



Certificate of Conformance to Requirements for Welding Electrode

Product Type: FabCO Triple 7
Classification: E71T-1C/M H8,E71T-9C/M H8,E81T1-GC/GM H8
Specifications: AWS A5.20;A5.29;ASME SFA 5.20;A5.29
Diameter Tested: 1/16"
Date Tested: 7/17/2023
Date Generated: 9/14/2023

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 ISO 9001, 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.

THE STEEL USED IN THIS LOT OF MATERIAL WAS MELTED AND MANUFACTURED IN THE U.S.A.

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)
C1	290 / DCEP	27	250 (6.4)	3/4 (19)	Room Temp	300(149)	11 (27.9)
M20-ArC-15	275 / DCEP	26	240 (6.1)	3/4 (19)	Room Temp	300(149)	10 (25.4)
M21-ArC-25	310 / DCEP	27	290 (7.4)	3/4 (19)	Room Temp	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"
M20-ArC-15	PE6476	Aged 48 Hrs 220F	89,000 (616)	82,000 (565)	27
M21-ArC-25	PE6496	Aged 48 Hrs 220F	88,000 (605)	81,000 (558)	27
C1	PE6156	Aged 48 Hrs 220F	78,000 (537)	71,000 (488)	28

Mechanical Properties - Impact

Shielding Medium	Ref. No.	Testing Conditions	Temp. F (C)	Individuals ft.lb.(J)	Avg. ft.lb.(J)	Type
C1	PE6156	As Welded	-20 (-29)	53,43,44 (72,58,60)	47 (63)	Charpy-V-Notch
M20-ArC-15	PE6476	As Welded	-20 (-29)	119,116,130 (161,157,176)	122 (165)	Charpy-V-Notch
M21-ArC-25	PE6496	As Welded	-20 (-29)	80,92,102 (108,125,138)	91 (124)	Charpy-V-Notch

Ref.No.	Radiographic Inspection	Fillet Weld Test			
PE6156	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
PE6476	Conforms	Horizontal :	Overhead :	Vertical :	Conforms
PE6496	Conforms	Horizontal :	Overhead :	Vertical :	Conforms

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	Sb	As
M21-ArC-25 / CD96766	0.03	1.47	0.010	0.008	0.66	0.02	0.03	0.02	0.01	0.01					0.0057										
M20-ArC-15 / CD96868	0.02	1.58	0.009	0.007	0.69	0.01	0.03	0.02	< .01	0.01					0.0060										
C1 / PE6156	0.02	1.28	0.008	0.006	0.45	0.03	0.04	0.02	< .01						0.0028										

Diffusible Hydrogen Collected per AWS A4.3

M20-ArC-15	6.4 ml/100g of weld metal for 1/16 in diameter 55% relative humidity
M21-ArC-25	6.6 ml/100g of weld metal for 1/16 in diameter 55% relative humidity
C1	4.8 ml/100g of weld metal for 1/16 in diameter 55% relative humidity

James A. Owens

James A. Owens, Q.A. Specialist

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.