



KOBE STEEL, LTD.  
 TECHNICAL CENTER, WELDING BUSINESS  
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**Certificate of Conformance for AWS D1.8**

1. Trade designation: **FAMILIARC™**MX-A70C6SA
2. Size: 0.045 in. (1.2 mm)
3. Shielding gas: 90%Ar-10%CO<sub>2</sub>
4. Current/Polarity: DCEP
5. Classification: E70C-6M
6. Specification: AWS A5.18
7. Manufacturer: Ibaraki Plant Welding Business KOBE STEEL, LTD.
8. Test condition:

Heat input conditions	Low heat input	High heat input
Desired heat input level kJ/in. [kJ/mm]	29 [1.2]	67 [2.7]
Welding position	Flat(1G)	Flat(1G)
Welding Current Amp.	270	290
Arc Voltage V	27	29
Preheat temp. °F [°C]	≤120 [≤49]	250≤ [121≤]
Inter-pass temperature °F [°C]	≤250 [≤121]	450≤ [232≤]

9. Test result:

Wire diameter in. [mm]	Lot - #	Average of Heat input kJ/in. [kJ/mm]	Layers - Passes	Tensile properties			Impact properties				
				0.2% O.S. ksi [MPa]	T.S. ksi [MPa]	EI %	vE+70°F (20°C) ft·lbs [J]				
							1	2	3	Avg.	
0.045" [1.2]	AV4499 15224	29 [1.2]	6-16	79 [547]	93 [638]	23	123 [167]	137 [186]	131 [177]	130 [177]	
		67 [2.7]	5-8	60 [411]	79 [548]	31	138 [187]	128 [174]	128 [173]	131 [178]	
	AV4490 15224	29 [1.2]	6-16	82 [567]	96 [660]	22	99 [134]	105 [143]	94 [128]	100 [135]	
		67 [2.7]	5-8	58 [402]	79 [542]	31	128 [173]	140 [190]	138 [187]	135 [183]	
	AV4491 15224	29 [1.2]	6-16	80 [551]	93 [643]	25	111 [151]	113 [153]	116 [157]	113 [154]	
		67 [2.7]	5-8	61 [424]	80 [555]	26	118 [160]	119 [162]	122 [166]	120 [163]	
	AWS D1.8	Low heat input	24-36 [0.9-1.4]	-	58min. [400min.]	70min. [483min.]	22min.	40min. [54min.]			
		High heat input	63-95 [2.5-3.7]	-							

10. Diffusible hydrogen: Tested in accordance with AWS A4.3 & extended exposure: in accordance with AWS D1.8

Condition	Lot - #	Average(mL/100g)
As Received	AV449915224	4.5
72 hours Exposure	AV449115224	5.0

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(Concluded)

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