Custom Cr10Ni90 Wire Nickel Chromium Electric Resistance Wire Heating Wire

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Victory
- Certification: CE
- Model Number: Cr10Ni90
- Minimum Order Quantity: 5
- Packaging Details: Spool package with Carton box, Coil package with polybag for Resistance wire
- Delivery Time: 5-21 days
- Payment Terms: L/C, T/T, Western Union, MoneyGram
- Supply Ability: 300 tons per month

Product Specification

- Material: Nickel, Chromium
- Nickel(Min): 89%
- Tensile Strength: 637MPA
- Magnetic Permeability: 0.78+/-0.05
- Elongtation: ≥20%
- Application: Heating, Resistivity
- Condition: Hard / Soft
- Sureface: Bright, Oxided, Acide
- Delivery Time: 7-20 Days
- Name: NiCr Alloy Wire
- Highlight: **Cr10Ni90 Wire**, **Nickel Chromium Electric Resistance Wire**, **Cr10Ni90 Electric Resistance Wire**

Our Product Introduction

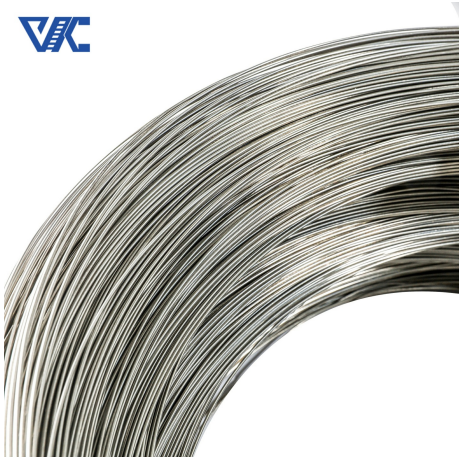
Product Description

Introduction:

Cr10Ni90 alloy wire is a highly corrosion-resistant nickel-based alloy wire containing 10% chromium and 90% nickel. It has excellent corrosion resistance and oxidation resistance, and can maintain its stable performance in harsh chemical environments and high temperature conditions.

This alloy wire is often used in the manufacture of chemical equipment, petroleum processing equipment, and high-temperature furnaces.

In addition, Cr10Ni90 alloy wire also has good mechanical properties and processability, making it easy to manufacture products of various shapes and sizes to meet the needs of different applications.



Elements:

When selecting the appropriate diameter and length of Cr10Ni90 alloy wire for heating applications, you need to consider the following factors:

1. Required resistance value: First determine the required resistance value, that is, the resistance you want to produce through the Cr10Ni90 alloy wire. The resistance value can be calculated by the resistance formula R = ρ * (L/A), where R is the resistance value, ρ is the resistivity of Cr10Ni90 alloy wire, L is the length, and A is the cross-sectional area. The resistance value can be controlled by adjusting the length and diameter.

2. Heating power and temperature: Determine the required heating power and operating temperature. Heating power can be calculated by the power formula P = I^2 * R, where P is the power, I is the current, and R is the resistance value. According to the required heating power and operating temperature, the appropriate resistance value and current can be selected to determine the diameter and length of the alloy wire.

3. Thermal conductivity and heat dissipation: Consider the thermal conductivity performance and heat dissipation conditions of Cr10Ni90 alloy wire. A thicker diameter provides a larger surface area and better heat dissipation, and is suitable for situations where higher heat dissipation performance is required. The smaller diameter provides higher resistor density for applications where space is limited or higher power density is required.

4. Current and Power: Determine required current and available power. Thicker diameters can handle higher currents, while thinner diameters may require lower currents. Make sure the selected diameter and length meet the current requirements and match the available power supply.

Technical Parameters:

Performance material		Cr10Ni90	Cr20Ni80	Cr30Ni70	Cr15Ni60	Cr20Ni35
Composición	**Ni**	90	Rest	Rest	55.0 61.0	34.0 37.0
	Cr	10	20.0 23.0	28.0 31.0	15.0 18.0	18.0 21.0
	Fe		≤1.0	≤1.0	Rest	Rest
Temperatura máxima°C		1300	1200	1250	1150	1100
Punto de fusion °C		1400	1400	1380	1390	1390
Densidad g/cm3		8.7	8.4	8.1	8.2	7.9
Resistividad μΩ·m,20°C		0.76±0.05	1.09±0.05	1.18±0.05	1.12±0.05	1.00±0.05
Alargamiento a la ruptura		≥20	≥20	≥20	≥20	≥20
Calor especifico J/g.°C			0.44	0.461	0.494	0.5
Conductividad térmica KJ/m.h°C			60.3	45.2	45.2	43.8
Coeficiente de expansión de líneas a×10-6/(20 1000°C)			18	17	17	19
Estructura micrográfica			Austenite	Austenite	Austenite	Austenite
Propiedades magnéticas			Nonmagnetic	Nonmagnetic	Nonmagnetic	Weak magnetic

Form	**Specification**	
Wire	Diameter=0.025mm~8mm	
Flat wire	Width=0.40~6.0mm	Thick=0.03~0.50mm
Strip	width=8~250mm	Thick=0.05~3.0mm
Bar	Diameter=8~100mm	Long=50~1000

Service:

By choosing our NiCr alloy heaters, you gain access to a heating solution that combines efficiency, reliability, and flexibility. We are committed to delivering top-quality products and services that enhance your production efficiency and reduce energy consumption. With our heaters, you can expect outstanding performance and a customized approach to meet your heating needs.

contact us
email:victory@dlx-alloy.com
Oem service:
Welcome customized size
We are experience factory for OEM&ODM service

Size dimension range:

Wire: 0.01-10mm
Ribbons: 0.05*0.2-2.0*6.0mm
Strip: 0.05*5.0-5.0*250mm
NiCr series: Cr20Ni80, Cr30Ni70, Cr15Ni60, Cr20Ni35, Cr20Ni30

Packing and Shipping:

Sturdy cardboard boxes are used for packaging NiCr Alloy.
Each box has dimensions of approximately 26 cm (length) x 26 cm (width) x 30 cm (height).
The shipping method for NiCr Alloy depends on the customer's requirements.

FAQ :

What are the applications of NiCr alloy in ceramic manufacturing?
NiCr alloys are often used as heating elements in kilns, sintering furnaces and drying equipment in ceramic manufacturing to control the sintering and drying processes of ceramics.

What are the resistance properties of NiCr alloy?
NiCr alloy has high resistance properties, which means that it generates a lot of heat as it passes through the alloy. This makes it ideal for heating element and resistor applications.

What is the oxidation resistance of NiCr alloy?
NiCr alloy has good oxidation resistance, which means it can work at high temperatures for a long time without being affected by oxidation. This makes it an alloy for use in air or other oxidizing atmospheres.

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