



WA. ALLOY CO.

US Alloy Co. dba
Washington Alloy Co.
825 Groves St.
Lowell, NC 28098

Material Test Report

(Certificate of Conformance to AWS D1.8 / D1.8M)

Certificate No. : 20191122-03

Issued Date : 11/22/2019

Brand Name : Washington Alloy BW 799

Customer Name :

This material conforms to specification :

Invoice No. : -

AWS Specification A5.20/5.20M, D1.8/D1.8M

Size : 0.045"

Classification : E71T-1C/9C, -9C/9M H8

Lot Number : 81327603

Test Conditions	AWS D1.8 Requirements	High Heat Input	Low Heat Input
		Results	Results
Electrode Size, in(mm)		0.045""(1.2mm)	0.045""(1.2mm)
Electrode Polarity		DC +	DC +
Travel Speed (cm/min)		15.7	35.4
Current(A)		300	280
Voltage(V)		28	25
Passes / Layers		9/6	17/6
Preheat Temp.(°C)		250 (120)	120 (40)
Interpass Temp.(°C)		450 (240)	250 (120)
Shielding Gas		99.9% CO ₂	99.9% CO ₂
Heat Input KJ/in (KJ/mm) Avg.		84 (3.3)	30 (1.2)
Welding Position		1G	1G

Mechanical Properties

Tensile Strength(MPa)	min.480	597	588
Yield Strength, 0.2% offset(MPa)	min.400	509	505
Elongation(%)	min.22	30	31
Charpy V-notch Impact Properties Joules@20°C	min.54J	Avg.128 125/131/129	Avg.149 144/149/156

- 1) This product satisfied the requirements of AWS D1.8/D1.8M, Annex E after exposure for 144hrs at 80°F, 80% relative humidity.
- 2) The Charpy V-notch impact values reported at 20 °C are required when the Lowest Anticipated Service Temperature(LAST) is 10°C.
- 3) Test assembly constructed of ASTM A516-70 steel.
- 4) The strength and elongation properties reported here were obtained from tensile specimens artificially aged at 105°C for 48hours.

The undersigned certifies that the products supplied will meet the applicable AWS filler metal specification when tested in accordance with those specifications.

By :

Dave Colwell



Material Test Report

(Certificate of Conformance to AWS D1.8 / D1.8M)

US Alloy Co. dba
 Washington Alloy Co.
 825 Groves St.
 Lowell, NC 28098

Certificate No. : 20191122-04
 Issued Date : 11/22/2019

Brand Name : Washington Alloy BW 799

Customer Name :

This material conforms to specification :

Invoice No. : -

AWS Specification A5.20/5.20M, D1.8/D1.8M

Size : 0.045"

Classification : E71T-1C/9C, -9C/9M H8

Lot Number : 81327603


Test Conditions	AWS D1.8 Requirements	High Heat Input	Low Heat Input
		Results	Results
Electrode Size, in(mm)		0.045""(1.2mm)	0.045""(1.2mm)
Electrode Polarity		DC +	DC +
Travel Speed (cm/min)		15.7	35.4
Current(A)		300	280
Voltage(V)		27	25
Passes / Layers		9/6	17/6
Preheat Temp.(°C)		250 (120)	120 (40)
Interpass Temp.(°C)		450 (240)	250 (120)
Shielding Gas		75% Ar + 25% CO ₂	75% Ar + 25% CO ₂
Heat Input KJ/in (KJ/mm) Avg.		84 (3.3)	30.1 (1.2)
Welding Position		1G	1G

Mechanical Properties

Tensile Strength(MPa)	min.480	603	599
Yield Strength, 0.2% offset(MPa)	min.400	522	510
Elongation(%)	min.22	29	31
Charpy V-notch Impact Properties Joules@20°C	min.54J	Avg.118 119/111/126	Avg.139 133/139/145

- 1) This product satisfied the requirements of AWS D1.8/D1.8M, Annex E after exposure for 144hrs at 80°F, 80% relative humidity.
- 2) The Charpy V-notch impact values reported at 20 °C are required when the Lowest Anticipated Service Temperature(LAST) is 10°C.
- 3) Test assembly constructed of ASTM A516-70 steel.
- 4) The strength and elongation properties reported here were obtained from tensile specimens artificially aged at 105°C for 48hours.

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