



**Certificate of Conformance
to Requirements for Welding Electrode**

Hobart

Product Type: Hoballoy 7018A1
 Classification: E7018-A1 H4R
 Specifications: AWS A5.5/A5.5M:2014
 Diameter Tested:
 Date Tested: 12/05/2016
 Date Generated: 12/14/2016

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
150	23	1/8X14 in	AC	225 F (107 C)	225 F (107 C)	+ - 1 in/min
140	23	1/8X14 in	DCEP	225 F (107 C)	225 F (107 C)	+ - 1 in/min
200	26	5/32X14 in	AC	225 F (107 C)	225 F (107 C)	+ - 1 in/min
195	26	5/32X14 in	DCEP	225 F (107 C)	225 F (107 C)	+ - 1 in/min

Mechanical Properties - Tensile

Size / Polarity	Ref. No.	Testing Conditions	Ult. Tensile Strength	Yield Strength	Elong.% in 2"
1/8X14 in / AC	pd0925	SR 1 Hr @ 1150F	84,000 psi (580 Mpa)	68,000 psi (472 Mpa)	30
1/8X14 in / DCEP	PD0926	SR 1 Hr @ 1150F	86,000 psi (591 Mpa)	73,000 psi (503 Mpa)	28
5/32X14 in / AC	PD2561	SR 1 Hr @ 1150F	88,000 psi (610 Mpa)	75,000 psi (518 Mpa)	26
5/32X14 in / DCEP	PD2562	SR 1 Hr @ 1150F	84,000 psi (582 Mpa)	70,000 psi (483 Mpa)	28

Size / Polarity	Ref. No.	Radiograph	Fillet Weld Test			
1/8X14 in / AC	PD0925	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
1/8X14 in / DCEP	PD0926	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / AC	PD2561	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / DCEP	PD2562	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
1/8X14 in / DCEP / CD08951	0.04	0.68	0.02	0.01	0.41					0.46													
5/32X14 in / DCEP / PD2562	0.03	0.87	0.01	0.01	0.50					0.49													

Size : 1/8X14 in	Total H2O Method : RC412 - As Received	Total Coating Moisture : 0.18	Ref. No. : CD08951
Size : 5/32X14 in	Total H2O Method : RC412 - As Received	Total Coating Moisture : 0.1	Ref. No. : PD2562

Diffusible Hydrogen Collected per AWS A4.3 - ml/100 g weld metal

2.8	ml/100g	For	1/8X14 in	dia
3.1	ml/100g	For	5/32X14 in	dia

Dave A. Thomas

Dave Thomas , Quality Assurance Rep.

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").