

Product Type: TM-72
 Classification: E70T-1C; E70T-9C
 Specifications: AWS A5.20-2005; ASME SFA5.20
 Diameter Tested: 3/32"; 1/16"
 Date Tested: 12/07/09
 Date Generated: 12/14/2009

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

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	425 / DCEP	28	164 (4.2)	1 (25)	60(16)	300(149)	12 (30.5)
SG-C 100% CO2	250 / DCEP	26	210 (5.3)	.75 (19)	70(21)	300(149)	10 (25.4)

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	PB0631	Aged 48 Hrs 200F	87,000 (598)	74,000 (510)	27
SG-C 100% CO2	PB1555	Aged 48 Hrs 200F	88,000 (610)	76,000 (521)	26

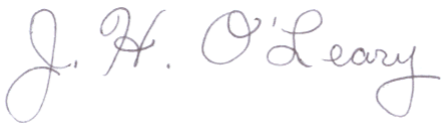
Mechanical Properties - Impact

Shielding Medium	Ref. No.	Testing Conditions	Temp. F (C)	Individuals ft.lb.(J)	Avg. ft.lb.(J)	Type
SG-C 100% CO2	PB1517	As Welded	0 (-18)	23,24,31 (31,33,42)	26 (35)	Charpy-V-Notch
SG-C 100% CO2	PB1517	As Welded	-20 (-29)	20,21,22 (27,28,30)	21 (28)	Charpy-V-Notch
SG-C 100% CO2	PB0580	As Welded	0 (-18)	31,25,30 (42,34,41)	29 (39)	Charpy-V-Notch
SG-C 100% CO2	PB0580	As Welded	-20 (-29)	24,24,23 (33,33,31)	24 (32)	Charpy-V-Notch

Ref.No.	Radiographic Inspection	Fillet Weld Test			
PB0580	Conforms	Horizontal :	Conforms	Overhead :	Vertical :
PB1517	Conforms	Horizontal :		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 / CA96991	0.05	1.15	0.011	0.009	0.67	0.05	0.04	0.02	0.02	0.01													
SG-C 100% CO2 / PB0580	0.08	1.36	0.008	0.013	0.64	0.07	0.04	0.02	0.03	0.01													



Joe O'Leary, Manager, Quality Assurance



Melvin Seitz, Quality Manager

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").