

Eureka Welding Alloys

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TECHNICAL DATA FOR EUREKA 82 ELECTRODE

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Revised:

INTRODUCTION

Eureka 82 Electrode is a smooth running rutile coated stick electrode with a nickel base 182 chemistry. The electrodes are designed for superior weldability having no spatter, a stable arc, good wet out, and easy slag removal.

METALLURGICAL CHARACTERISTICS

Eureka 82 Electrode is a Nickel base, Chromium, Niobium alloy that has a tensile strength of 80,000 PSI and elongation of 30%. It has outstanding strength and toughness up to 2000 F. Eureka 82 has excellent fatigue strength, which resists heat checking from alternating heating and cooling cycles.

RECOMMENDED APPLICATIONS

Eureka 82 Electrode is for welding 600, and 800 type nickel base alloys. It is also used for making high strength welds on 9% nickel steels and for overlaying carbon steel. It has outstanding strength and toughness up to 2000° F. Eureka 82 weld deposits perform excellent in many hot working applications. In the steel mill industry it is used on tongs, entry roll guides, hot shear applications, and furnace parts. In the ring industry, it has found great success on axial cones and in the forging and extrusion industry, it is used for hard facing impressions and dummy blocks.

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WELDING PARAMETERS

SIZE	AMPERAGE RANGE
3/32" 2.4mm	70 – 120
1/8" 3.2mm	100 – 140
5/32" 4.0mm	140 – 170
3/16" 4.8mm	170 – 225
1/4" 6.35mm	225 – 300

TYPICAL CHEMISTRY

C	Mn	Si	Cr	Nb	Ni
.02	3.0	.50	20.0	2.5	Bal

PHYSICAL AND OR MECHANICAL PROPERTIES

TENSILE STRENGTH 80,000 psi

ELONGATION 30%

Preheating and post heating not normally needed but will depend entirely on the type of alloy being welded, and the preheat should always be sufficient to prevent cracking. The surface to be overlaid should be free of oil, scale, or any other foreign matter. All heat checks and cracks need to be removed. The lowest current possible should be used to minimize dilution.