

Certificate of Conformance for AWS D1.8

1. Trade designation: DW-50
2. Size: 0.045 in. (1.2 mm)
3. Shielding gas: 75%Ar-25%CO₂
4. Current/Polarity: DCEP
5. Specification: AWS A5.20
6. Classification: E71T-1C/M-H8, E71T-9C/M-H8
7. Factory: Ibaraki plant, Japan
8. Test condition:

Heat input conditions	Low heat input	High heat input
Desired heat input level kJ/in. [kJ/cm]	30 [12]	79 [31]
Welding position	Flat(1G)	Vertical up (3G)
Welding Current Amp.	250	220
Arc Voltage V	26	26
Preheat temp. °F [°C]	≤ 120 [≤ 49]	250 ≤ [121 ≤]
Inter-pass temp. °F [°C]	≤ 250 [≤ 121]	450 ≤ [232 ≤]

9. Test result:

Wire diameter in. [mm]	Lot.No.	Average of Heat input kJ/in. [kJ/cm]	Layers -Passes	Tensile properties			Impact properties				
				0.2% O.S.	T.S.	EI	vE+70°F (21°C) ft-lbf [J]				
				ksi [MPa]	ksi [MPa]	(%)	1	2	3	Avg.	
0.045 [1.2]	AE91415 [Original]	28 [11]	7-16	88 [608]	96 [665]	27	66 [90]	71 [96]	86 [116]	74 [101]	
		69 [27]	5-6	70 [483]	86 [594]	29	102 [138]	104 [141]	103 [140]	103 [140]	
	AE88055 [Original]	33 [13]	6-14	90 [620]	98 [676]	26	110 [136]	92 [125]	100 [136]	97 [132]	
		71 [28]	5-6	72 [494]	86 [591]	27	107 [145]	110 [149]	105 [143]	108 [146]	
	AE8Y255 [Original]	33 [13]	6-14	89 [611]	98 [676]	27	105 [143]	97 [132]	104 [141]	103 [139]	
		79 [31]	5-6	71 [489]	85 [588]	28	116 [157]	118 [160]	103 [139]	112 [152]	
	AF232113157 [Most recent]	28 [11]	7-16	89 [612]	97 [666]	24	132 [179]	123 [167]	129 [175]	128 [174]	
		84 [33]	5-6	64 [442]	79 [548]	31	117 [159]	117 [159]	116 [157]	117 [158]	
	AWS D1.8 Spec.	Low heat input	24-36 [9-14]	-	58min. [400 min.]	70min. [483 min.]	22 min.	40min. [54min.]			
		High heat input	63-95 [25-37]	-							

10. Diffusible Hydrogen Test

Condition	Lot. No.	Average(ml/100g)
As Received	AF03195	4
Exposure test (≥ 72hr)	AF03195	6
Note 1: Testing method: AWS A5.20		
Note 2: Exposure conditions: AWS D1.8 Annex E		



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