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COR™FORGE F35 FC

DESCRIPTION

COR™FORGE F35 FC is a flux-cored, chrome-nickel-moly, iron base alloy designed for welding wrought and cast steel. F35 is optimally suited for forging die applications, primarily for the repair and reclamation of hammer dies. The welding characteristics facilitate continuous multiple passes, without pausing for slag removal. F35 is also an excellent plant maintenance alloy, providing 160,000 psi tensile strength fabricating welds.

APPLICATIONS

Forging applications include repair and buildup of hammer dies, rams, and sow blocks. F35 also works extremely well for joining hardenable steels such as 4140. The undiluted weld deposits are fully machinable.

PROCEDURE

A minimum preheat/interpass temperature of 800°F is recommended for forging dies. Post heat at 800°F for 3 hours after welding, and then allow the deposit to cool below 200°F. Temper at 1050°F for 1 hour/inch thickness. Preheat and post heat according to the base material for all other applications.

WELDING PARAMETERS

Type	Size	Volts	Amps	Shielding Gas/Flux
FC-G	.045"	18-20	150-200	100% CO ₂ or Ar-CO ₂ mixtures
FC-G	1/16"	23-25	200-400	100% CO ₂ or Ar-CO ₂ mixtures
FC-G	3/32"	29-31	350-600	100% CO ₂ or Ar-CO ₂ mixtures
FC-G	1/8"	30-32	450-650	100% CO ₂ or Ar-CO ₂ mixtures

Submerged arc wires are available in 1/16"-3/16"; Use a neutral flux.

MECHANICAL PROPERTIES AFTER 1050°F TEMPER, 10 HOURS

Hardness: 35-40 Rc
 Tensile: 165,000 psi
 Yield: 145,000 psi
 Elongation: 16%
 R.A.: 52%

CLASSIFICATION

Chrome-Nickel-Moly Iron base alloy