

Product Type: HOBART 447C
 Classification: E6013
 Specifications: AWS A5.1/A5.1M:2004
 Diameter Tested:
 Date Tested: 08/25/09
 Date Generated: 1/21/2010

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 ISO9000, ANSI/AWS A5.01, and other specification and Military requirements, as applicable.

Test Settings

Amps	Volts	Size	Polarity	Preheat	Interpass	Travel Speed
170	23	5/32X14 in	AC	350 F (177 C)	350 F (177 C)	+ - 1 in/min
170	23	5/32X14 in	DCEN	350 F (177 C)	350 F (177 C)	+ - 1 in/min
150	20	1/8X14 in	AC	225 F (107 C)	350 F (177 C)	+ - 1 in/min
150	20	1/8X14 in	DCEN	225 F (107 C)	350 F (177 C)	+ - 1 in/min

Mechanical Properties - Tensile

Size / Polarity	Ref. No.	Testing Conditions	Ult. Tensile Strength	Yield Strength	Elong.% in 2"
5/32X14 in / AC	PB0901	Aged 48 Hrs 220F	77,000 psi (532 Mpa)	68,000 psi (470 Mpa)	27
5/32X14 in / DCEN	PB0902	Aged 48 Hrs 220F	76,000 psi (523 Mpa)	68,000 psi (471 Mpa)	25
1/8X14 in / AC	PB1018	Aged 48 Hrs 220F	77,000 psi (530 Mpa)	67,000 psi (460 Mpa)	25
1/8X14 in / DCEN	PB1019	Aged 48 Hrs 220F	77,000 psi (528 Mpa)	68,000 psi (470 Mpa)	30

Size / Polarity	Ref. No.	Radiograph	Fillet Weld Test			
5/32X14 in / AC	PB0901	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / DCEN	PB0902	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
1/8X14 in / AC	PB1018	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
1/8X14 in / DCEN	PB1019	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
5/32X14 in / DCEN / PB0902	0.09	0.41			0.27		0.05	0.02	0.08	0.01													
1/8X14 in / DCEN / PB1019	0.08	0.39			0.19		0.05	0.01	0.02	< .01													



Steve Knostman , Quality Engineer



Guo Hao , R & D Engineer

The information 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. Hobart Brothers produces welding consumables under continuing quality assurance programs audited and approved by the American Bureau of Shipping ("ABS").