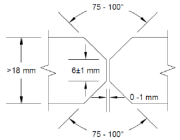
EP-206



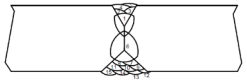
THK≤18mm



EP-207



18mm<THK



TYPICAL JOINT PREPARATION FOR THK≤13mm

TYPICAL JOINT PREPARATION FOR THK>13mm

COMPLETE JOINT PENETRATION	JOINT TYPE				
■ Back-gouged to sound metal	■ BUTT	Back Purge	N/A	Contact Tip to Work Distance	20-55 mm
☐ Welded onto steel backing	☐ CORNER	Backing type	N/A		
☐ Welded form one side without backing	☐ LAP	Welding Technique	Stringer	Shielding Gas	N/A
■ Welded both sides w or w/o back-gouging	☐ TEE	Max. Bead Width	N/A		
☐ Welded onto other than steel backing	☐ EDGE	Tungsten Electrode	N/A	Gas Flow	N/A ☐ Cfph ☐ Lpm
		Cleaning	Grinding and Wire Wheel		

Edge Prep	BM Thickness (mm)	Layers / Passes	Position	Electrode Size (mm)	Welding Process	Power Mode	Consumable	Amperage	Voltage	WFS (IPM)	Travel Speed (IPM)	Heat Input kJ/mm
217	6≤T≤14.3	Side 1	1G	3.2 & 4.0	SAW	CC/DC+	F7A4-EA1-A2	398 - 688	24 - 43	45-79	18-30	Note 4
217	6≤T≤14.3	Side 2	1G	3.2 & 4.0	SAW	CC/DC+	F7A4-EA1-A2	417 - 850	24 - 43	47-91	18-30	
206 207	10<T≤100	Side 1 **Root**	1G	3.2 & 4.0	SAW	CC/DC+	F7A4-EA1-A2	360-838	22-41	13-55	17-34	Note 5
206 207	10<T≤100	Side 2 **Root**	1G	3.2 & 4.0	SAW	CC/DC+	F7A4-EA1-A2	397-900	25-41	13-55	16-29	
206 207	10<T≤100	Side 1&2 **Fill/Cap**	1G	3.2 & 4.0	SAW	CC/DC+	F7A4-EA1-A2	338-825	23-40	13-55	15-36	

Note 1: Joint must be free from any source of contamination

Note 2: Heat Input (kJ/mm) = [V x A x 60] / [Travel Speed (mm/min) x 1000]

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.

Note 4	**Base Metal THK (mm)**	**6 ≤ T < 9.7**	**9.7 ≤ T ≤ 9.9**	**10 < T ≤ 14.3**
	Root Heat Input (kJ/mm)	Side1: 1.3 - 2.1 | Side2: 1.3 - 2.2	Side1: 1.3 - 2.2 | Side2: 1.3 - 2.9	Side1: 1.3 - 2.2 | Side2: 1.7- 2.9
Note 5	**Base Metal THK (mm)**	**10 ≤ T < 25**	**25 ≤ T ≤ 40**	**40 < T ≤ 100**
	Root Heat Input (kJ/mm)	Side1: 0.9 - 1.5 | Side2: 1.4 - 2.2	Side1: 0.9 - 3.4 | Side2: 1.4 - 3.5	Side1: 2.0 - 3.4 | Side2: 2.0- 3.5
	Fill/Cap Heat Input (kJ/mm)	1.0 - 2.1	1.0 - 3.6	1.3 - 3.6

Reference WPS No.	SA-CS-G-01 (Rev. 1) SA-CS-G-02 (Rev. 1)	Engineer Stamp

Vancouver Shipyards Co. Ltd. #1002295
PROFESSIONAL ENGINEER — PROVINCE OF BRITISH COLUMBIA
Dr. P. BABAGHORBANI # 43695
2025-04-17

POLAR POCKET WPDS | Pocket-POLAR-07 | 0 | April 17, 2025
WPDS No. | Rev. | Date
seaspan SHIPYARDS — Seaspan Vancouver Shipyards Co. Ltd. — Applicable Standard(s): Lloyds Register - Rules for the Manufacture, Testing and Certification of Materials 2022
Process/Mode | Wire/Flux Classification | Brand Name | Manufacturer
1 | SAW | AWS A5.23 : F7A4-EA1-A2 | Lincolnweld L-70 / 888 | Lincoln Electric
Material Designation | Base material 1: EH 36 and all lower toughness grades | Base material 2: EH 36 and all lower toughness grades | Min. Preheat / Interpass Temp.: As per VSY Preheat and Interpass Temperature Requirements for Welding
Delivery Condition(s): All except QT | All except QT
Thickness or Dia: 6mm - 100 mm | 6mm - 100 mm | Max. Interpass Temp.: 180°C
Nominal Pipe Size: 150mm and above | 150mm and above | PWHT: N/A
Welding Position: 1G | Joint Design: Butt Square, Single/Double Bevel/Vee
EP-217 / EP-206 / EP-207
TYPICAL JOINT PREPARATION FOR THK≤13mm | TYPICAL JOINT PREPARATION FOR THK>13mm
COMPLETE JOINT PENETRATION: ■ Back-gouged to sound metal; ☐ Welded onto steel backing; ☐ Welded form one side without backing; ■ Welded both sides w or w/o back-gouging; ☐ Welded onto other than steel backing
JOINT TYPE: ■ BUTT; ☐ CORNER; ☐ LAP; ☐ TEE; ☐ EDGE
Back Purge: N/A | Backing type: N/A | Welding Technique: Stringer | Max. Bead Width: N/A | Tungsten Electrode: N/A | Cleaning: Grinding and Wire Wheel
Contact Tip to Work Distance: 20-55 mm | Shielding Gas: N/A | Gas Flow: N/A ☐ Cfph ☐ Lpm
Edge Prep | BM Thickness (mm) | Layers / Passes | Position | Electrode Size (mm) | Welding Process | Power Mode | Consumable | Amperage | Voltage | WFS (IPM) | Travel Speed (IPM) | Heat Input kJ/mm
217 | 6≤T≤14.3 | Side 1 | 1G | 3.2 & 4.0 | SAW | CC/DC+ | F7A4-EA1-A2 | 398 - 688 | 24 - 43 | 45-79 | 18-30 | Note 4
217 | 6≤T≤14.3 | Side 2 | 1G | 3.2 & 4.0 | SAW | CC/DC+ | F7A4-EA1-A2 | 417 - 850 | 24 - 43 | 47-91 | 18-30 |
206 207 | 10<T≤100 | Side 1 **Root** | 1G | 3.2 & 4.0 | SAW | CC/DC+ | F7A4-EA1-A2 | 360-838 | 29-38 | 13-55 | 17-34 | Note 5
206 207 | 10<T≤100 | Side 2 **Root** | 1G | 3.2 & 4.0 | SAW | CC/DC+ | F7A4-EA1-A2 | 397-900 | 29-39 | 13-55 | 16-29 |
206 207 | 10<T≤100 | Side 1&2 **Fill/Cap** | 1G | 3.2 & 4.0 | SAW | CC/DC+ | F7A4-EA1-A2 | 338-825 | 26-35 | 13-55 | 15-36 |
Note 1: Joint must be free from any source of contamination
Note 2: Heat Input (kJ/mm) = [V x A x 60] / [Travel Speed (mm/min) x 1000]
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Note 4: Base Metal THK (mm): 6 ≤ T < 9.7 | 9.7 ≤ T ≤ 9.9 | 10 < T ≤ 14.3
Root Heat Input (kJ/mm): Side1: 1.3 - 2.1 \| Side2: 1.3 - 2.2 | Side1: 1.3 - 2.2 \| Side2: 1.3 - 2.9 | Side1: 1.3 - 2.2 \| Side2: 1.7- 2.9
Note 5: Base Metal THK (mm): 10 ≤ T < 25 | 25 ≤ T ≤ 40 | 40 < T ≤ 100
Root Heat Input (kJ/mm): Side1: 0.9 - 1.5 \| Side2: 1.4 - 2.2 | Side1: 0.9 - 3.4 \| Side2: 1.4 - 3.5 | Side1: 2.0 - 3.4 \| Side2: 2.0- 3.5
Fill/Cap Heat Input (kJ/mm): 1.0 - 2.1 | 1.0 - 3.6 | 1.3 - 3.6
Reference WPS No.: SA-CS-G-01 (Rev. 1), SA-CS-G-02 (Rev. 1)
Engineer Stamp