Corrosion resistance Inconel 625 Thermal Spray Wire 1.6mm For Aerospace Industry

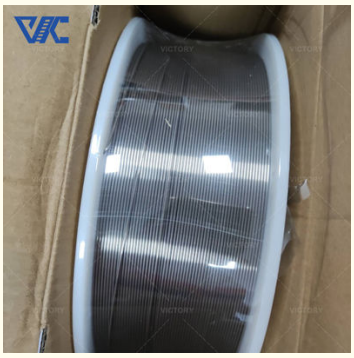
Our Product Introduction

Basic Information

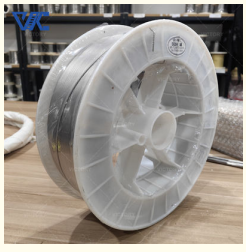
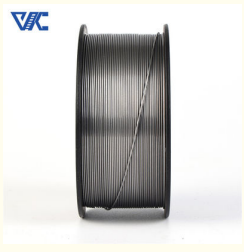
- Place of Origin: China
- Brand Name: Victory
- Certification: CE,ROHS,ISO 9001
- Model Number: inconel 625
- Minimum Order Quantity: 5 Kg
- Price: Negotiable
- Packaging Details: Plastic film or waterproof woven bag inside, wire packed in spool put into carton,coil wire or strip wire put into wooden case
- Delivery Time: 7 to 20 Days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month

Product Specification

- Product Name: Thermal Spray Wire
- Grade: Metco 8625/inconel 625
- Material: Ni+Cr+Mo
- Size: 0.8mm 1.2mm 1.6mm 2.4mm 3.2mm
- Coating Hardness: HRB 92
- Bonding Strength: 48.26 N/mm2
- Tensile Strength: 760 MPa
- Yieldstrength: 345 Mpa
- Elongation(%): 30 %
- Brinell Hard: ≤220
- Application: Turbine Engine Components, Combustion Chamber Components, Gas Turbine Blades
- Highlight: **Ni95Al5 Wire**, **Aluminium Spraying Ni95Al5 Wire**



More Images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Product Description

Product Introduction

Product Description:

Product Overview: Thermal Spray Wire

Inconel 625 is a common superalloy that is widely used in thermal spray applications in the aerospace sector. It is composed of alloy components such as nickel, chromium and molybdenum, with excellent corrosion resistance and high temperature strength.

Thermal spraying is a coating technique in which a metal powder or silk material is sprayed to form a protective coating attached to the surface of the substrate. Inconel 625 thermal spray wires are widely used in key components such as turbine engines, combustion chambers and nozzles in the aerospace industry.

The Inconel 625 has excellent high temperature resistance and is able to maintain stable performance in extreme operating environments. It withstands challenges such as high-temperature corrosion, oxidation and thermal shock, while maintaining a low coefficient of thermal expansion, providing reliable mechanical properties and dimensional stability.

In addition, Inconel 625 thermal spray wire has good corrosion resistance and can perform well in harsh environments such as acid, alkaline and salt corrosion. It also has excellent fatigue resistance and resistance to stress corrosion cracking, making it ideal for a variety of critical components in the aerospace sector.

Features:

High temperature resistance: The Inconel 625 has excellent high temperature stability and is able to maintain strength and creep resistance in extreme high temperature environments.

Corrosion resistance: The material has excellent corrosion resistance, can resist acid, alkali, salt and other corrosive media, so that it has excellent durability in corrosive environments.

Fatigue resistance: Inconel 625 has good fatigue resistance and can withstand the stress caused by cyclic loads and temperature changes.

High strength: The material has excellent mechanical properties, high strength and excellent tensile, yield and ductility properties.

Technical Parameters:

Chemical composition:
Nickel (Ni) : about 61%
Chromium (Cr) : about 21%
Molybdenum (Mo) : about 9%
Iron (Fe) : about 5%
Silicon (Si) : about 0.5%
Manganese (Mn) : about 0.5%
Carbon (C) : about 0.1%
Titanium (Ti) : about 0.4%
Aluminum (Al) : about 0.4%
Melting point: Approximately 1350°C (2462°F)
Density: About 8.4 g/cm ³ (0.304 lb/cm ³)
Thermal spraying methods: Common thermal spraying methods include Plasma Spray and High Velocity Oxygen Fuel Spray.

Item	Inconel 625	Ni95Al5	45CT	Monel 400	HC-276	Cr20Ni80	K500
C	≤0.05	≤0.02	0.01-0.1	≤0.04	≤0.02	≤0.08	≤0.25
Mn	≤0.4	≤0.2	≤0.2	2.5-3.5	≤1.0	≤0.06	≤1.5
P	≤0.01	≤0.01	≤0.01	≤0.01	≤0.01	≤0.02	≤0.01
S	≤0.01	≤0.01	≤0.01	≤0.01	≤0.01	≤0.01	≤0.01
Si	≤0.15	≤0.2	≤0.2	≤0.15	≤0.08	0.75-1.6	≤0.5
Cr	21.5-23	≤0.2	42-46	-	14.5-16	20-23	-
Ni	Rest	Rest	Rest	65-67	Rest	Rest	Rest
Cu	-	-	-	Rest	-	-	27-33
Mo	8.5-10	-	-	-	15-17	-	-
Ti	≤0.4	0.4-1	0.3-1.0	2.0-3.0	-	-	0.35-0.85
Al	≤0.4	4--5	-	≤0.5	-	-	2.3-3.15
Fe	≤1.0	-	≤0.5	≤1.0	4.0-7.0	-	≤1.0
Nb	3.5-4.15	-	-	-	-	≤1.0	-
Co	-	-	-	-	-	-	-
V	-	-	-	-	≤0.35	-	-
W	-	-	-	-	3.0-4.5	-	-
Impurities	≤0.50	≤0.50	≤0.50	≤0.50	≤0.50	≤0.50	≤0.50

Alloy	Tensile strength Rm N/mm²	Yieldstrength R P0. 2 N/mm²	Elongation(%)	Brinell hardness HB
625	760	345	30	≤220

Applications:

Thermal Spray Wire - Perfect Solution for Aerospace Industry

Turbine engine components: Inconel 625 thermal spray wire is commonly used in the manufacture of critical components such as combustion chamber components, turbine blades and burner nozzles for turbine engines to provide high temperature and corrosion resistance.

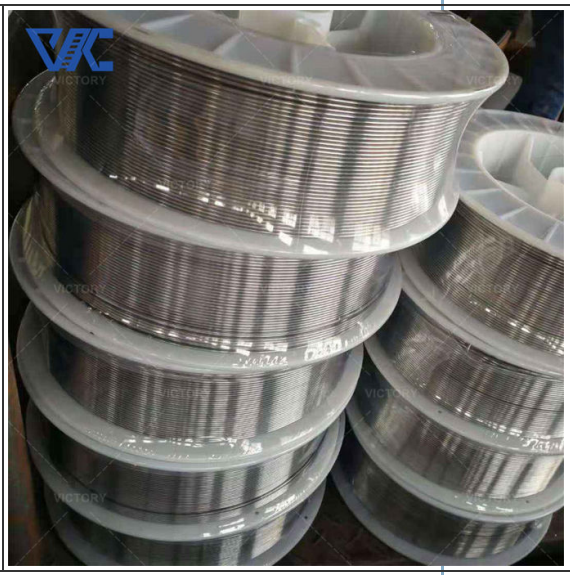
Gas turbine blades: In the aerospace sector, Inconel 625 thermal spray wire can be used as a protective coating for gas turbine blades, providing durability at high temperatures and thermal barrier protection.
Combustion chamber components: Due to the high temperature and corrosion resistance of Inconel 625, it can be used to manufacture combustion chamber components, such as combustion chamber panels and nozzles, to cope with the high temperatures and corrosive gases produced by combustion.
Exhaust system components: Inconel 625 thermal spray wire can be used in exhaust system components of aerospace engines, such as nozzles and exhaust pipes, to provide high temperature and corrosion resistance.

Customization:

Size range
Wire: 0.8mm 1.2mm 1.6mm 2.4mm 3.2mm.

Package
Products are generally supplied in standard cardboard boxes, pallets, wooden boxes. Special packaging requirements can also be accommodated. (also depend on the customers' requirements)
For the Thermal spray wires , we wind small size wire less than 1.6mm wires on spools. Bigger size over than 2.4mm in coils. Then put spools into cartons, Then put the cartons onto pallet or wood box.

Our Services
1) Free sample could be supplied for testing purpose.
2) Customized lable, packing, OEM service.
3) Mill test certificate will be provided after production.
4) Good packing methods to keep goods statable.



FAQ:

Is the thermal spraying process of this material complex?
Thermal spraying of Inconel 625 wire involves specific spraying equipment and processes, including the adjustment of spraying parameters and the mastery of spraying technology. The right equipment and good operating skills are essential to achieve good spray quality.

What is the typical coating thickness for Inconel 625 thermal spray wire?
The thermal spray coating thickness of Inconel 625 typically ranges from tens to hundreds of microns, and is adjusted according to the specific application needs.

Does the use of this material in the aerospace field require special certification?
Yes, the use of materials and components in the aerospace sector often requires special certification and compliance with strict standards to ensure their performance and safety.

What are the advantages of Inconel 625 thermal spray wire compared to other thermal spray materials?
Inconel 625 has excellent high temperature and corrosion resistance compared to other thermal spray materials. Its high temperature stability and corrosion resistance make it one of the preferred materials in the aerospace industry. It can withstand mechanical stress and chemical corrosion at high temperatures, while providing reliable protection and extended service life.

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