



Certificate of Conformance to Requirements for Welding Electrode

Product Type: HOBART 447A
Classification: E6013
Specifications: AWS A5.1/A5.1M; ASME SFA 5.1
Diameter Tested: 5/32" - 3/16"
Date Tested: 4/5/2021
Date Generated: 4/8/2021

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	150	25	225°F ()	300°F ()
5/32X14 in	DCEN	145	25	225°F ()	350°F ()
3/16X14 in	DCEN	160	21	225°F ()	350°F ()
3/16X14 in	AC	170	21	225 (107)	350 (177)

Mechanical Properties - Tensile

Size / Polarity	Ref. No.	Testing Conditions	Ult. Tensile Strength psi(MPa)	Yield Strength psi(MPa)	Elong.% in 2"
3/16X14 in / DCEN	PE2003	Aged 48 Hrs 220F	72,000 (494)	62,000 (426)	25
3/16X14 in / AC	PE2158	Aged 48 Hrs 220F	73,000 (506)	65,000 (446)	24
5/32X14 in / AC	PE2000	Aged 48 Hrs 220F	74,000 (511)	66,000 (458)	18
5/32X14 in / DCEN	PE2001	Aged 48 Hrs 220F	72,000 (499)	63,000 (434)	23

Size / Polarity	Ref. No.	Radiograph	Fillet Weld Test			
3/16X14 in / DCEN	PE2003	Conforms	Horizontal :	Overhead :	Conforms	Vertical : Conforms
3/16X14 in / AC	PE2158	Conforms	Horizontal :	Overhead :	Conforms	Vertical : Conforms
5/32X14 in / AC	PE2000	Conforms	Horizontal :	Overhead :	Conforms	Vertical : Conforms
5/32X14 in / DCEN	PE2001	Conforms	Horizontal :	Overhead :	Conforms	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 / PE2000	0.08	0.34			0.37		0.03	0.01	0.02	< .01															
5/32X14 in / DCEN / PE2001	0.09	0.37			0.34		0.03	0.01	0.02	0.01															
3/16X14 in / DCEN / PE2003	0.09	0.36			0.41		0.03	0.01	0.02	< .01															
3/16X14 in / AC / PE2158	0.09	0.38			0.43		0.03	0.01	0.02	0.01															

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.