

Product Type: McKay 505-18  
 Classification: E8018B8 H4R  
 Specifications: AWS A5.5/A5.5M:2006  
 Diameter Tested:  
 Date Tested: 11/08/10  
 Date Generated: 4/26/2011

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	26	1/8X14 in	AC	450 F (232 C)	450 F (232 C)	+ - 1 in/min
140	26	1/8X14 in	DCEP	450 F (232 C)	450 F (232 C)	+ - 1 in/min
210	27	5/32X14 in	AC	450 F (232 C)	450 F (232 C)	+ - 1 in/min
200	27	5/32X14 in	DCEP	450 F (232 C)	450 F (232 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	PB3689	SR 1 Hr @ 1375F	101,000 psi ( 696 Mpa)	79,000 psi ( 546 Mpa)	23
1/8X14 in / DCEP	PB3690	SR 1 Hr @ 1375F	90,000 psi ( 619 Mpa)	68,000 psi ( 467 Mpa)	26
5/32X14 in / AC	PB3691	SR 1 Hr @ 1375F	97,000 psi ( 670 Mpa)	78,000 psi ( 536 Mpa)	22
5/32X14 in / DCEP	pb3692	SR 1 Hr @ 1375F	94,000 psi ( 651 Mpa)	75,000 psi ( 515 Mpa)	24

Size / Polarity	Ref. No.	Radiograph	Fillet Weld Test			
1/8X14 in / AC	PB3689	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
1/8X14 in / DCEP	PB3690	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / AC	PB3691	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
5/32X14 in / DCEP	PB3692	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 / CB04277	0.05	0.70	0.013	0.007	0.35		8.49		0.05	0.87													
5/32X14 in / DCEP / CB06643	0.06	0.69	0.011	0.007	0.44		8.78		0.03	0.85													

Size : 1/8X14 in	Total H2O Method : RC412 - As Received	Total Coating Moisture : 0.11	Ref. No. : CB04277
Size : 5/32X14 in	Total H2O Method : RC412 - As Received	Total Coating Moisture : 0.11	Ref. No. : CB06643

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

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



Steve Knostman , Quality 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").