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COR™FORGE F114 FC

DESCRIPTION

COR™FORGE F114 FC is a flux-cored, nickel base alloy designed to prolong forging die life. F114 FC is alloyed with chromium, molybdenum, and cobalt to withstand stresses and oxidation at elevated temperatures. This is the softest alloy of a group of three: refer to Cor-Met F115 FC, and F116 FC.

APPLICATIONS

F114 FC is most often used for overlaying rotary forge hammer dies, and large, flat dies which are exposed to elevated temperatures for extended periods of contact. This material is not used for “finishing” dies, i.e. coining dies.

PROCEDURE

Preheat at 750°F. Use COR™FORGE F110, or COR™FORGE F111 as an underlay. Apply F114 FC with stringer beads, or a slight weave. Temper at 1025°F for 10 hours, and furnace cool at a rate not exceeding 100°F/hour. The welded overlay may display some stress relief cracks which will not affect the forging die performance.

WELDING PARAMETERS

Type	Size	Volts	Amps	Stickout	Shielding Gas
FC-G	1/16"	18-22	225-275	5/8"	100% Ar or 75Ar-25CO ₂
FC-G	3/32"	22-26	210-450	3/4"	100% Ar or 75Ar-25CO ₂

MECHANICAL PROPERTIES

Hardness: 25-30 Rc as welded
Work hardens to 35 +

CLASSIFICATION

Modification of Udimet® 520

Udimet is a registered trademark of Special Metals Corporation.