

Eureka Welding Alloys

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TECHNICAL DATA FOR EUREKA ROBOWELD 88 METAL CORED WIRE

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Revised:

INTRODUCTION

Eureka RoboWeld 88 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 88 produces a martensitic H-19 hot working tool 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 88 Metal Cored Wire has an as welded hardness of 55 - 60 HRC. The weld deposits are very resistant to wear at elevated temperatures, display good thermal fatigue resistance, and retains good hot hardness. This alloy is an A.I.S.I. type H-19 hot work tool steel containing high levels of Chromium, Cobalt, Tungsten and Vanadium.

RECOMMENDED APPLICATIONS

Eureka RoboWeld 88 Metal Cored Wire is used on hot punches and trim dies, hot extrusion dies, hot press forging dies and forging die inserts. It is used in areas where severe heat and abrasion will be encountered. Some forged dies would be hand tools, gears, discs and connecting rods. This alloy performs well in shallow impressions and is often use as an overlay or hard facing alloy.

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	Mo	W	V	Co
.40	.35	.30	4.5	.45	4.3	2.0	4.3

PHYSICAL AND OR MECHANICAL PROPERTIES

Welded Hardness

55-60 HRC

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TEMPERING DATA

The tempering data is to be used as a guide. Your results may differ due to the many variables in the utilization of this product.

SINGLE TEMPER CURVE EUREKA 88

