



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

**AWS D1.8:2016**

**Product : PREMIUM 71T**

Classification : AWS A5.36 E71T1-C1/M21A0-CS1-H8  
 AWS A5.36M E49T-1C/M21A2-CS1-H8  
 AWS A5.20 E71T-1C/1M

Specification: AWS D1.8/D1.8M:2016

Diameter: 1.2mm ( 0.045")

Lot : 208A1MD

Issue date. : Nov. 05. 2020

Test date. : May. 21. 2020

This is to certify that the product was manufactured to meet the class T4 requirement of AWS 5.01 as required by clause 6.3.8.1 of AWS D1.8/D1.8M:2016

Test Condition	Requirements	Low Heat Input	High Heat Input
Heat Input : kJ/mm(KJ/in)		1.25 (31)	3.0 (78)
Electrode size : mm(in)		1.2 (.045")	1.2 (.045")
Shielding Gas :		100%CO <sub>2</sub>	100%CO <sub>2</sub>
Current(amps) :		260	200
Voltage(volts) :		31	24
WFS : cm(in) per min		500(196)	340(134)
Polarity :		DCEP	DCEP
Welding position :		1G	3G
Pass / Layer :		13/ 7	7 / 7
Preheat Temp : °C(°F)		R.T.	150(302)
Interpass Temp : °C(°F)		110(230)	250(482)

**Mechanical Properties**

Heat treatment		As Welded	As Welded
Tensile Strength : MPa(ksi)	490(70)	557(81)	531(77)
Yield Strength : MPa(ksi)	400(58)	505(73)	443(64)
Elongation % in 2 inches	22	32	34
Avg. CV Impact Properties		177(130)	172(126)
Joules @ 21°C ( ft-lbf @ 70°F )	54(40)	175 172 183(129 126 135)	135 188 192(99 138 141)

This product satisfies the requirements of AWS D1.8/D1.8M:2016, Annex D after exposure for 3 days at 80°F(26.7°C), 80% humidity. Our quality system is certified in accordance with ISO9001 by Preferred Registrar Group, Inc.

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Classification : AWS A5.36 E71T1-C1/M21A0-CS1-H8  
AWS A5.36M E49T-1C/M21A2-CS1-H8  
AWS A5.20 E71T-1C/1M

Specification: AWS D1.8/D1.8M:2016

Diameter: 1.2mm ( 0.045")

Lot : 208A1MD

Issue date. : Nov. 05. 2020

Test date. : May. 21. 2020

This is to certify that the product was manufactured to meet the class T4 requirement of AWS 5.01 as required by clause 6.3.8.1 of AWS D1.8/D1.8M:2016

Test Condition	Requirements	Low Heat Input	High Heat Input
Heat Input : kJ/mm(KJ/in)		1.2 (30)	3.0 (78)
Electrode size : mm(in)		1.2 (.045")	1.2 (.045")
Shielding Gas :		Ar+25%CO <sub>2</sub>	Ar+25%CO <sub>2</sub>
Current(amps) :		260	200
Voltage(volts) :		31	24
WFS : cm(in) per min		500(196)	340(134)
Polarity :		DCEP	DCEP
Welding position :		1G	3G
Pass / Layer :		13/ 7	7 / 7
Preheat Temp : °C(°F)		R.T.	150(302)
Interpass Temp : °C(°F)		115(239)	250(482)

## Mechanical Properties

Heat treatment		As Welded	As Welded
Tensile Strength : MPa(ksi)	490(70)	620(90)	574(83)
Yield Strength : MPa(ksi)	400(58)	582(84)	500(73)
Elongation % in 2 inches	22	29	32
Avg. CV Impact Properties		200(147)	177(130)
Joules @ 21°C ( ft-lbf @ 70°F )	54(40)	195 202 204(143 149 150)	175 172 183(129 126 135)

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 AWS A5.36M E49T-1C/M21A2-CS1-H8  
 AWS A5.20 E71T-1C/1M

Specification: AWS D1.8/D1.8M:2016

Diameter: 1.4mm ( 0.052")

Lot : 208A2ME

Issue date. : Nov. 05. 2020

Test date. : May. 26. 2020

This is to certify that the product was manufactured to meet the class T4 requirement of AWS 5.01 as required by clause 6.3.8.1 of AWS D1.8/D1.8M:2016

Test Condition	Requirements	Low Heat Input	High Heat Input
Heat Input : kJ/mm(KJ/in)		1.3 (33)	3.1 (80)
Electrode size : mm(in)		1.4 (.052")	1.4 (.052")
Shielding Gas :		100%CO2	100%CO2
Current(amps) :		240	200
Voltage(volts) :		28	26
WFS : cm(in) per min		500(196)	340(134)
Polarity :		DCEP	DCEP
Welding position :		1G	3G
Pass / Layer :		13/ 7	7 / 7
Preheat Temp : °C(°F)		R.T.	150(302)
Interpass Temp : °C(°F)		100(212)	260(500)

**Mechanical Properties**

Heat treatment		As Welded	As Welded
Tensile Strength : MPa(ksi)	490(70)	636(92)	560(81)
Yield Strength : MPa(ksi)	400(58)	594(86)	480(70)
Elongation % in 2 inches	22	26	25
Avg. CV Impact Properties		161(119)	135(100)
Joules @ 21°C ( ft-lbf @ 70°F )	54(40)	150 165 168(110 120 121)	132 133 141(97 98 104)

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AWS A5.36M E49T-1C/M21A2-CS1-H8  
AWS A5.20 E71T-1C/1M

Specification: AWS D1.8/D1.8M:2016

Diameter: 1.4mm ( 0.052")

Lot : 208A2ME

Issue date. : Nov. 05. 2020

Test date. : May. 26. 2020

This is to certify that the product was manufactured to meet the class T4 requirement of AWS 5.01 as required by clause 6.3.8.1 of AWS D1.8/D1.8M:2016

Test Condition	Requirements	Low Heat Input	High Heat Input
Heat Input : kJ/mm(KJ/in)		1.2 (30)	2.8 (71)
Electrode size : mm(in)		1.4 (.052")	1.4 (.052")
Shielding Gas :		Ar+25%CO <sub>2</sub>	Ar+25%CO <sub>2</sub>
Current(amps) :		240	200
Voltage(volts) :		28	26
WFS : cm(in) per min		500(196)	340(134)
Polarity :		DCEP	DCEP
Welding position :		1G	3G
Pass / Layer :		13/ 7	7 / 7
Preheat Temp : °C(°F)		R.T.	150(302)
Interpass Temp : °C(°F)		100(212)	255(491)

**Mechanical Properties**

Heat treatment		As Welded	As Welded
Tensile Strength : MPa(ksi)	490(70)	620(90)	554(80)
Yield Strength : MPa(ksi)	400(58)	571(82)	479(70)
Elongation % in 2 inches	22	28	30
Avg. CV Impact Properties		172(126)	119(88)
Joules @ 21°C ( ft-lbf @ 70°F )	54(40)	169 177 170(124 130 125)	118 116 123(87 85 90)

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AWS A5.20 E71T-1C/1M

Specification: AWS D1.8/D1.8M:2016

Diameter: 1.6mm ( 1/16")

Lot : 208A3MD

Issue date. : Nov. 05. 2020

Test date. : May. 21. 2020

This is to certify that the product was manufactured to meet the class T4 requirement of AWS 5.01 as required by clause 6.3.8.1 of AWS D1.8/D1.8M:2016

Test Condition	Requirements	Low Heat Input	High Heat Input
Heat Input : kJ/mm(KJ/in)		1.1 (28)	3.1 (80)
Electrode size : mm(in)		1.6 (1/16")	1.6 (1/16")
Shielding Gas :		100%CO <sub>2</sub>	100%CO <sub>2</sub>
Current(amps) :		260	200
Voltage(volts) :		28	22
WFS : cm(in) per min		485(190)	330(130)
Polarity :		DCEP	DCEP
Welding position :		1G	3G
Pass / Layer :		13/ 7	7 / 7
Preheat Temp : °C(°F)		R.T.	150(302)
Interpass Temp : °C(°F)		118(244)	250(482)

**Mechanical Properties**

Heat treatment		As Welded	As Welded
Tensile Strength : MPa(ksi)	490(70)	616(89)	543(79)
Yield Strength : MPa(ksi)	400(58)	588(85)	474(69)
Elongation % in 2 inches	22	29	32
Avg. CV Impact Properties		206(151)	117(86)
Joules @ 21°C ( ft-lbf @ 70°F )	54(40)	189 204 225(139 150 165)	106 116 130(78 85 96)

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 AWS A5.20 E71T-1C/1M

Specification: AWS D1.8/D1.8M:2016

Diameter: 1.6mm ( 1/16")

Lot : 208A3MD

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Test Condition	Requirements	Low Heat Input	High Heat Input
Heat Input : kJ/mm(KJ/in)		1.1 (28)	3.1 (80)
Electrode size : mm(in)		1.6 (1/16")	1.6 (1/16")
Shielding Gas :		Ar+25%CO <sub>2</sub>	Ar+25%CO <sub>2</sub>
Current(amps) :		260	200
Voltage(volts) :		28	22
WFS : cm(in) per min		485(190)	330(130)
Polarity :		DCEP	DCEP
Welding position :		1G	3G
Pass / Layer :		13/ 7	7 / 7
Preheat Temp : °C(°F)		R.T.	150(302)
Interpass Temp : °C(°F)		105(221)	250(482)

**Mechanical Properties**

Heat treatment		As Welded	As Welded
Tensile Strength : MPa(ksi)	490(70)	626(91)	591(86)
Yield Strength : MPa(ksi)	400(58)	587(85)	508(74)
Elongation % in 2 inches	22	28	32
Avg. CV Impact Properties		222(163)	207(152)
Joules @ 21°C ( ft-lbf @ 70°F )	54(40)	225 222 219(165 163 161)	214 209 198(157 154 146)

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