Product: FabCOR Edge XP
Diameter: .045”
Shielding Gas: M20-ArC-10
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 4/21/2021

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

This is to certify that the product named herein is of the same classification, manufacturing process, and material requirements as the material used for the tests completed on the date shown, the results of which are recorded below. All tests 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 Management System 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-# D670911005	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.8 kJ/in	27.8 kJ/in	Mechanical Properties		78.8 kJ/in	27.8 kJ/in
Voltage	27	25.5	Test Reference #		PE2254	PE2257
Current (amps)	350	280				
WFS (ipm)	575	385				
Travel Speed (ipm)	7.2	15.4	Tensile Strength (psi)	70,000	81,000	88,600
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	65,900	77,400
# of passes	8	16	Elongation (%)	22	27	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	97	92
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F62327	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	81.1 kJ/in	29.8 kJ/in	Mechanical Properties		81.1 kJ/in	29.8 kJ/in
Voltage	27	25.5	Test Reference #		PE2212	PE2210
Current (amps)	350	280				
WFS (ipm)	560	385				
Travel Speed (ipm)	7.0	14.44	Tensile Strength (psi)	70,000	77,600	84,500
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	60,800	72,500
# of passes	6	16	Elongation (%)	22	30	28
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	80	68
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# D608031003121	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	81.1 kJ/in	29.9 kJ/in	Mechanical Properties		81.1 kJ/in	29.9 kJ/in
Voltage	27	25.5	Test Reference #		PE2194	PE2195
Current (amps)	350	285				
WFS (ipm)	560	385				
Travel Speed (ipm)	7.0	14.35	Tensile Strength (psi)	70,000	74,800	82,000
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	59,700	71,000
# of passes	6	17	Elongation (%)	22	30	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	92	79
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	D670911005	HB4803	1.5 (ml/100g)
7 Day Exposure	D670911005	HB4828	3.0 (ml/100g)

David A. Thomas, Quality Specialist

Product: FabCOR Edge XP
Diameter: .045”
Shielding Gas: M20-ArC-15
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 10/20/2022

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

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Test Settings	High Heat Input	Low Heat Input	Lot- # G63488	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	72.0 kJ/in	24.3 kJ/in	Mechanical Properties		72.0 kJ/in	24.3 kJ/in
Voltage	28.6	31	Test Reference #		PE4852	PE4856
Current (amps)	315	285				
WFS (ipm)	565	480				
Travel Speed (ipm)	6.7	16.5	Tensile Strength (psi)	70,000	78,000	88,000
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	61,900	77,000
# of passes	6	18	Elongation (%)	22	29	25
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	64	78
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # G62855	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.9 kJ/in	24.9 kJ/in	Mechanical Properties		79.9 kJ/in	24.9 kJ/in
Voltage	27	26	Test Reference #		PE4862	PE4861
Current (amps)	315	285				
WFS (ipm)	575	390				
Travel Speed (ipm)	6.7	16.35	Tensile Strength (psi)	70,000	80,000	89,000
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	64,000	79,000
# of passes	6	17	Elongation (%)	22	28	25
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	74	89
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # G63517	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	75.3 kJ/in	25.8 kJ/in	Mechanical Properties		81.1 kJ/in	25.8 kJ/in
Voltage	27	25.5	Test Reference #		PE4870	PE4869
Current (amps)	340	250				
WFS (ipm)	575	480				
Travel Speed (ipm)	7.37	15.72	Tensile Strength (psi)	70,000	78,000	84,000
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	62,000	72,000
# of passes	6	18	Elongation (%)	22	29	27
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	69	90
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	G63488	HB6248	1.7 (ml/100g)
7 Day Exposure	G63488	HB6249	2.7 (ml/100g)

James Owens, Quality Assurance Specialist

Product: FabCOR Edge XP
Diameter: .045”
Shielding Gas: M21-ArC-25
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 5/4/2021

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

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Test Settings	High Heat Input	Low Heat Input	Lot-# D670911005	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	81.6 kJ/in	27.5 kJ/in	Mechanical Properties		81.6 kJ/in	27.5 kJ/in
Voltage	28	26	Test Reference #		PE2252	PE2261
Current (amps)	340	270				
WFS (ipm)	560	400				
Travel Speed (ipm)	7.0	15.3	Tensile Strength (psi)	70,000	79,100	85,500
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	62,600	74,100
# of passes	8	16	Elongation (%)	22	29	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	88	78
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F62327	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	82.5 kJ/in	29.2 kJ/in	Mechanical Properties		82.5 kJ/in	29.2 kJ/in
Voltage	28	26	Test Reference #		PE2211	PE2209
Current (amps)	350	275				
WFS (ipm)	560	370				
Travel Speed (ipm)	7.14	14.83	Tensile Strength (psi)	70,000	76,300	82,200
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	59,900	71,500
# of passes	6	18	Elongation (%)	22	29	27
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	71	54
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# D608031003121	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.6 kJ/in	29.0 kJ/in	Mechanical Properties		78.6 kJ/in	29.0 kJ/in
Voltage	28	26	Test Reference #		PE2356	PE2193
Current (amps)	345	275				
WFS (ipm)	560	370				
Travel Speed (ipm)	7.42	14.84	Tensile Strength (psi)	70,000	74,800	80,800
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	61,100	68,400
# of passes	7	18	Elongation (%)	22	32	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	89	70
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	D670911005	HB4802	0.7 (ml/100g)
7 Day Exposure	D670911005	HB4816	1.9 (ml/100g)

David A. Thomas, Quality Specialist

Product: FabCOR Edge XP
Diameter: .052”
Shielding Gas: M20-ArC-10
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 4/22/2021

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

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Test Settings	High Heat Input	Low Heat Input	Lot-# F624251201	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.4 kJ/in	28.2 kJ/in	Mechanical Properties		80.4 kJ/in	28.2 kJ/in
Voltage	29.5	26	Test Reference #		PE2262	PE2253
Current (amps)	350	275				
WFS (ipm)	415	265				
Travel Speed (ipm)	7.7	15.2	Tensile Strength (psi)	70,000	75,900	83,300
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	59,800	71,800
# of passes	6	16	Elongation (%)	22	31	26
# of layers	3	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	103	76
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# D670121202031	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.3 kJ/in	29.4 kJ/in	Mechanical Properties		79.3 kJ/in	29.4 kJ/in
Voltage	27	25	Test Reference #		PE2229	PE2227
Current (amps)	375	275				
WFS (ipm)	420	270				
Travel Speed (ipm)	7.68	14.1	Tensile Strength (psi)	70,000	76,100	85,700
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	61,500	75,100
# of passes	7	17	Elongation (%)	22	33	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	107	82
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# D607821203031	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.7 kJ/in	29.5 kJ/in	Mechanical Properties		78.7 kJ/in	29.5 kJ/in
Voltage	27	26	Test Reference #		PE2106	PE1903
Current (amps)	375	275				
WFS (ipm)	415	265				
Travel Speed (ipm)	7.85	14.65	Tensile Strength (psi)	70,000	77,500	86,800
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	61,300	75,700
# of passes	7	16	Elongation (%)	22	30	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	70	78
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	F624251201	HB4804	1.7 (ml/100g)
7 Day Exposure	F624251201	HB4828	3.8 (ml/100g)

David A. Thomas, Quality Specialist

Product: FabCOR Edge XP
Diameter: .052”
Shielding Gas: M20-ArC-15
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 5/17/2021

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

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Test Settings	High Heat Input	Low Heat Input	Lot-# F62931	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.2 kJ/in	29.6 kJ/in	Mechanical Properties		80.2 kJ/in	29.6 kJ/in
Voltage	27.5	25.5	Test Reference #		PE2286	PE2287
Current (amps)	375	275				
WFS (ipm)	420	270				
Travel Speed (ipm)	7.72	14.34	Tensile Strength (psi)	70,000	72,500	80,400
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	58,500	68,600
# of passes	7	18	Elongation (%)	22	32	27
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	84	64
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# D670121202031	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.0 kJ/in	29.2 kJ/in	Mechanical Properties		80.0 kJ/in	29.2 kJ/in
Voltage	27.5	25.5	Test Reference #		PE2276	PE2275
Current (amps)	375	275				
WFS (ipm)	420	275				
Travel Speed (ipm)	7.74	14.47	Tensile Strength (psi)	70,000	75,200	82,600
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	59,500	70,700
# of passes	7	18	Elongation (%)	22	30	27
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	95	81
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F624251201	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.4 kJ/in	29.7 kJ/in	Mechanical Properties		79.4 kJ/in	29.7 kJ/in
Voltage	29.5	27	Test Reference #		PE2294	PE2263
Current (amps)	350	275				
WFS (ipm)	415	270				
Travel Speed (ipm)	7.8	15.0	Tensile Strength (psi)	70,000	74,200	82,400
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	58,600	71,100
# of passes	7	17	Elongation (%)	22	30	27
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	67	84
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	F624251201	HB4813	1.6 (ml/100g)
30 Day Exposure	F624251201	HB4868	2.9 (ml/100g)
45 Day Exposure	F624251201	HB4863	2.9 (ml/100g)

David A. Thomas, Quality Specialist

Product: FabCOR Edge XP
Diameter: .052”
Shielding Gas: M21-ArC-25
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 4/23/2021

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

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Test Settings	High Heat Input	Low Heat Input	Lot-# D670121201031	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	81.2 kJ/in	29.5 kJ/in	Mechanical Properties		81.2 kJ/in	29.5 kJ/in
Voltage	29.5	27	Test Reference #		PE2228	PE2226
Current (amps)	350	275				
WFS (ipm)	410	270				
Travel Speed (ipm)	7.65	15.2	Tensile Strength (psi)	70,000	71,800	82,900
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	57,600	72,300
# of passes	7	17	Elongation (%)	22	32	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	102	71
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F624251201	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.4 kJ/in	28.7 kJ/in	Mechanical Properties		78.4 kJ/in	28.7 kJ/in
Voltage	29.5	27	Test Reference #		PE2200	PE2198
Current (amps)	350	275				
WFS (ipm)	410	265				
Travel Speed (ipm)	7.9	15.5	Tensile Strength (psi)	70,000	72,600	81,200
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	58,100	69,800
# of passes	6	17	Elongation (%)	22	31	26
# of layers	3	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	81	51
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# D607821203031	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.0 kJ/in	30.4 kJ/in	Mechanical Properties		79.0 kJ/in	30.4 kJ/in
Voltage	29.5	27	Test Reference #		PE1871	PE1901
Current (amps)	350	275				
WFS (ipm)	410	265				
Travel Speed (ipm)	7.92	14.72	Tensile Strength (psi)	70,000	76,400	84,000
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	61,400	71,800
# of passes	7	17	Elongation (%)	22	30	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	60	53
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	F624251201	HB4805	1.0 (ml/100g)
7 Day Exposure	F624251201	HB4827	1.8 (ml/100g)

David A. Thomas, Quality Specialist

Product: FabCOR Edge XP
Diameter: .052”
Shielding Gas: Ozoline C8
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 11/19/2021

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

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Test Settings	High Heat Input	Low Heat Input	Lot-# F64777	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	77.3 kJ/in	29.5 kJ/in	Mechanical Properties		77.3 kJ/in	29.5 kJ/in
Voltage	29	26	Test Reference #		PE3175	PE3176
Current (amps)	350	300				
WFS (ipm)	410	300				
Travel Speed (ipm)	7.89	15.91	Tensile Strength (psi)	70,000	73,000	85,000
Stick Out	1”	3/4”	Yield Strength (psi)	58,000	58,000	74,000
# of passes	7	15	Elongation (%)	22	30	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	56	68
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F65403	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.5 kJ/in	29.7 kJ/in	Mechanical Properties		78.5 kJ/in	29.7 kJ/in
Voltage	29	26	Test Reference #		PE3189	PE3190
Current (amps)	350	300				
WFS (ipm)	410	300				
Travel Speed (ipm)	7.92	15.83	Tensile Strength (psi)	70,000	76,000	88,000
Stick Out	1”	1”	Yield Strength (psi)	58,000	60,000	77,000
# of passes	7	15	Elongation (%)	22	33	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	65	88
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F64916	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	77.0 kJ/in	30.1 kJ/in	Mechanical Properties		77.0 kJ/in	30.1 kJ/in
Voltage	29	26	Test Reference #		PE3191	PE3192
Current (amps)	350	300				
WFS (ipm)	410	300				
Travel Speed (ipm)	7.92	15.59	Tensile Strength (psi)	70,000	75,000	86,000
Stick Out	1”	1”	Yield Strength (psi)	58,000	60,000	76,000
# of passes	7	15	Elongation (%)	22	32	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	81	70
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	F64916	HB5277	4.0 (ml/100g)
7 Day Exposure	F64916	HB5278	6.0 (ml/100g)

David A. Thomas, Quality Specialist

Product: FabCOR Edge XP
Diameter: 1/16”
Shielding Gas: M20-ArC-10
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 5/12/2021

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

This is to certify that the product named herein is of the same classification, manufacturing process, and material requirements as the material used for the tests completed on the date shown, the results of which are recorded below. All tests 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 Management System 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-# D607811301251	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.9 kJ/in	31.3 kJ/in	Mechanical Properties		78.9 kJ/in	31.3 kJ/in
Voltage	26.5	26	Test Reference #		PE1982	PE1981
Current (amps)	375	300				
WFS (ipm)	295	220				
Travel Speed (ipm)	7.64	15.51	Tensile Strength (psi)	70,000	80,100	90,400
Stick Out	3/4”	7/8”	Yield Strength (psi)	58,000	63,800	78,300
# of passes	7	17	Elongation (%)	22	31	25
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	83	78
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F623171301	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.3 kJ/in	30.8 kJ/in	Mechanical Properties		80.3 kJ/in	30.8 kJ/in
Voltage	26.5	30	Test Reference #		PE2339	PE2299
Current (amps)	375	350				
WFS (ipm)	295	200				
Travel Speed (ipm)	7.45	15.0	Tensile Strength (psi)	70,000	73,400	79,400
Stick Out	3/4”	7/8”	Yield Strength (psi)	58,000	58,500	67,000
# of passes	7	16	Elongation (%)	22	31	27
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	80	67
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F62351	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	81.4 kJ/in	29.8 kJ/in	Mechanical Properties		81.4 kJ/in	29.8 kJ/in
Voltage	26.5	26	Test Reference #		PE2387	PE2372
Current (amps)	375	300				
WFS (ipm)	295	220				
Travel Speed (ipm)	7.38	15.7	Tensile Strength (psi)	70,000	75,300	85,400
Stick Out	1”	1”	Yield Strength (psi)	58,000	59,800	73,800
# of passes	7	17	Elongation (%)	22	30	27
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	85	79
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	F62351	HB4810	1.4 (ml/100g)
7 Day Exposure	F62351	HB4825	2.6 (ml/100g)

David A. Thomas, Quality Specialist

Product: FabCOR Edge XP
Diameter: 1/16”
Shielding Gas: M20-ArC-15
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 5/12/2021

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

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Test Settings	High Heat Input	Low Heat Input	Lot-# D607811301251	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.8 kJ/in	30.3 kJ/in	Mechanical Properties		79.8 kJ/in	30.3 kJ/in
Voltage	27	26.5	Test Reference #		PE2291	PE2292
Current (amps)	360	285				
WFS (ipm)	276	195				
Travel Speed (ipm)	7.32	15.02	Tensile Strength (psi)	70,000	75,900	85,100
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	59,500	72,900
# of passes	7	17	Elongation (%)	22	34	27
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	99	94
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F623171301	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.6 kJ/in	30.6 kJ/in	Mechanical Properties		80.6 kJ/in	30.6 kJ/in
Voltage	27	26.5	Test Reference #		PE2344	PE2358
Current (amps)	360	285				
WFS (ipm)	275	191				
Travel Speed (ipm)	7.24	14.85	Tensile Strength (psi)	70,000	72,400	78,600
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	58,600	65,700
# of passes	7	17	Elongation (%)	22	32	27
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	74	87
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F62351	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.0 kJ/in	30.3 kJ/in	Mechanical Properties		78.0 kJ/in	30.3 kJ/in
Voltage	27	26.5	Test Reference #		PE2385	PE2384
Current (amps)	360	285				
WFS (ipm)	275	191				
Travel Speed (ipm)	7.52	15.0	Tensile Strength (psi)	70,000	73,600	80,300
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	59,400	68,900
# of passes	7	17	Elongation (%)	22	30	27
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	77	82
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	F62351	HB4807	0.8 (ml/100g)
7 Day Exposure	F62351	HB4823	2.8 (ml/100g)

David A. Thomas, Quality Specialist

Product: FabCOR Edge XP
Diameter: 1/16”
Shielding Gas: M21-ArC-25
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 5/13/2021

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

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Test Settings	High Heat Input	Low Heat Input	Lot-# D607811301251	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.2 kJ/in	31.1 kJ/in	Mechanical Properties		80.2 kJ/in	31.1 kJ/in
Voltage	28	27	Test Reference #		PE1979	PE1980
Current (amps)	350	275				
WFS (ipm)	272	195				
Travel Speed (ipm)	7.35	14.35	Tensile Strength (psi)	70,000	76,300	84,100
Stick Out	3/4”	7/8”	Yield Strength (psi)	58,000	61,500	72,300
# of passes	7	16	Elongation (%)	22	32	29
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	89	78
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F623171301	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.9 kJ/in	30.5 kJ/in	Mechanical Properties		79.9 kJ/in	30.5 kJ/in
Voltage	28	26.5	Test Reference #		PE2346	PE2352
Current (amps)	350	275				
WFS (ipm)	265	195				
Travel Speed (ipm)	7.37	14.35	Tensile Strength (psi)	70,000	71,200	81,400
Stick Out	3/4”	3/4”	Yield Strength (psi)	58,000	57,900	68,600
# of passes	7	18	Elongation (%)	22	33	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	65	74
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F62351	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	81.8 kJ/in	29.8 kJ/in	Mechanical Properties		81.8 kJ/in	29.8 kJ/in
Voltage	28	26.5	Test Reference #		PE2381	PE2388
Current (amps)	350	285				
WFS (ipm)	255	191				
Travel Speed (ipm)	7.2	14.73	Tensile Strength (psi)	70,000	71,200	80,700
Stick Out	7/8”	3/4”	Yield Strength (psi)	58,000	58,100	69,600
# of passes	7	17	Elongation (%)	22	33	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	98	71
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	F62351	HB4809	1.3 (ml/100g)
7 Day Exposure	F62351	HB4824	2.9 (ml/100g)

David A. Thomas, Quality Specialist

Product: FabCOR Edge XP
Diameter: 1/16”
Shielding Gas: Ozoline C8
Current/Polarity: DCEP
Classification: E70C-6M H4
Specification: AWS A5.18/A5.18M:2017
Test Completed: 11/19/2021

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

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Test Settings	High Heat Input	Low Heat Input	Lot-# F63663	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	80.3 kJ/in	30.0 kJ/in	Mechanical Properties		80.3 kJ/in	30.0 kJ/in
Voltage	26.5	25	Test Reference #		PE3194	PE3195
Current (amps)	360	300				
WFS (ipm)	275	205				
Travel Speed (ipm)	7.16	15.01	Tensile Strength (psi)	70,000	75,000	84,000
Stick Out	1”	1”	Yield Strength (psi)	58,000	60,000	72,000
# of passes	7	15	Elongation (%)	22	30	27
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	98	98
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F62317	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	79.8 kJ/in	30.1 kJ/in	Mechanical Properties		79.8 kJ/in	30.1 kJ/in
Voltage	26.5	25	Test Reference #		PE3208	PE3209
Current (amps)	360	300				
WFS (ipm)	275	205				
Travel Speed (ipm)	7.19	14.99	Tensile Strength (psi)	70,000	77,000	85,000
Stick Out	1”	1”	Yield Strength (psi)	58,000	61,000	72,000
# of passes	7	15	Elongation (%)	22	31	26
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	82	108
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot-# F62899	AWS D1.8 Requirements	High Heat Input	Low Heat Input
	78.9 kJ/in	30.0 kJ/in	Mechanical Properties		78.9 kJ/in	30.0 kJ/in
Voltage	26.5	25	Test Reference #		PE3215	PE3216
Current (amps)	360	300				
WFS (ipm)	275	205				
Travel Speed (ipm)	7.29	15.09	Tensile Strength (psi)	70,000	76,000	86,000
Stick Out	1”	1”	Yield Strength (psi)	58,000	62,000	75,000
# of passes	7	15	Elongation (%)	22	31	25
# of layers	4	6	Average Charpy V-notch			
Preheat Temp. ºF	300+/-25	RT	Impact Properties ft•lbs @	40	72	77
Interpass Temp. ºF	500+/-50	200+/-25	+70 ºF			
Weld Position	1G	1G				

Diffusible Hydrogen - Tested in accordance with AWS A5.18/A5.18M, Clause 15 & Extended Exposure - in accordance with AWS D1.8/D1.8M

Condition	Lot - #	Test Reference #	Average (ml/100g)
As Received	F62899	HB5279	3.1 (ml/100g)
7 Day Exposure	F62899	HB5280	4.6 (ml/100g)

David A. Thomas, Quality Specialist