

Eureka Welding Alloys

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TECHNICAL DATA FOR EUREKA ROBOWELD 350 METAL CORED WIRE

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Revised:

INTRODUCTION

Eureka RoboWeld 350 Metal Cored Wire was specifically developed for robotic welding of forging dies of most any designs. The RoboWeld wires when used with the **NEWELD** robotic process do not require peening of weld metal due to lower welding stresses. This is accomplished through a combination of five factors;

- 1) High quality wires utilizing the very best raw materials available.
- 2) The programmed pulse arc welding energy has lower penetration, dilution, and heat input.
- 3) The programmed robot maintains precise torch angles, stick out length and travel speeds.
- 4) Programed arc start up and arc ending amperages and voltages are ramped up and down.
- 5) Only a few layers of weld metal are required to achieve nearly pure weld metal.

The RoboWeld 350 produces a martensitic stainless steel deposit. The wire has a smooth spray transfer arc with nearly no slag to contend with. The wire is formulated to develop high quality weld deposits that are free of defects. The wire is designed for multi-pass welding which greatly increases productivity.

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METALLURGICAL CHARACTERISTICS

Eureka RoboWeld 350 Metal Cored Wire is a low carbon martensitic stainless steel alloy. The as welded hardness is 35 - 40 HRC and is readily machinable. **Eureka 350** weld deposits have a high tensile strength and are quite corrosion resistant. The weld deposits are ideally suited for heavy build ups in moderate wear conditions. The weld deposits flow very freely, producing extremely dense, crack, and porosity free weld deposits.

RECOMMENDED APPLICATIONS

Eureka RoboWeld 350 Metal Cored Wire is for the welding of 410 and 410NiMo castings and wrought metals. It is used in the repair, reclamation and joining of die casting dies, forging dies, arbors and shafts. It can be used as an underlay material in crack sensitive areas when a harder alloy is to be used as an overlay. Deposits polish to a high luster with a medium resistance to abrasion and are highly crack resistant due to its high tensile strength.

WELDING PARAMETERS

TYPE	SIZE	AMPERAGE	VOLTS
Metal Cored Wire	1/16" 1.6mm	180 – 350	24 – 31

**Use DC Current with a Stick Out of
1/2"-3/4" (12mm-19mm)**

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RECOMMENDED SHIELDING GASES

90% Argon, 10% Co2

92% Argon, 8% Co2

GAS FLOW RATE

1/16" 1.6mm 40-80 CFH

TYPICAL CHEMISTRY

C	Mn	Si	Cr	Ni	Mo
.06	.50	.40	11.5	4.5	.50

PHYSICAL AND OR MECHANICAL PROPERTIES

TENSILE STRENGTH 165,000 psi

ELONGATION 23%

AS WELDED HARDNESS

35- 40 HRC