



## Certificate of Conformance to Requirements for Welding Electrode

**Product Type:** HOBART 610  
**Classification:** E6010  
**Specifications:** AWS A5.1/A5.1M; ASME SFA 5.1  
**Diameter Tested:** 5/32" 3/16"  
**Date Tested:** 11/02/2022  
**Date Generated:** 6/28/2023

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	DCEP	130	26-28	225 (107)	350 (177)
3/16X14 in	DCEP	160	24-26	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 / DCEP	PE5001	Aged 48 Hrs 220F	71,000 ( 490 )	60,000 ( 417 )	27
5/32X14 in / DCEP	PE4976	Aged 48 Hrs 220F	78,000 ( 535 )	65,000 ( 447 )	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 / DCEP	PE4976	As Welded	-20 F (-29 C)	39,40,39 (53,54,53)	39 ( 53 )	Charpy-V-Notch
3/16X14 in / DCEP	PE5001	As Welded	-20 F (-29 C)	61,65,56 (83,88,76)	61 ( 82 )	Charpy-V-Notch

Size / Polarity	Ref. No.	Radiograph	Fillet Weld Test			
			Horizontal :	Overhead :	Vertical :	Conforms
3/16X14 in / DCEP	PE5001	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / DCEP	PE4976	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 / DCEP / PE4976	0.28	0.42			0.12		0.06	0.01	0.07	< .01															
3/16X14 in / DCEP / PE5001	0.25	0.35			0.07		0.06	0.01	0.07	0.01															

James A. Owens, Q.A. Specialist

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.