

Product Type: TM-11  
 Classification: E70T-1C  
 Specifications: AWS A5.20-2005; ASME SFA5.20  
 Diameter Tested: 3/32";1/16"  
 Date Tested: 07/08/2013  
 Date Generated: 7/16/2013

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 ISO9001, 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.

### Test Settings

Shielding Medium	Amps / Polarity	Volts	WFS in/min(m/min)	ESO in(mm)	Preheat F(C)	Interpass F(C)	Travel Speed in/min(cm/min)
SG-C 100%CO2	275 / DCEP	27	270 (6.9)	0.75 (19)	70(21)	300(149)	10 (25.4)
SG-C 100%CO2	425 / DCEP	29	170 (4.3)	1 (25)	70(21)	300(149)	12 (30.5)

### Mechanical Properties - Tensile

Shielding Medium	Ref. No.	Testing Conditions	Ult. Tensile Strength psi (MPa)	Yield Strength psi (MPa)	Elong.% in 2"
SG-C 100%CO2	PC0038	Aged 48 Hrs 220F	92,000 ( 634 )	80,000 ( 550 )	25
SG-C 100%CO2	PC0417	Aged 48 Hrs 220F	95,000 ( 654 )	82,000 ( 563 )	24

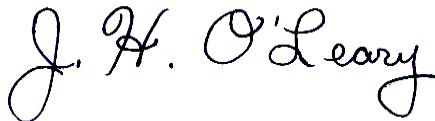
### Mechanical Properties - Impact

Shielding Medium	Ref. No.	Testing Conditions	Temp. F (C)	Individuals ft.lb.(J)	Avg. ft.lb.(J)	Type
SG-C 100%CO2	PC0038	As Welded	0 (-18)	19,25,22 (26,34,30)	22 ( 30 )	Charpy-V-Notch
SG-C 100%CO2	PC0417	As Welded	0 (-18)	27,27,26 (37,37,35)	27 ( 36 )	Charpy-V-Notch

Ref.No.	Radiographic Inspection	Fillet Weld Test			
PC0038	Conforms	Horizontal :	Overhead :	Vertical :	Vertical :
PC0417	Conforms	Horizontal :	Conforms	Overhead :	Vertical :

### Chemical Analysis

Shielding Medium / 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
SG-C 100%CO2 / PC0038	0.07	1.21	0.009	0.010	0.62	0.07	0.05	0.01	0.04	0.01													
SG-C 100%CO2 / PC0417	0.09	1.26	0.011	0.011	0.76	0.07	0.05	0.02	0.02	0.01													



Joe O'Leary, Quality Assurance Rep.

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").