

**Product:** FabCOR Elevate

Diameter: .052"

**Shielding Gas:** M20-ArC-15 **Current/Polarity:** DCEP **Classification:** E70C-6M H4

Specification: AWS A5.18/A5.18M; ASME SFA 5.18

**Test Completed:** 8/17/2022

## 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.

High Heat Input	Low Heat Input		Lot- # F90061-388708-7621-14	AWS D1.8	High Heat Input	Low Heat Input
80.1 kJ/in	24.3 kJ/in		Mechanical Properties	Requirements	80.1 kJ/in	24.3 kJ/in
28.5	25.4		Test Reference #		PE4273	PE4268
385 420	274 270					
8 3/4"	17.3 3/4"		Tensile Strength (psi) Yield Strength (psi)	70,000 58,000	75,800 60,900	86,700 76,800
8	18		Elongation (%)	22	29	24
300+/-25 500+/-50 1G	8T 200+/-25 1G		Average Charpy V-notch Impact Properties ft•lbs @ +70 °F	40	86	87
	80.1 kJ/in 28.5 385 420 8 3/4" 8 4 300+/-25 500+/-50	80.1 kJ/in 24.3 kJ/in  28.5 25.4  385 274  420 270  8 17.3  3/4" 3/4"  8 18  4 8  300+/-25 RT  500+/-50 200+/-25	80.1 kJ/in 24.3 kJ/in  28.5 25.4 385 274 420 270 8 17.3 3/4" 3/4" 8 18 4 8 300+/-25 RT 500+/-50 200+/-25	80.1 kJ/in         24.3 kJ/in         Mechanical Properties           28.5         25.4         Test Reference #           385         274         Test Reference #           420         270         Test Reference #           8         17.3         Tensile Strength (psi)           9         Yield Strength (psi)         Felongation (%)           18         Result of the properties	80.1 kJ/in         24.3 kJ/in         Mechanical Properties         Requirements           28.5         25.4         Test Reference #           385         274         420         270           8         17.3         Tensile Strength (psi)         70,000           3/4"         3/4"         Yield Strength (psi)         58,000           8         18         Elongation (%)         22           4         8         Average Charpy V-notch         Impact Properties ft•lbs @         40           500+/-50         200+/-25         +70 °F         40	80.1 kJ/in         24.3 kJ/in         Mechanical Properties         Requirements         80.1 kJ/in           28.5         25.4         Test Reference #         PE4273           385         274         420         270           8         17.3         Tensile Strength (psi)         70,000         75,800           3/4"         3/4"         Yield Strength (psi)         58,000         60,900           8         18         Elongation (%)         22         29           4         8         Average Charpy V-notch         Impact Properties ft•lbs @         40         86           500+/-25         200+/-25         +70 °F         40         86

Test Settings	High Heat Input	Low Heat Input	Lot-# F95233-457857-27721-1	AWS D1.8	High Heat Input	Low Heat Input
	80.7 kJ/in	25.1 kJ/in	Mechanical Properties	Requirements	80.7 kJ/in	25.1 kJ/in
Voltage	28.5	26	Test Reference #		PE4277	PE4554
Current (amps)	375	265				
WFS (ipm)	420	285				
Travel Speed (ipm)	8.18	17.10	Tensile Strength (psi)	70,000	76,700	86,600
Stick Out	3/4"	3/4"	Yield Strength (psi)	58,000	59,800	78,700
# of passes	7	17	Elongation (%)	22	30	23
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ⁰F	300+/-25	RT	Impact Properties ft•lbs @	40	84	74
Interpass Temp. ⁰F	500+/-50	200+/-25	+70 °F			
Weld Position	1G	1G				

Test Settings	High Heat Input	Low Heat Input	Lot- # F94219-431325-16522-2	AWS D1.8	High Heat Input	Low Heat Input
	78.0 kJ/in	26.1 kJ/in	Mechanical Properties	Requirements	78.0 kJ/in	26.1 kJ/in
Voltage	28.5	26	Test Reference #		PE4269	PE4337
Current (amps)	375	270				
WFS (ipm)	420	285				
Travel Speed (ipm)	7.8	16.43	Tensile Strength (psi)	70,000	77,900	87,700
Stick Out	3/4"	3/4"	Yield Strength (psi)	58,000	62,600	78,400
# of passes	8	17	Elongation (%)	22	27	24
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ⁰F	300+/-25	RT	Impact Properties ft•lbs @	40	74	80
Interpass Temp. ⁰F	500+/-50	200+/-25	+70 °F			
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	F94219-431325-16522-2	HB5974	3.0 (ml/100g)						
7 Day Exposure	F94219-431325-16522-2	HB5975	3.4 (ml/100g)						

The information contained or otherwise referenced herein is presented without guarantee or warranty. Hobart Brothers LLC expressly disclaims any liability incurred from any reliance thereon. Data for the above-supplied product are those obtained during the welding process and tested in accordance with the above specification with electrodes of the same manufacturing processes and material requirements. All tests for the above classification were performed satisfactorily. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers. Refer to the Hobart Brothers website at www.hobartbrothers.com for current Safety Data Sheets ("SDS").

James Owens, Quality Assurance Specialist

James Owens



**Product:** FabCOR Elevate

Diameter: 1/16"

**Shielding Gas:** M20-ArC-10 **Current/Polarity:** DCEP **Classification:** E70C-6M H4

Specification: AWS A5.18/A5.18M; ASME SFA 5.18

**Test Completed:** 8/13/2024

## 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-# J92068	AWS D1.8	High Heat Input	Low Heat Input
	83.2 kJ/in	26.8 kJ/in	Mechanical Properties	Requirements	83.2 kJ/in	26.8 kJ/in
Voltage	28	25	Test Reference #		PE8494	PE8504
Current (amps) WFS (ipm)	385 350	250 180				
Travel Speed (ipm) Stick Out	7.7 3/4"	13.9 3/4"	Tensile Strength (psi) Yield Strength (psi)	70,000 58,000	84,100 63,000	98,200 89,300
# of passes # of layers	6 4	19 7	Elongation (%) Average Charpy V-notch	22	27	24
Preheat Temp. °F Interpass Temp. °F Weld Position	300+/-25 500+/-50 1G	RT 200+/-25 1G	Impact Properties ft•lbs @ +70 °F	40	68	69

Test Settings	High Heat Input	Low Heat Input	Lot-# J92356	AWS D1.8	High Heat Input	Low Heat Input
	82.1 kJ/in	27.0 kJ/in	Mechanical Properties	Requirements	82.1 kJ/in	27.0 kJ/in
Voltage	28	25	Test Reference#		PE8500	PE8504
Current (amps)	385	260				
WFS (ipm)	350	180				
Travel Speed (ipm)	7.8	14.4	Tensile Strength (psi)	70,000	87,700	94,300
Stick Out	3/4"	3/4"	Yield Strength (psi)	58,000	69,000	82,800
# of passes	6	19	Elongation (%)	22	26	23
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ⁰F	300+/-25	RT	Impact Properties ft•lbs @	40	60	64
Interpass Temp. ⁰F	500+/-50	200+/-25	+70 °F			
Weld Position	1G	1G				
						1

Test Settings	High Heat Input	Low Heat Input	Lot-# J92439	AWS D1.8	High Heat Input	Low Heat Input
	81.4 kJ/in	26 kJ/in	Mechanical Properties	Requirements	81.4 kJ/in	26 kJ/in
Voltage	28	25	Test Reference #		PE8721	PE8516
Current (amps)	382	260				
WFS (ipm)	260	160				
Travel Speed (ipm)	8	15	Tensile Strength (psi)	70,000	90,600	95,300
Stick Out `	3/4"	3/4"	Yield Strength (psi)	58,000	74,200	84,500
# of passes	7	20	Elongation (%)	22	26	24
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. ⁰F	300+/-25	RT	Impact Properties ft•lbs @	40	55	64
Interpass Temp. ⁰F	500+/-50	200+/-25	+70 °F			
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	J92439	HB7804	3 (ml/100g)							
7 Day Exposure	J92439	HB7822	4 (ml/100g)							

The information contained or otherwise referenced herein is presented without guarantee or warranty. Hobart Brothers LLC expressly disclaims any liability incurred from any reliance thereon. Data for the above-supplied product are those obtained during the welding process and tested in accordance with the above specification with electrodes of the same manufacturing processes and material requirements. All tests for the above classification were performed satisfactorily. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers. Refer to the Hobart Brothers website at www.hobartbrothers.com for current Safety Data Sheets ("SDS").

francom.

James Owens, Quality Assurance Specialist



**Product:** FabCOR Elevate

Diameter: 1/16"

**Shielding Gas:** M20-ArC-15 **Current/Polarity:** DCEP **Classification:** E70C-6M H4

Specification: AWS A5.18/A5.18M; ASME SFA 5.18

**Test Completed:** 8/19/2024

## 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-# J92068	AWS D1.8	High Heat Input	Low Heat Input
	80.5 kJ/in	27.1 kJ/in	Mechanical Properties	Requirements	80.5 kJ/in	27.1 kJ/in
Voltage	29 385	26 250	Test Reference #		PE8491	PE8487
Current (amps) WFS (ipm) Travel Speed (ipm) Stick Out # of passes # of layers Preheat Temp. °F Interpass Temp. °F Weld Position	350 8.3 3/4" 7 4 300+/-25 500+/-50 1G	180 14.4 3/4" 19 7 RT 200+/-25 1G	Tensile Strength (psi) Yield Strength (psi) Elongation (%) Average Charpy V-notch Impact Properties ft•lbs @ +70 °F	70,000 58,000 22 40	78,600 62,500 30 73	92,600 82,400 23 76

Test Settings	High Heat Input	Low Heat Input	Lot-# J92356	AWS D1.8	High Heat Input	Low Heat Input
	81.5 kJ/in	28.3 kJ/in	Mechanical Properties	Requirements	81.5 kJ/in	28.3 kJ/in
Voltage	29	26	Test Reference#		PE8507	PE8510
Current (amps)	385	260				
WFS (ipm)	350	180				
Travel Speed (ipm)	8.2	13.7	Tensile Strength (psi)	70,000	86,100	92,200
Stick Out	3/4"	3/4"	Yield Strength (psi)	58,000	68,100	81,300
# of passes	6	19	Elongation (%)	22	25	24
# of layers	4	7	Average Charpy V-notch			
Preheat Temp. °F	300+/-25	RT	Impact Properties ft•lbs @	40	73	71
Interpass Temp. °F	500+/-50	200+/-25	+70 °F			
Weld Position	1G	1G				
						1

Test Settings	High Heat Input	Low Heat Input		Lot-# J92439	AWS D1.8	High Heat Input	Low Heat Input
	84.6 kJ/in	27.6 kJ/in		Mechanical Properties	Requirements	84.6 kJ/in	27.6 kJ/in
Voltage	29	25	1	Test Reference #		PE8497	PE8502
Current (amps)	389	260					
WFS (ipm)	355	160					
Travel Speed (ipm)	8	14.1		Tensile Strength (psi)	70,000	86,600	96,800
Stick Out `	3/4"	3/4"		Yield Strength (psi)	58,000	70,500	87,700
# of passes	7	20		Elongation (%)	22	26	23
# of layers	4	7		Average Charpy V-notch			
Preheat Temp. ⁰F	300+/-25	RT		Impact Properties ft•lbs @	40	74	65
Interpass Temp. ⁰F	500+/-50	200+/-25		+70 °F			
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	J92439	HB7805	2 (ml/100g)						
7 Day Exposure	J92439	HB7823	4 (ml/100g)						

The information contained or otherwise referenced herein is presented without guarantee or warranty. Hobart Brothers LLC expressly disclaims any liability incurred from any reliance thereon. Data for the above-supplied product are those obtained during the welding process and tested in accordance with the above specification with electrodes of the same manufacturing processes and material requirements. All tests for the above classification were performed satisfactorily. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers. Refer to the Hobart Brothers website at www.hobartbrothers.com for current Safety Data Sheets ("SDS").

francom.