

DURAMAX NICKEL ALLOY ELECTRODE DMNICKEL055

Classification: ENiFe-CI AWS A 5.15 / ASME SFA 5.15

Description, Characteristics & Applications:

DURAMAX NICKEL055 (ENiFe-CI) electrode is used for welding cast irons to other cast irons as well as for joining cast irons to mild steels. It is also readily used for the repair of castings. DMNICKEL055 welds are moderately hard and require carbide tipped tools for machining. A preheat and inter-pass temperature of not less than 350°F is required during welding to prevent cracking.

Typical Chemical Composition (%)

C	Mn	Si	S	Fe	Ni	Cu	Al	TOE
2.0 max	2.5 max	4.0 max	0.03 max	REM	45.0-60.0	2.5 max	1.0 max	1.0 max

Deposited Chemical Composition (%) (Typical)

C	Mn	Si	S	Fe	Ni	Cu	Al	TOE
0.94	1.02	1.48	0.009	REM	50.23	0.091	0.46	<1.0

Typical Mechanical Properties as Welded

Tensile Strength (n/mm ²)	Yield Strength (n/mm ²)	Elongation (%)	Hardness (BHN)	Ferrite WRC (FN)	CVN Impacts (J)	
					@	°C
550	380	16.9%	182-192	-----	-----	

Typical Welding Parameters DCEP or AC

Diameter	Type of Current	Amperage Range		Voltage Range
		Flat	Out of Position	
3/32"	DCEP	70 - 80	65 - 80	20 - 23
1/8"	DCEP	80 - 110	75 - 95	21 - 24
5/32"	DCEP	110 - 140	110 - 120	22 - 25
3/16"	DCEP	120 - 160	Not recommended	23 - 26

NOTE: Maintaining a proper welding procedure, including pre-heat and interpass temperatures, may be critical depending on the type and thickness of material being welded.

POLARITY: DCEP

DCEP: DC, Electrode Positive (reverse polarity) has the most weld penetration

USE LESS AMPS ON THIN METAL; MORE AMPS ON THICK METALS