

Product Type: HOBART418
 Classification: E7018-1H4R
 Specifications: AWSA5.1/A5.1M:2004/ASMESFA5.1
 Diameter Tested:
 Date Tested: 05/17/07
 Date Generated: 2/12/2008

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 dates 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 9000, ANSI/AWSA5.01, and other specification and Military requirements, as applicable.

Test Settings

Amps	Volts	Size	Polarity	Preheat	Interpass	Travel Speed
195	261/2-241/2	5/32X14in	DCEP	225F(107C)	300F(149C)	+1 in/min
200	261/2-241/2	5/32X14in	AC	225F(107C)	300F(149C)	+1 in/min
225	27	3/16X14in	DCEP	225F(107C)	300F(149C)	+1 in/min
245	26	3/16X14in	AC	225F(107C)	300F(149C)	+1 in/min
350	28-29	1/4X18in	DCEP	225F(107C)	300F(149C)	+1 in/min
350	27	1/4X18in	AC	225F(107C)	300F(149C)	+1 in/min

Mechanical Properties-Tensile

Size/Polarity	Ref.No.	Testing Conditions	Ult. Tensile Strength	Yield Strength	Elong. %in2"
1/4X18in/DCEP	PA5288	As Welded	75,000psi(518Mpa)	62,000psi(430Mpa)	31
3/16X14in/DCEP	PA5261	As Welded	74,000psi(509Mpa)	60,000psi(414Mpa)	31
3/16X14in/AC	PA5262	As Welded	77,000psi(532Mpa)	63,000psi(437Mpa)	25
5/32X14in/DCEP	PA5199	As Welded	75,000psi(518Mpa)	61,000psi(422Mpa)	30
5/32X14in/AC	PA5201	As Welded	78,000psi(538Mpa)	64,000psi(443Mpa)	30
1/4X18in/AC	PA5430	As Welded	80,000psi(555Mpa)	67,000psi(459Mpa)	27

Mechanical Properties-Impact

Size/Polarity	Ref.No.	Testing Conditions	Test Temp.	Individuals	Average	Type
1/4X18in/DCEP	PA5288	As Welded	-50F(-46C)	118,113,105ft.lb	112ft.lb(152J)	Charpy-V-Notch
3/16X14in/DCEP	PA5261	As Welded	-50F(-46C)	150,104,125ft.lb	126ft.lb(171J)	Charpy-V-Notch
3/16X14in/AC	PA5262	As Welded	-50F(-46C)	46,60,69ft.lb	58ft.lb(79J)	Charpy-V-Notch
5/32X14in/DCEP	PA5199	As Welded	-50F(-46C)	122,119,103ft.lb	115ft.lb(155J)	Charpy-V-Notch
5/32X14in/AC	PA5201	As Welded	-50F(-46C)	86,85,85ft.lb	85ft.lb(116J)	Charpy-V-Notch
1/4X18in/AC	PA5430	As Welded	-50F(-46C)	46,34,40ft.lb	40ft.lb(54J)	Charpy-V-Notch

Size/Polarity	Ref.No.	Radiograph	Fillet Weld Test			
			Horizontal:	Vertical:	Overhead:	Vertical:
1/4X18in/DCEP	PA5288	Conforms	Horizontal: Conforms	Vertical: Conforms	Overhead: Conforms	Vertical: Conforms
3/16X14in/DCEP	PA5261	Conforms	Horizontal: Conforms	Vertical: Conforms	Overhead: Conforms	Vertical: Conforms
3/16X14in/AC	PA5262	Conforms	Horizontal: Conforms	Vertical: Conforms	Overhead: Conforms	Vertical: Conforms
5/32X14in/DCEP	PA5199	Conforms	Horizontal: Conforms	Vertical: Conforms	Overhead: Conforms	Vertical: Conforms
5/32X14in/AC	PA5201	Conforms	Horizontal: Conforms	Vertical: Conforms	Overhead: Conforms	Vertical: Conforms
1/4X18in/AC	PA5430	Conforms	Horizontal: Conforms	Vertical: Conforms	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
3/16X14in/DCEP/CA50135	0.04	0.90	0.008	0.015	0.48		0.06	<.01	0.07	0.02													
1/4X18in/DCEP/CA55327	0.05	1.24	0.011	0.011	0.50		0.08	<.01	0.08	0.01													
5/32X14in/DCEP/PA5199	0.03	1.08	0.011	0.011	0.61		0.07	<.01	0.07	0.01													

Size:	Total H2O Method:	Total Coating Moisture:	Ref.No.:
3/16X14in	RC412-AsReceived	0.11	CA50135
1/4X18in	RC412-AsReceived	0.135	CA55327
5/32X14in	RC412-AsReceived	0.119	PA5199



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").