


**CHOSUN VINA CO., LTD**

(LONGTHANH INDUSTRIAL ZONE, TAMAN, LONGTHANH, DONGNAI, VIETNAM / TEL: 351-4421 / FAX: 351-4425)

P/O NO:

Brand Name	Classification	Diameter (mm)	Lot No.	Weight
CSF-71T	E71T1-C1(M21)A0-CS1/ E491T1-C1(M21)A2-CS1	1.2(0.045")	F71TA00001193	-

※ Meets all requirements of AWS D1.8/D1.8M:2009/ FEMA 353

CUSTOMER :

DATE : 2020.02.21

Certificate No.: CSV-2002-090

**100%CO2**

Test Conditions	AWS D1.8 Requirement	High Heat Input	Low Heat Input
Electrode Size mm (inch)		1.2(0.045)	1.2(0.045)
Shielding Gas		100% CO2	100% CO2
Electrode Polarity		DC+	DC+
Travel Speed cm/min (inch/min)		11.9(4.7)	25.9(10.2)
Current (amps)		220	210
Arc Voltage (volts)		26	26
Contact Tip to Work Distance mm (inch)		20(0.8)	20(0.8)
Passes / Layers		8 / 4	14/ 8
Preheat Temp. °C(°F)		125(257)	30(86)
Interpass Temp. °C(°F)		234(452)	106(222)
Heat Input kJ/mm (kJ/in) avg.		2.90(0.11)	1.26(0.05)
Weld Position		3G	1G
<b>Mechanical Properties</b>			
Yield Strength, 0.2% offset MPa (ksi)	400 (58) min.	498(72.2)	528(76.6)
Tensile Strength MPa (ksi)	480 (70) min.	600(87.0)	605(87.7)
Elongation (%)	22 min.	29.7	25.5
Avg. Charpy V-notch Impact Properties		135(100)	154(114)
Joles @ 20°C (ft-lbf @ 70°F)	54 (40) min.	136, 133, 137(100, 98, 101)	158, 155, 149(117, 114, 110)

**This product satisfies the requirements of AWS D1.8/D1.8M:2009, Annex D after exposure for 3 days at 27°C(80°F) at 80% humidity**

*Ahn Jun Sig*

Manager of Quality Assurance Department


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P/O NO:

Brand Name	Classification	Diameter (mm)	Lot No.	Weight
CSF-71T	E71T1-C1(M21)A0-CS1/ E491T1-C1(M21)A2-CS1	1.2(0.045")	F71TA00001193	-

※ Meets all requirements of AWS D1.8/D1.8M:2009/ FEMA 353

CUSTOMER :

DATE : 2020.02.21

Certificate No.: CSV-2002-090

*75-85% Ar, CO2*

Test Conditions	AWS D1.8 Requirement	High Heat Input	Low Heat Input
Electrode Size mm (inch)		1.2(0.045)	1.2(0.045)
Shielding Gas		75-85% Ar, CO2	75-85% Ar, CO2
Electrode Polarity		DC+	DC+
Travel Speed cm/min (inch/min)		11.7(4.6)	26.0(10.2)
Current (amps)		220	210
Arc Voltage (volts)		26	26
Contact Tip to Work Distance mm (inch)		20(0.8)	20(0.8)
Passes / Layers		8 / 4	14/ 7
Preheat Temp. °C(°F)		135(275)	28(82)
Interpass Temp. °C(°F)		243(469)	107(224)
Heat Input kJ/mm (kJ/in) avg.		2.95(0.12)	1.26(0.05)
Weld Position		3G	1G
<b>Mechanical Properties</b>			
Yield Strength, 0.2% offset MPa (ksi)	400 (58) min.	591(85.7)	626(90.8)
Tensile Strength MPa (ksi)	480 (70) min.	697(101.1)	699(101.4)
Elongation (%)	22 min.	22.1	24.6
Avg. Charpy V-notch Impact Properties		100(74)	142(104)
Joles @ 20°C (ft-lbf @ 70°F)	54 (40) min.	100, 97, 102(74, 72, 75)	144, 140, 141(106, 103, 104)

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(LONGTHANH INDUSTRIAL ZONE, TAMAN, LONGTHANH, DONGNAI, VIETNAM / TEL: 351-4421 / FAX: 351-4425)

P/O NO:

Brand Name	Classification	Diameter (mm)	Lot No.	Weight (kg)
CSF-71T	E71T1-C1(M21)A0-CS1/ E491T1-C1(M21)A2-CS1	1.6(0.062")	F71TA00001193	-

※ Meets all requirements of AWS D1.8/D1.8M:2009/ FEMA 353

CUSTOMER :

DATE : 2020.02.21

Certificate No.: CSV-2002-091

**100%CO2**

Test Conditions	AWS D1.8 Requirement	High Heat Input	Low Heat Input
Electrode Size mm (inch)		1.6(0.062)	1.6(0.062)
Shielding Gas		100% CO2	100% CO2
Electrode Polarity		DC+	DC+
Travel Speed cm/min (inch/min)		10.9(4.3)	26.7(10.5)
Current (amps)		220	210
Arc Voltage (volts)		26	26
Contact Tip to Work Distance mm (inch)		20(0.8)	20(0.8)
Passes / Layers		8 / 4	14/ 7
Preheat Temp. °C(°F)		135(275)	30(86)
Interpass Temp. °C(°F)		241(465)	100(211)
Heat Input kJ/mm (kJ/in) avg.		3.15(0.12)	1.23(0.05)
Weld Position		3G	1G
<b>Mechanical Properties</b>			
Yield Strength, 0.2% offset MPa (ksi)	400 (58) min.	491(71.2)	549(79.6)
Tensile Strength MPa (ksi)	480 (70) min.	596(86.4)	611(88.6)
Elongation (%)	22 min.	25.9	26.1
Avg. Charpy V-notch Impact Properties		146(107)	172(127)
Joles @ 20°C (ft-lbf @ 70°F)	54 (40) min.	157, 136, 144(116, 100, 106)	176, 166, 175(130, 122, 129)

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(LONGTHANH INDUSTRIAL ZONE, TAMAN, LONGTHANH, DONGNAI, VIETNAM / TEL: 351-4421 / FAX: 351-4425)

P/O NO: 4060027926

Brand Name	Classification	Diameter (mm)	Lot No.	Weight (kg)
CSF-71T	E71T1-C1(M21)A0-CS1/ E491T1-C1(M21)A2-CS1	1.6(0.062")	F71TA00001193	-

※ Meets all requirements of AWS D1.8/D1.8M:2009/ FEMA 353

CUSTOMER :

DATE : 2020.02.21

Certificate No.: CSV-2002-091

*75-85% Ar, CO2*

Test Conditions	AWS D1.8 Requirement	High Heat Input	Low Heat Input
Electrode Size mm (inch)		1.6(0.062)	1.6(0.062)
Shielding Gas		75-85% Ar, CO2	75-85% Ar, CO2
Electrode Polarity		DC+	DC+
Travel Speed cm/min (inch/min)		10.9(4.3)	26.8(10.5)
Current (amps)		220	210
Arc Voltage (volts)		26	26
Contact Tip to Work Distance mm (inch)		20(0.8)	20(0.8)
Passes / Layers		8/ 4	14/ 7
Preheat Temp. °C(°F)		130(266)	31(88)
Interpass Temp. °C(°F)		244(471)	99(209)
Heat Input kJ/mm (kJ/in) avg.		3.15(0.12)	1.23(0.05)
Weld Position		3G	1G
<b>Mechanical Properties</b>			
Yield Strength, 0.2% offset MPa (ksi)	400 (58) min.	562(81.5)	492(71.4)
Tensile Strength MPa (ksi)	480 (70) min.	667(96.7)	591(85.7)
Elongation (%)	22 min.	24.1	24.3
Avg. Charpy V-notch Impact Properties		134(99)	140(103)
Joles @ 20°C (ft-lbf @ 70°F)	54 (40) min.	136, 137, 129(100, 101, 95)	140, 129, 150(103, 95, 111)

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