Product: FabCO Triple 7
Diameter: .045”
Shielding Gas: M21-ArC-25
Current/Polarity: DCEP
Classification: E71T-1 H8, E71T-9 H8
Specification: AWS A5.20/A5.20M:2005
Test Completed: 10/14/2020

Certificate of Conformance
For AWS D1.8/D1.8M, Seismic Supplement

This is to certify that the product named is of the same classification, manufacturing process, and material requirements as the material, which was used for the test which was concluded on the date shown, the results of which are shown below. All test required by the code or specifications were performed at that time and the material tested met all requirements. The product was manufactured and supplied by the Quality System Program of Hobart Brothers, which meets the requirements of ISO 9001:2015, ANSI/AWS A5.01, and other specification and Military requirements, as applicable.

Test Settings	High Heat Input	Low Heat Input	Lot- # C608862501171	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	82.5 kJ/in	27.6 kJ/in	Mechanical Properties		82.5 kJ/in	27.6 kJ/in
Voltage	25	27	Test Reference #		PD8880	PD8879
Current (amps)	220	290				
WFS (ipm)	350	490				
Travel Speed (ipm)	4	17	Tensile Strength (psi)	70,000	78,200	90,500
Stick Out	5/8”	5/8”	Yield Strength (psi)	58,000	67,100	86,000
# of passes	7	19	Elongation (%)	22	28	23
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	130	94
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	C623262104213	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.7 kJ/in	29.3 kJ/in	Mechanical Properties		78.7 kJ/in	29.3 kJ/in
Voltage	25	27	Test Reference #		PD9714	PD9730
Current (amps)	220	290				
WFS (ipm)	375	600				
Travel Speed (ipm)	4.21	16.11	Tensile Strength (psi)	70,000	82,100	99,000
Stick Out	5/8”	3/4”	Yield Strength (psi)	58,000	72,100	84,700
# of passes	7	16	Elongation (%)	22	28	22
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	150	120
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61355	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.8 kJ/in	29.2 kJ/in	Mechanical Properties		78.8 kJ/in	29.2 kJ/in
Voltage	24.5	27	Test Reference #		PE1365	PE1363
Current (amps)	225	290				
WFS (ipm)	375	600				
Travel Speed (ipm)	4.20	16.1	Tensile Strength (psi)	70,000	85,000	99,400
Stick Out	5/8”	3/4”	Yield Strength (psi)	58,000	72,400	97,000
# of passes	7	16	Elongation (%)	22	26	24
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	137	123
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.20/A5.20M, Clause 16 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	C623262104213	HB4242	5.6 (ml/100g)
7 Day Exposure	C623262104213	HB4243	7.0 (ml/100g)

David A. Thomas, Quality Assurance Representative

Product: FabCO Triple 7
Diameter: .045”
Shielding Gas: C1 (100% CO2)
Current/Polarity: DCEP
Classification: E71T-1 H8, E71T-9 H8
Specification: AWS A5.20/A5.20M:2005
Test Completed: 10/09/2020

Certificate of Conformance
For AWS D1.8/D1.8M, Seismic Supplement

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Test Settings	High Heat Input	Low Heat Input	Lot- # C608862501171	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	82.9 kJ/in	28.2 kJ/in	Mechanical Properties		82.9 kJ/in	28.2 kJ/in
Voltage	25	27.5	Test Reference #		PD8878	PD8877
Current (amps)	220	290				
WFS (ipm)	350	490				
Travel Speed (ipm)	3.99	17	Tensile Strength (psi)	70,000	71,500	83,100
Stick Out	5/8”	5/8”	Yield Strength (psi)	58,000	61,200	77,900
# of passes	7	19	Elongation (%)	22	29	25
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	169	92
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # C623262104213	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	82.3 kJ/in	29.0 kJ/in	Mechanical Properties		82.3 kJ/in	29.0 kJ/in
Voltage	25	27	Test Reference #		PD9713	PD9729
Current (amps)	220	290				
WFS (ipm)	375	600				
Travel Speed (ipm)	4.04	16.25	Tensile Strength (psi)	70,000	73,800	92,500
Stick Out	5/8””	3/4”	Yield Strength (psi)	58,000	63,200	87,600
# of passes	7	16	Elongation (%)	22	31	23
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	210	88
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61355	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.3 kJ/in	29.9 kJ/in	Mechanical Properties		80.3 kJ/in	29.9 kJ/in
Voltage	25	27	Test Reference #		PE1364	PE1362
Current (amps)	225	290				
WFS (ipm)	375	600				
Travel Speed (ipm)	4.22	15.7	Tensile Strength (psi)	70,000	72,100	90,000
Stick Out	5/8”	3/4”	Yield Strength (psi)	58,000	62,800	84,700
# of passes	6	14	Elongation (%)	22	29	22
# of layers	4	5	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	139	104
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.20/A5.20M, Clause 16 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	C623262104213	HB4240	4.0 (ml/100g)
7 Day Exposure	C623262104213	HB4241	5.4 (ml/100g)

David A. Thomas, Quality Assurance Representative

Product: FabCO Triple 7
Diameter: .052”
Shielding Gas: M21-ArC-25
Current/Polarity: DCEP
Classification: E71T-1 H8, E71T-9 H8
Specification: AWS A5.20/A5.20M:2005
Test Completed: 10/05/2020

Certificate of Conformance
For AWS D1.8/D1.8M, Seismic Supplement

This is to certify that the product named is of the same classification, manufacturing process, and material requirements as the material, which was used for the test which was concluded on the date shown, the results of which are shown below. All test required by the code or specifications were performed at that time and the material tested met all requirements. The product was manufactured and supplied by the Quality System Program of Hobart Brothers, which meets the requirements of ISO 9001:2015, ANSI/AWS A5.01, and other specification and Military requirements, as applicable.

Test Settings	High Heat Input	Low Heat Input	Lot- # C619262804161	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.4 kJ/in	28.8 kJ/in	Mechanical Properties		78.4 kJ/in	28.8 kJ/in
Voltage	24	25	Test Reference #		PD9742	PD9744
Current (amps)	230	275				
WFS (ipm)	270	368				
Travel Speed (ipm)	4.25	14.42	Tensile Strength (psi)	70,000	83,600	102,000
Stick Out	5/8”	3/4”	Yield Strength (psi)	58,000	70,100	97,800
# of passes	8	16	Elongation (%)	22	28	22
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	117	109
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61355	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	82.7 kJ/in	29.0 kJ/in	Mechanical Properties		82.7 kJ/in	29.0 kJ/in
Voltage	24	25	Test Reference #		PE1319	PE1318
Current (amps)	230	275				
WFS (ipm)	270	367				
Travel Speed (ipm)	4.05	14.24	Tensile Strength (psi)	70,000	83,100	100,000
Stick Out	5/8”	3/4”	Yield Strength (psi)	58,000	69,400	96,300
# of passes	7	16	Elongation (%)	22	29	22
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	122	135
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61354	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.7 kJ/in	30.0 kJ/in	Mechanical Properties		79.7 kJ/in	30.0 kJ/in
Voltage	24.5	25	Test Reference #		PE1350	PE1348
Current (amps)	225	275				
WFS (ipm)	255	350				
Travel Speed (ipm)	4.2	13.75	Tensile Strength (psi)	70,000	80,800	99,000
Stick Out	5/8”	3/4”	Yield Strength (psi)	58,000	68,400	93,600
# of passes	7	16	Elongation (%)	22	30	23
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	130	117
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.20/A5.20M, Clause 16 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	C619262804161	HB4251	6.6 (ml/100g)
7 Day Exposure	C619262804161	HB4252	9.0 (ml/100g)

David A. Thomas, Quality Assurance Representative

Product: FabCO Triple 7
Diameter: .052”
Shielding Gas: C1 (100% CO2)
Current/Polarity: DCEP
Classification: E71T-1 H8, E71T-9 H8
Specification: AWS A5.20/A5.20M:2005
Test Completed: 10/05/2020

Certificate of Conformance
For AWS D1.8/D1.8M, Seismic Supplement

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Test Settings	High Heat Input	Low Heat Input	Lot- # C619262804161	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.0 kJ/in	29.9 kJ/in	Mechanical Properties		79.0 kJ/in	29.9 kJ/in
Voltage	25.5	26	Test Reference #		PD9741	PD9743
Current (amps)	230	275				
WFS (ipm)	270	368				
Travel Speed (ipm)	4.47	14.41	Tensile Strength (psi)	70,000	76,900	91,900
Stick Out	5/8”	3/4”	Yield Strength (psi)	58,000	66,500	85,900
# of passes	8	16	Elongation (%)	22	29	25
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	118	102
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61355	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	81.7 kJ/in	29.9 kJ/in	Mechanical Properties		81.7 kJ/in	29.9 kJ/in
Voltage	25.5	26	Test Reference #		PE1321	PE1320
Current (amps)	230	275				
WFS (ipm)	270	350				
Travel Speed (ipm)	4.32	14.35	Tensile Strength (psi)	70,000	74,900	87,700
Stick Out	5/8”	3/4”	Yield Strength (psi)	58,000	65,600	82,500
# of passes	7	16	Elongation (%)	22	32	25
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	112	128
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61354	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.2 kJ/in	29.9 kJ/in	Mechanical Properties		80.2 kJ/in	29.9 kJ/in
Voltage	25.5	26	Test Reference #		PE1349	PE1347
Current (amps)	225	275				
WFS (ipm)	260	350				
Travel Speed (ipm)	4.3	14.35	Tensile Strength (psi)	70,000	74,900	86,300
Stick Out	5/8”	3/4”	Yield Strength (psi)	58,000	63,300	80,400
# of passes	7	16	Elongation (%)	22	29	25
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	174	124
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1/G				

Diffusible Hydrogen - Tested in accordance with AWS A5.20/A5.20M, Clause 16 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	C619262804161	HB4249	5.3 (ml/100g)
7 Day Exposure	C619262804161	HB4250	7.7 (ml/100g)

David A. Thomas, Quality Assurance Representative

Product: FabCO Triple 7
Diameter: 1/16”
Shielding Gas: M21-ArC-25
Current/Polarity: DCEP
Classification: E71T-1 H8, E71T-9 H8
Specification: AWS A5.20/A5.20M:2005
Test Completed: 09/23/2020

Certificate of Conformance
For AWS D1.8/D1.8M, Seismic Supplement

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Test Settings	High Heat Input	Low Heat Input	Lot- # C61972201291	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.0 kJ/in	29.0 kJ/in	Mechanical Properties		79.0 kJ/in	29.0 kJ/in
Voltage	24	26	Test Reference #		PD8884	PD8883
Current (amps)	225	260	Tensile Strength (psi)	70,000	81,700	87,300
WFS (ipm)	185	205	Yield Strength (psi)	58,000	70,800	82,500
Travel Speed (ipm)	4	14	Elongation (%)	22	29	25
Stick Out	3/4”	3/4”	Average Charpy V-notch Impact Properties ft•lbs @ +70 ºF	40	128	131
# of passes	6	19				
# of layers	3	7				
Preheat Temp. ºF	300+/-25	RT				
Interpass Temp. ºF	500+/-50	200+/-25				
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61280	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.8 kJ/in	29.8 kJ/in	Mechanical Properties		80.8 kJ/in	29.8 kJ/in
Voltage	24.5	26	Test Reference #		PE1247	PE1246
Current (amps)	225	260	Tensile Strength (psi)	70,000	77,500	86,900
WFS (ipm)	185	215	Yield Strength (psi)	58,000	67,300	82,900
Travel Speed (ipm)	4.10	13.64	Elongation (%)	22	32	29
Stick Out	3/4”	3/4”	Average Charpy V-notch Impact Properties ft•lbs @ +70 ºF	40	136	158
# of passes	6	19				
# of layers	3	7				
Preheat Temp. ºF	300+/-25	RT				
Interpass Temp. ºF	500+/-50	200+/-25				
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61354	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	83.0 kJ/in	29.2 kJ/in	Mechanical Properties		83.0 kJ/in	29.2 kJ/in
Voltage	24	26	Test Reference #		PE1285	PE1284
Current (amps)	225	260	Tensile Strength (psi)	70,000	81,300	94,000
WFS (ipm)	185	218	Yield Strength (psi)	58,000	67,200	89,500
Travel Speed (ipm)	3.91	13.93	Elongation (%)	22	28	25
Stick Out	3/4”	3/4”	Average Charpy V-notch Impact Properties ft•lbs @ +70 ºF	40	121	143
# of passes	6	19				
# of layers	3	7				
Preheat Temp. ºF	300+/-25	RT				
Interpass Temp. ºF	500+/-50	200+/-25				
Weld Position	3G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.20/A5.20M, Clause 16 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	C61972201291	HB3901	6.4 (ml/100g)
7 Day Exposure	C61972201291	HB3902	7.0 (ml/100g)

David A. Thomas, Quality Assurance Representative

Product: FabCO Triple 7
Diameter: 1/16”
Shielding Gas: C1 (100% CO2)
Current/Polarity: DCEP
Classification: E71T-1 H8, E71T-9 H8
Specification: AWS A5.20/A5.20M:2005
Test Completed: 09/24/2020

Certificate of Conformance
For AWS D1.8/D1.8M, Seismic Supplement

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Test Settings	High Heat Input	Low Heat Input	Lot- # C619272201291	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	82.5 kJ/in	29.0 kJ/in	Mechanical Properties		82.5 kJ/in	29.0 kJ/in
Voltage	25	26	Test Reference #		PD8882	PD8881
Current (amps)	225	260				
WFS (ipm)	185	205				
Travel Speed (ipm)	4	14	Tensile Strength (psi)	70,000	75,100	79,100
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	64,100	72,000
# of passes	6	19	Elongation (%)	22	29	27
# of layers	3	7	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	138	45
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61280	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	82.4 kJ/in	28.7 kJ/in	Mechanical Properties		82.4 kJ/in	28.7 kJ/in
Voltage	25	26	Test Reference #		PE1257	PE1256
Current (amps)	220	260				
WFS (ipm)	185	215				
Travel Speed (ipm)	4.01	14.18	Tensile Strength (psi)	70,000	72,900	82,700
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	63,000	77,900
# of passes	6	19	Elongation (%)	22	32	26
# of layers	3	7	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	96	87
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # D61354	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	81.7 kJ/in	29.0 kJ/in	Mechanical Properties		81.7 kJ/in	29.0 kJ/in
Voltage	25	26	Test Reference #		PE1287	PE1286
Current (amps)	225	260				
WFS (ipm)	185	215				
Travel Speed (ipm)	4.13	14.04	Tensile Strength (psi)	70,000	77,700	85,800
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	67,300	81,100
# of passes	6	19	Elongation (%)	22	28	27
# of layers	3	7	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	74	145
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	3G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.20/A5.20M, Clause 16 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	C619272201291	HB3899	6.6 (ml/100g)
7 Day Exposure	C619272201291	HB3900	9.3 (ml/100g)

David A. Thomas, Quality Assurance Representative