

## DESCRIPTION

**Eureka 62 Electrode** is a Nickel base, Chromium, Molybdenum, Columbium, alloy that can be work hardened up to 46 HRC for high wear or abrasive environments. **Eureka 62 Electrode** has outstanding strength and toughness up to 2000 ° F., which is derived from the solid solution strengthening affects of the refractory metals, columbium and molybdenum. **Eureka 62 Electrode** being nickel base has excellent fatigue strength, which resists heat checking from alternating heating and cooling cycles.

## RECOMMENDED APPLICATIONS

**Eureka 62 Electrode** 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 rolling industry, it has found great success on axial cones. In the forging and extrusion industry, it is used for hard facing impressions and dummy blocks.

## PREPARATION AND WELDING PROCEDURE

1. Impressions or surfaces to be welded must be free of scale, dirt, or any other foreign matter.
2. All cracks and heat checks must be removed entirely. This can be accomplished by grinding or machining and or air carbon arc gouging.  
**Note: If air carbon arc gouging is to be utilized. Then preheating prior to gouging will be necessary.** In stock removal, allow at least three layers (3/8") of weld metal to guard against dilution or admixture with the base metal.

## **PREPARATION AND WELDING PROCEDURE**

(continued)

3. Select a preheat temperature according to the base metal (heat for one hour per inch maximum cross sectional thickness at temperature.)
4. Select D.C. reverse polarity.
5. Select the proper diameter electrode according to job size or repair area.
6. Select the lowest amperage needed to effectively weld so as not to overheat or disturb the base.
7. Utilize short 3" – 4" stringer beads – peening thoroughly after each pass to offset shrinkage and welding stress in the crater of the weld.
8. Control interpass temperature as close as possible to preheat temperature.
9. After welding, **post heat** at the same temperature used to preheat to equalize thermal gradients.
10. After post heating, slow cool the die by covering it with heat resistant blankets (Kaowool, Cerawool) to 150°F. minimum.
11. Return the die or component to the furnace for tempering. Temper the die or component according to the temper chart of the welding alloy for desired hardness.
12. Remove from furnace and slow cool (**same as Step 8**).
13. Double temper (**highly recommended**).

## HEAT TREATMENT

In general, no heat treatment is required unless it is being applied to the same alloy type base metal where solution annealing is required. In this case, contact Eureka for data. **If an iron base alloy is used as an underlay, it must be allowed to cool to room temperature and be tempered prior to applying Eureka 62.**

## HARDNESS DATA BASED ON PURE WELD METAL

As welded 14 - 20 HRC

Work hardened 44 - 46 HRC