



Certificate of Conformance to Requirements for Welding Electrode

Product Type: HOBART 718MC
Classification: E7018, E7018-1 H4R
Specifications: AWS A5.1/A5.1M; ASME SFA 5.1
Diameter Tested:
Date Tested: 2/1/2022
Date Generated: 3/2/2022

This is to certify that the product named above and supplied on the referenced order number is of the same classification, manufacturing process, and material requirements as the material which was used for the test that was concluded on the date shown, the results of which are shown below. All tests required by the specifications shown for classification were performed at that time and the material tested met all requirements. It was manufactured and supplied by the Quality System Program of Hobart Brothers, which meets the requirements of ISO 9001, ANSI/AWS A5.01, and other specification and Military requirements, as applicable. This document supplies actual test results of non-specific inspection in conformance with the requirements of EN 10204, type 2.2 certification.

MADE IN THE U.S. OF U.S. AND IMPORTED MATERIALS.

Test Settings

Size	Polarity	Amps	Volts	Preheat F(C)	Interpass F(C)
5/32X14 in	AC	200	26 1/2 - 24 1/2	225 (107)	300 (149)
5/32X14 in	DCEP	185	26 1/2 - 24 1/2	225 (107)	300 (149)
1/4X18 in	DCEP	330	27 - 26	225 (107)	300 (149)
3/16X14 in	AC	240	26	225 (107)	300 (149)
3/16X14 in	DCEP	225	23-24	225 (107)	300 (149)
1/4X18 in	AC	340	27 - 26	()	()

Mechanical Properties - Tensile

Size / Polarity	Ref. No.	Testing Conditions	Ult. Tensile Strength psi(MPa)	Yield Strength psi(MPa)	Elong.% in 2"
3/16X14 in / DCEP	PE3269	As Welded	77,000 (532)	64,000 (439)	24
1/4X18 in / AC	PE2818	As Welded	79,000 (545)	67,000 (464)	30
1/4X18 in / DCEP	PE2819	As Welded	78,000 (537)	65,000 (448)	30
5/32X14 in / AC	PE2813	As Welded	78,000 (536)	65,000 (448)	29
5/32X14 in / DCEP	PE2814	As Welded	79,000 (545)	67,000 (459)	25
3/16X14 in / AC	PE3200	As Welded	80,000 (551)	67,000 (463)	28

Mechanical Properties - Impact

Size / Polarity	Ref. No.	Testing Conditions	Test Temp. F(C)	Individuals ft.lb.(J)	Average ft.lb.(J)	Type
5/32X14 in / AC	PE2813	As Welded	-50 F (-46 C)	96,98,91 (130,133,123)	95 (129)	Charpy-V-Notch
5/32X14 in / DCEP	PE2814	As Welded	-50 F (-46 C)	43,50,70 (58,68,95)	54 (74)	Charpy-V-Notch
1/4X18 in / AC	PE2818	As Welded	-50 F (-46 C)	54,32,15 (73,43,20)	34 (46)	Charpy-V-Notch
1/4X18 in / DCEP	PE2819	As Welded	-50 F (-46 C)	74,81,82 (100,110,111)	79 (107)	Charpy-V-Notch
3/16X14 in / AC	PE3200	As Welded	-50 F (-46 C)	72,87,68 (98,118,92)	76 (103)	Charpy-V-Notch
3/16X14 in / DCEP	PE3269	As Welded	-50 F (-46 C)	81,90,86 (110,122,117)	86 (116)	Charpy-V-Notch

Size / Polarity	Ref. No.	Radiograph	Fillet Weld Test			
5/32X14 in / AC	PE2813	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / DCEP	PE2814	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
1/4X18 in / DCEP	PE2819	Conforms	Horizontal :	Overhead :	Vertical :	
3/16X14 in / AC	PE3200	Conforms	Horizontal :	Overhead :	Vertical :	
3/16X14 in / DCEP	PE3269	Conforms	Horizontal :	Overhead :	Vertical :	
1/4X18 in / AC	PE3528	Conforms	Horizontal :	Overhead :	Vertical :	

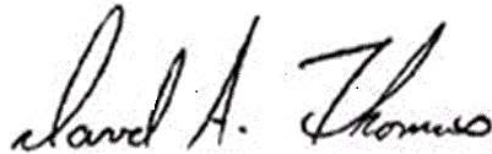
Chemical Analysis

Size / Polarity / Ref. No.	C	Mn	P	S	Si	Cu	Cr	V	Ni	Mo	Al	Ti	Nb	Co	B	W	Sn	Fe	Sb	N	Mg	Zn	Be	Sb	As
5/32X14 in / AC / PE2813	0.05	0.95	0.010	0.013	0.25		0.06	0.01	0.06	0.01															
5/32X14 in / DCEP / PE2814	0.05	0.96	0.010	0.011	0.26		0.06	0.01	0.06	0.01															
1/4X18 in / AC / PE2818	0.04	1.12	0.009	0.010	0.58		0.05	0.01	0.07	0.01															
1/4X18 in / DCEP / PE2819	0.04	1.02	0.010	0.014	0.57		0.06	0.01	0.07	0.01															

5/32X14 in / PE2813	Total H2O Method : Train - As Received	Total Coating Moisture : 0.068
5/32X14 in / PE2814	Total H2O Method : Train - 9 Hour	Total Coating Moisture : 0.132
1/4X18 in / PE2818	Total H2O Method : Train - 9 Hour	Total Coating Moisture : 0.143
1/4X18 in / PE2819	Total H2O Method : Train - As Received	Total Coating Moisture : 0.11

Diffusible Hydrogen Collected per AWS A4.3

1.3 ml/100g of weld metal for 5/32 in diameter 19% relative humidity
3.5 ml/100g of weld metal for 3/16X14 in diameter 31% relative humidity
3.5 ml/100g of weld metal for 1/4X18 in diameter 29% relative humidity



Dave Thomas, Quality Assurance Rep.

Certification and Limited Warranty - Data for the above supplied product are those obtained when welded and tested in accordance with the above specification. All tests for the above classification were satisfied. Other tests and procedures may produce different results.