Eureka Welding Alloys

2000 E. Avis Drive
Madison Heights, MI 48071
Phone: 248-588 0001 Fax: 248-585 7711 Toll Free: 800-962 8560

WELDING PROCEDURE FOR

EUREKALLOY CHD AND CWD

A) Preheat and maintain 900°F Max (480°C) for one hour per inch of thickness.

B) For both CHD and CWD use the GMAW with DCRP under

90% Argon 10% Co2 or 98% Argon 2% Co2 shielding gas with a flow rate of 110-120 C.F.H.

C) For 1/8” diameter CHD run at 28-32 volts and 350 – 550 amperes. For 1/”8 diameter CWD wire run a maximum of 28 volts 380 amperes, surface defects may begin to show up if it is run too hot. Make sure that no cold laps occur, meaning don't let the weld metal roll in front of the arc, the CWD alloy does not flow as easily as the CHD. Adjust travel speed and torch angle to control cold laps.

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Starting torch travel speed for 1/8” CHD and CWD wires is estimated at 15-18 inches per minute. Eureka CWD needs to be run at a speed as to not cause cold laps.

D) Apply approximately 1 3/ 8” (34.9 mm) of Eureka CHD on all iron base surfaces. Eureka CHD may be applied using overlapped stringer beads.

E) Do not fill craters as it will cause shrinkage cracking. Just extinguish the arc quickly.

F) Thoroughly peen all weld deposits immediately after each layer.

G) Post heat the first die at 900°F (480°C) while the second die is being welded. Place second die in when complete to equalize both dies for 2 hours minimum at 900°F (480°C).

H) Slow cool in furnace to 150°F (65°C) minimum.

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I) Stress relief the Eureka CHD and base metal immediately after slow cooling at 1025°F Max (552°C) for 15 hours.

J) Prior to welding CWD preheat the base metal at 900°F (480°C) for one hour per inch of thickness. Apply approximately a 1/2" (12.7) and clean up 3/16” (4.8) max of Eureka CWD as the upper most working surface. Eureka CWD may be applied using overlapped stringer beads.

K) Do not fill craters as it will cause shrinkage cracking. Just extinguish the arc quickly.

L) Thoroughly peen all weld deposits immediately after each layer.

M) Immediately after welding, the dies should be post heated back to 1025°F max (552°C) to equalize weld deposits and base metal for 2 hours minimum.

N) Furnace cool to a minimum of 150°F (65°C).

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O) Stress relief the welded section immediately after cooling at 1025°F max (552°C) for 15 hours.

P) Slow cool at approximately 100°F (38°C) per hour.

Q) As welded hardness should be approximately 24-30 HRC.