

GMAW Wire for Nickel and Nickel-Based Alloy

KMS-686

Classification

AWS A5.14/A5.14M	ERNiCrMo-14
JIS Z3334	SNi6686
EN ISO 18274	S Ni 6686
GB T15620	S Ni 6686

Shielding Gas:75% Ar+25%He

Applications and Features

- (1) KMS-686 is 57%Ni-21%Cr-16%Mo-4%W alloy.
- (2) It provides excellent oxidizing acid, reducing acid, pitting, and crevice corrosion resistance.
- (3) Suitable for welding Hastelloy C-22, Hastelloy C-276, Inconel Alloy 625 and Inconel Alloy 686.

Welding Position



Welding Instruction

- (1) Clean surface of base metal before welding.
- (2) Heat input should be controlled as low as possible.
- (3) For other instructions, please refer to Appendix B.

Typical Chemical Composition of Wire (wt%)

C	Si	Mn	P	S	Cr	Mo	Fe	Al	W	Ni
0.01	0.07	0.30	0.001	0.001	21.20	15.90	0.40	0.20	3.40	58.10

Typical Mechanical Properties of Weld Metal

Tensile Strength	Yield Strength	Elongation	Charpy V-Notch	
N/mm ²	N/mm ²	%	°C	J
760	545	35	-	-

Size and Suggested Operating Range (DC+)

Diameter (mm)	0.8	0.9	1.2	1.6
Current (A)	140~180	160~200	190~230	200~250
Voltage (V)	24~27	25~28	26~30	29~33