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 (%)

AWS Spec.	C	Mn	Si	S	Fe	Ni	Cu	Al	TOE	
A5.15	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	
Typical	0.94	1.02	1.48	0.009	REM	50.23	0.091	0.46	<1.0	

Typical Mechanical Properties as Welded

Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (%)	Hardness (BHN)
550	380	16.9	182-192

Typical Welding Parameters DCEP

Diameter	Type of Current	Amperage Range		Voltage Range
		Flat	Out of Position	
3/32"	DCEP	70 - 85	65 - 75	20 - 23
1/8"	DCEP	85 - 110	80 - 90	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