WISDOM Thermal Spray Consumables

Nickel base alloy

Inconel 718 **DATA SHEET**

November 2015

Introduction

Inconel 718 is a nickel super alloy frequently used for cryogenic storage tanks, turbines, down hole shafting and well head parts. High tolerance to extremely high and low temperatures allow Inconel 718 to be welded and annealed into products that will withstand extreme conditions. Other uses include jet rocket, nuclear fuel, and pump body components.
It equivalent to: TAFA 78T, Sulzer Metco 8718, PMET 818.

Surface Preparation

Surface should be clean, white metal, with no oxides (rust), dirt, grease, or oil on the surface to be coated. Note: It is best not to handle surfaces after cleaning. Recommended method of preparation is, to grit blast with 24 mesh aluminum oxide, rough grind, or rough machine in a lathe.

Application

- Coating
- Casings
- Instrumentation components
- Nuclear fuel element spacers
- High-strength bolts

Chemical composition

Type	Composition(100%)							
	Ni	Cr	Fe	Others		Ti	Al	Co
Inconel 718	50-55	17-21	Bal	Nb+Ta: 4.75-5.5		0.65-1.15	0.2-0.8	Max 1.0
	C	Mn	Si	P	S	Cu	B	Mo
	Max 0.08	Max 0.35	Max 0.35	Max 0.015	Max 0.015	Max 0.3	Max 0.006	3.0

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Specifications

Grade	GE
Inconel 718	B50TF202

Physical Properties

Grade	Density	Melting Point
Inconel 718	8.2g/cm3	1260℃-1340 ℃

Typical Deposit Characteristics

Typical Hardness	Bond Strength	Deposit Rate	Deposit Efficiency	Machine Ability
HRC 30	9000 psi	10 lbs /hr/100A	70%	Good

Standard Sizes & Packing

Diameter	Dimension Tolerance	Packing	Wire Weight
1/16"(1.6mm)	+0/-0.05	D 300 Spool	15kgs(33 lbs)/spool
2.0mm	+0/-0.05	D 300 Spool	15kgs(33 lbs)/spool
1/8"(3.17mm）	+0/-0.05	Coil Form	20-400kgs/coil

Other sizes can be produced by customers' requirement.

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