

# CERTIFICATE OF CONFORMANCE

Product: **SuperArc® LA-75**

Classification: **AWS D1.5 ER80S-Ni1**

Also meets the requirements of **AWS D1.1 ER80S-Ni1**

Date: **July 05, 2023**

This is to certify that the product named above is of the same classification(s) and design as the material used for the tests reported herein. The material was tested according to the specification(s) indicated and met all requirements. It was manufactured and supplied according to a Quality System Program that meets the requirements of ISO9001 among others as documented on The Lincoln Electric web page (<http://www.lincolnelectric.com/en-us/company/Pages/certifications.aspx>).

Operating Settings	ER80S-Ni1 Requirements	RESULTS
Electrode Size		.045" (1.1 mm)
Current Type/Polarity	DC+	DC+
Shielding Gas	Not Specified	92% Ar, 8% CO2
Nominal Voltage, V	Not Specified	30.0
Wire Feed Speed, cm/min (in/min)	Not Specified	1092 (430)
Nominal Current, A	Not Specified	325
Average Heat Input, kJ/mm (kJ/in)		1.6 (40.2)
Travel Speed, cm/min (in/min)	Not Specified	37 (14.6)
Contact Tip to Work Distance, mm (in)	Not Specified	19 (3/4)
Pass/Layers		15/6
Preheat Temperature, °C (°F)	(275 - 325)	135 (275)
Interpass Temperature, °C (°F)	(275 - 325)	135 (275)
Postweld Heat Treatment	As-welded	As-welded
Base Material		ASTM A537 steel (Class 1)

### Mechanical properties of weld deposits

Tensile Strength, MPa (ksi)	(80 min.)	590 (86)
Yield Strength, 0.2% Offset, MPa (ksi)	(68 min.)	490 (72)
Elongation %	24 min.	27
Average Impact Energy Joules @ -46 °C (ft-lbs @ -50 °F)	(20 min.)	158 (116) 153,158,161 (113,117,119)

### Chemical composition of weld deposits (weight %)

C	Info. Only	0.10
Ni	Info. Only	0.82
Mn	Info. Only	0.90
Si	Info. Only	0.48
S	Info. Only	0.008
P	Info. Only	0.006
Cr	Info. Only	0.02
Mo	Info. Only	<0.00
V	Info. Only	<0.003
Zr	Info. Only	0.00
Ti	Info. Only	0.00
Al	Info. Only	0.00
Cu	Info. Only	0.17

### Electrode composition (weight %)

Electrode composition (weight %)	ER80S-Ni1 Requirements	Electrode Results
C	12 max.	0.10
Mn	1.25 max.	1.02
Si	0.40 - 0.80	0.55
S	0.025 max.	0.004
P	0.025 max.	0.005
Cr	0.15 max.	0.02
Ni	0.80 - 1.10	0.88
Mo	0.35 max.	<0.00
V	0.05 max.	<0.00
Cu (Total)	0.35 max.	0.14

- This document meets the requirements of AWS A5.01M/A5.01 Schedule G. When a specific lot number is referenced it also meets the requirements of EN10204, type 2.2. It does not meet the requirements of type 3.1.
- Radiographic Inspection: Met requirements.
- The strength and elongation properties reported here were obtained from tensile specimens artificially aged at 105°C (220°F) for 48 hours.
- Strength values in SI units are reported to the nearest 10 MPa converted from actual data. Preheat and interpass temperature values in SI units are reported to the nearest 5 degrees.

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Daniel Gaul, Certification Supervisor

Date

July 05, 2023

Regis Geisler, Manager, Consumable Compliance

Date