

TYPICAL WELDING PROCEDURE

The procedure that follows are those that should be used when repairing most

The following procedures should be utilized for the repair of

Press Dies 2021 and 2010

- A. Qualify the base metal composition and hardness.
 - B. Visually inspect the tool or die to determine the reason for failure and establish the exact area of repair. Record any dimensions that will be altered during the course of repair for reference when remachining to original dimensions.
 - C. Machine, grind, or **Arc Air Gouge** defective areas, etc. If arc air gouging is the preparation method to be used, **then preheating before preparation is recommended.** Preparation for welding by remachining or grinding does not require preheating.
 - D. **Preheat 800°F. - 900°F.** for one hour per inch of thickness.
 - E. Select the appropriate welding process for the repair condition encountered.
 - 1. The **G.M.A.W.** or Flood welding process **using direct current reverse polarity (D.C.R.P.)** use 75% argon, 25% CO₂ Or 90% argon 10% CO₂ shielding gas with flow rate of 60 – 90 C.F.H.
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- F. **Alloy Selection:** Use **Eureka 450 ACW** in the lower 2/3 section and cap the remaining upper portion with **Eureka 650 ACW**
- G. Peen each weld deposit immediately after breaking arc.
- H. Eliminate all undercuts, square-up rounded corners, etc.
- I. Immediately after welding, the dies should be **post heated** back to **preheat Temperature 800°-900°F.** to equalize weld deposit and tool or die temperature prior to slow cooling. **If the preheat temperature has been maintained during welding, this step may be skipped; thereby ,commencing immediately to the following step.**
- J. **Slow cool** welded tool or die to room temperature for a minimum of **150°F.**
- K. **Temper** the weld deposit at 1050°F.
- L. Slow cool to room temperature.
- M. Commence with machining.
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