SPECIAL METALS
Welding Products Company

INCO-WELD® 686CPT® Filler Metal

INCO-WELD 686CPT Filler Metal is used for gas-tungsten-arc and gas-metal-arc welding of duplex, super-duplex and super-austenitic stainless steels, as well as nickel alloys such as UNS N06059 and N06022, INCONEL alloy C-276, and INCONEL alloys 22, 625, and 686. It is also capable of being used to deposit overlays of outstanding corrosion-resistance onto a range of steels. The high alloy levels (of Cr + Mo + W) result in increased resistance to pitting, crevice and general corrosion. INCO-WELD 686CPT Filler Metal is of great value for service environments requiring general corrosion-resistance in HCl or sulfuric acid; for resistance to crevice corrosion in hot, concentrated acid chloride solutions such as sulfur dioxide, saturated NaCl solutions and oxidizing chloride solutions; and for resistance to intergranular attack, after sensitization, in highly oxidizing environments. Submerged arc welding can be done with INCOFLUX NT120 Submerged Arc Flux.

Specifications

AWS A5.14 ERNiCrMo-14 (UNS N06686)
ASME II, Part C, SFA-5.14, ERNiCrMo-14 (UNS N06686)
ASME IX, F-No.43
*(EN) ISO 18274 – SNi6686 (NiCr21Mo16W4)
*Supply to these specifications available upon request
For manufacture to ASME III (NCA3800, NB2400), and other specifications please refer your inquiry to the Technical Department prior to order placement.

Approvals

VdTUV 06808.00; 06809.00
Other approvals may be applicable. Please confirm details of current scope of approvals with the Technical Department prior to order placement.

Limiting Chemical Composition

Ni+Co	Remainder	Cu	0.5 max.
C	0.01 max.	Si	0.08 max.
Mn	1.0 max.	Ti	0.25 max.
Fe	5.0 max.	Cr	19.0-23.0
P	0.02 max.	Mo	15.0-17.0
S	0.02 max.	W	3.0-4.4
Al	0.5 max.	Others	0.50 max.

Typical Mechanical Properties

Tensile Strength, psi		110,000
	MPa	758
Elongation, (4d) %		35

Filler metals available on spool and in cut straight lengths in a variety of sizes selected from the following diameters:

Available Product Forms

mm in	0.8 0.030	0.9 0.035	1.0 0.040	1.14 0.045	1.2 0.047	1.6 0.062	2.4 0.093	3.2 0.125

Straight Lengths - 915 mm (36 in.) or 1000 mm (39 in.)