Eureka Welding Alloys
2000 E. Avis Drive
Madison Heights, MI 48071
Phone: 248-588-0001 Fax: 248-585-7711 Toll Free: 800-962-8560
E-mail : info@eurekaweldingalloys.com Website: www.eurekaweldingalloys.com

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INTRODUCTION

Eureka No. 7 Alloy has been developed to produce extremely hard dense overlays resistant to erosion and high abrasion at elevated temperatures. **Eureka No. 7 Alloy** also can be used for moderate impact applications.

METALLURGICAL CHARACTERISTICS

Eureka No. 7 Alloy gives ultimate hardness with single pass deposits. Hardness range between 55 - 60 Rockwell "C". The resultant deposit will product a high Chromium Carbide Matrix.

APPLICATIONS

Eureka No. 7 Alloy is used on the following applications: coke handling equipment, sinter plant clod crushers, slag handling equipment, pug mill paddles, hot mill guides, iron ore wear plates, high speed fans and coke crushers.

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.

3. Select a preheat temperature according to the base metal (heat for one hour per inch maximum cross sectional thickness at temperature.)

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4. Select D.C. reverse polarity.

PREPARATION AND WELDING PROCEDURE
(continued)

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).

Standard Size	Standard Packaging
1/8”	10 lb.
5/32”	10 lb.
3/16”	10 lb.