



Certificate of Conformance to Requirements for Welding Electrode

Product Type: Hobart 7018 XLM
Classification: E7018-1 H4R
Specifications: AWS A5.1/A5.1M; ASME SFA 5.1
Diameter Tested:
Date Tested: 9/3/2021
Date Generated: 9/22/2021

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	25	225 (107)	300 (149)
5/32X14 in	DCEP	180	25	225 (107)	300 (149)
3/16X14 in	AC	240	29	225 (107)	325 (163)
3/16X14 in	DCEP	230	29	225 (107)	325 (163)
1/4X18 in	AC	350	29	225 (107)	300 (149)
1/4X18 in	DCEP	340	26	225 (107)	300 (149)

Mechanical Properties - Tensile

Size / Polarity	Ref. No.	Testing Conditions	Ult. Tensile Strength psi(MPa)	Yield Strength psi(MPa)	Elong.% in 2"
3/16X14 in / AC	PE2174	As Welded	82,000 (569)	69,000 (473)	26
3/16X14 in / DCEP	PE2175	As Welded	81,000 (556)	67,000 (461)	28
5/32X14 in / AC	PE2172	As Welded	82,000 (562)	67,000 (464)	26
5/32X14 in / DCEP	PE2173	As Welded	80,000 (550)	66,000 (456)	24
1/4X18 in / AC	PE2176	As Welded	87,000 (599)	73,000 (506)	29
1/4X18 in / DCEP	PE2177	As Welded	84,000 (577)	72,000 (493)	26

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	PE2172	As Welded	-50 F (-46 C)	68,18,49 (92,24,66)	45 (61)	Charpy-V-Notch
5/32X14 in / DCEP	PE2173	As Welded	-50 F (-46 C)	83,33,35 (113,45,47)	50 (68)	Charpy-V-Notch
3/16X14 in / AC	PE2174	As Welded	-50 F (-46 C)	38,15,28 (52,20,38)	27 (37)	Charpy-V-Notch
3/16X14 in / DCEP	PE2175	As Welded	-50 F (-46 C)	85,62,31 (115,84,42)	59 (80)	Charpy-V-Notch
1/4X18 in / DCEP	PE2177	As Welded	-50 F (-46 C)	71,35,40 (96,47,54)	49 (66)	Charpy-V-Notch
1/4X18 in / AC	PE2836	As Welded	-50 F (-46 C)	52,54,48 (70,73,65)	51 (70)	Charpy-V-Notch

Size / Polarity	Ref. No.	Radiograph	Fillet Weld Test			
5/32X14 in / AC	PE2172	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / DCEP	PE2173	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
3/16X14 in / AC	PE2174	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
3/16X14 in / DCEP	PE2175	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
1/4X18 in / AC	PE2176	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
1/4X18 in / DCEP	PE2177	Conforms	Horizontal :	Overhead :	Vertical :	Conforms

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 / PE2172	0.06	0.84	0.013	0.009	0.42		0.05	0.01	0.06	0.01															
5/32X14 in / DCEP / PE2173	0.06	0.88	0.014	0.009	0.38		0.06	0.01	0.06	0.01															
1/4X18 in / AC / PE2176	0.08	1.11	0.013	0.011	0.53		0.05	0.01	0.05	0.09															
1/4X18 in / DCEP / PE2177	0.06	1.08	0.013	0.009	0.49		0.05	0.01	0.05	0.09															

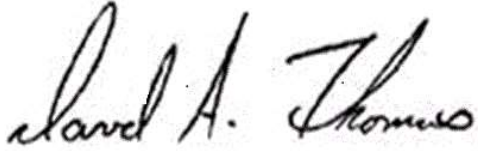
5/32X14 in / PE2172	Total H2O Method : Train - As Received	Total Coating Moisture : 0.06
5/32X14 in / PE2173	Total H2O Method : Train - 12 Hour	Total Coating Moisture : 0.155
1/4X18 in / PE2176	Total H2O Method : Train - As Received	Total Coating Moisture : 0.075
1/4X18 in / PE2177	Total H2O Method : Train - 9 Hour	Total Coating Moisture : 0.09

Diffusible Hydrogen Collected per AWS A4.3

3.6 ml/100g of weld metal for 5/32X14 in diameter 28% relative humidity

3.4 ml/100g of weld metal for 3/16X14 in diameter 28% relative humidity

4.0 ml/100g of weld metal for 1/4X18 in diameter 28% relative humidity

A handwritten signature in black ink that reads "Dave A. Thomas". The signature is written in a cursive style with a large initial "D".

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.