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ISO 9001:2008 REGISTERED
Certificate No.: 50040 & 50415

ENiFe-CI DATA SHEET

Pinnacle Alloys ENiFe-CI (55)

AWS CLASS ENiFe-CI

CODE AND SPECIFICATION DATA:

AWS A5.15 ASME SFA 5.15; UNS W82002

DESCRIPTION:

Pinnacle Alloys ENiFe-CI can be used for making repair welds on, as well as for joining, work pieces of various types of cast iron, including nodular iron, and for welding them to steel and some nonferrous base metals. Castings containing phosphorous levels higher than normal (approximately 0.20% phosphorous) are more readily welded using these electrodes than with an electrode with the ENi-CI classification. Experience has shown that satisfactory welds can be made on thick and highly restrained weldments, and on high-strength and engineering grades of cast iron. preheat and interpass temperature of not less than 350°F is typically used during welding to prevent cracking.

DIAMETERS: 3/32", 1/8", 5/32"

WELDING POSITIONS: All positions



TYPICAL DEPOSIT COMPOSITION:

	AWS Spec	Weld Metal Analysis (%)
Aluminum (Al)	1.00	0.50
Carbon (C)	2.00	1.30
Copper (Cu) ^a	2.50	1.00
Iron (Fe)	Balance	Balance
Manganese (Mn)	2.50	0.40
Nickel (Ni) ^b	45.0-60.0	50
Silicon (Si)	4.00	1.00
Sulfur (S)	0.03	0.003

NOTE: Single values are maximums.

^a Copper plus incidental Silver

^b Nickel plus incidental Cobalt

SOWESCO, LLC

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TYPICAL MECHANICAL PROPERTIES:

	AWS Spec (min)	As Welded
Ultimate Tensile Strength	Not required	58,000-84,000 psi (400-579 MPa)
Yield Strength	Not required	43,000-63,000 psi (296-434 MPa)
Percent Elongation in 2"	Not required	6-18%
Hardness	Not required	165-218 BHN

TYPICAL WELDING PARAMETERS:

Diameter	Type of Current	Amperage Range		Voltage Range
		Flat	Out of Position	
3/32"	DCEP or AC	70-85	65-75	Variable
1/8"	DCEP or AC	85-110	80-90	Variable
5/32"	DCEP or AC	110-140	110-120	Variable

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

NOTICE: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. An example of such conditions would be electrode size, plate chemistry, environment, weldment design, fabrication methods, welding procedure and service requirements. Thus the results are not guarantees for the use in the field. The manufacturer disclaims any warranty of merchantability of fitness for any particular purpose with respect to its products.

CAUTION: Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standards A49.1, "Safety in Welding and Cutting," published by the American Welding Society, 8669 NW 36 Street, #130, Miami, FL 33126: OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210.

Pinnacle Alloys SDS sheets may be obtained on the website below.