

ALLOY BARS



- MONEL ●
- INCONEL ●
- INCOLOY ●
- HASTELLOY ●

Round Bar & Rod |
Flat Bar
Square Bar
Hexagon Bar

CONTENT

1 ~ 2	ABOUT US
3 ~ 6	WHY CHOOSE US
7	OUR STORY
8 ~ 12	SOLUTIONS
43 ~ 53	GRADES AVAILABLE

Nickel Alloy Round Bar & Rod 13

Basic Information	.....15
Manufacturing Process	.....16
Drawing & Formula	.....16
Technical Sheet	.....17
Package & Logistics	.....19
FAQ	.....19

Nickel Alloy Flat Bar 21

Basic Information	.....23
Manufacturing Process	.....24
Drawing & Formula	.....24
Technical Sheet	.....25
Package & Logistics	.....27
FAQ	.....27

Nickel Alloy Square Bar 29

Basic Information	.....31
Manufacturing Process	.....32
Drawing & Formula	.....32
Technical Sheet	.....33
Package & Logistics	.....35
FAQ	.....35

Nickel Alloy Hexagon Bar 37

Basic Information	.....39
Manufacturing Process	.....40
Drawing & Formula	.....40
Technical Sheet	.....41
Package & Logistics	.....42
FAQ	.....42

Mission

At Rahul Ferrometal, its mission is leading the evolutions of this world.

As a raw material producer, we believe that each time new materials are successfully developed, the world will undergo evolution. To date, common carbon steels and stainless steels are difficult to deal with tasks and requirements faced by many high-tech industries and in extreme production environments. With global industrial upgrading, nickel alloys are emerging to replace previous materials for enhanced efficiency and more lasting performance of completing tasks. We are professional manufacturer of nickel alloys and what we keep doing is to supply high quality nickel alloy products to the world. We have our responsibility and role to play in the popularity of the superior nickel alloys, and usher a new chapter into our world industry.

Vision

Our vision is to see the world development unconstrained by the materials.

This is an age of rapid development. As technology advances at the lightning speed, it poses increasingly high requirements on materials. While now material becomes a bottleneck on technology breakthrough, putting sand in the wheels of development, a hinderance that cannot be ignored. As raw material manufacturers, we should develop and progress on materials continuously so that

we can introduce more advanced materials to the market. We firmly believe that material breakthrough will set off a chain effect on world technology.

Values

Our value is to provide excellent products, information and service.

Product is the core of everything. We hope that all of our customers will feel at absolute ease using our products, while the product quality is the best bridge that builds our mutual trust. Hence, we've developed a very strict quality control system. Each product is subject to rounds of inspections by our professional inspectors. We believe that, only when we have 100% confidence in our products can our customers experience ease and satisfaction using them.

As nickel alloys are not as popular in applications as other steels, people's knowledge on these advanced alloys are also relatively limited. We are nickel alloy specialist; we devote ourselves to disseminating the knowledge of these materials. We will deliver new articles on nickel alloys on Media regularly. Hope with our efforts more people will know these excellent materials.

If you have any demand on nickel alloys, please feel free to send us enquiries. Our team will solve your demand with a very professional attitude. Our goal is to start every cooperation with excellent service.

As a professional manufacturer of nickel alloys in India, Rahul Ferrometal CO., LIMITED provides a quite wide range of nickel alloy products to our worldwide customers. The forms of our supply come into five categories: Pipes, Fittings, Bars, Sheets and Wires. Monel, Inconel, Incoloy, Hastelloy are our four major grades. We also have other special alloys like Nimonic, Nitronic, pure-nickel and etc. to cater for your custom demands. With 30 years' accumulated experience in alloy industry, we have developed mature and diverse quality control solutions to free you from purchasing worries. At Rahul Ferrometal, you buy trustworthy nickel alloys.

ABOUT US



WHY



CHOOSE

US



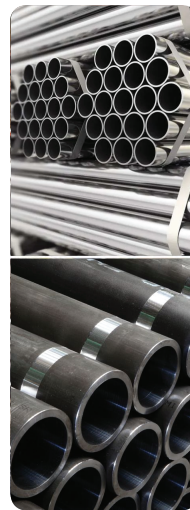
Quality Raw Material

Choosing raw material is the first step to quality control. This applies to all of our products. Our nickel alloy tube billets, ingots, and coils are all subjected to strict selection before putting into production.



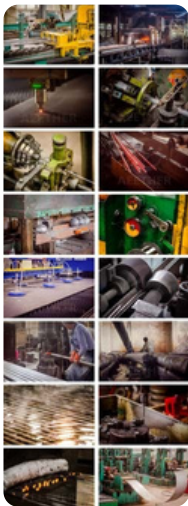
Huge Inventory

We have inventory for regular conventional products to solve regular and urgent demands. This enhances our supply chain efficiency. Meanwhile, it allows us to proceed with our production as plan and ensures production process.



Complete Process

We will not skip over any production process, even if it does not affect product look. We believe this is the basic requirement on product quality. If necessary, we will keep honing our products so that they can demonstrate workmanship.



Appearance Artful

Our products boast artful appearance. This cannot be done without our nearly fastidious attitudes on raw material selection, emphasis on finish treatment and skillful adapting of our equipment's functionality by our experienced engineers.



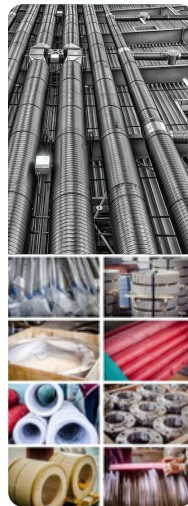
Strict Quality Control

Our products are subjected to strict quality inspection with original mill certificates issued by our officers or third party inspection with MTC issued by independent institutes. The final result is that we will never deliver unqualified products.



Strong Packing

Even the best-built products, if without suitable packing, may encounter problems during transportation. Hence, we are attentive to packing details. Packing is our shield to product transportation safety.



OUR STORY

Metal Experience

Rahul Ferrometal has its predecessor specialize in stainless steel products. At 1989, our first company Civmats was founded. Since then we have put into much efforts on stabilizing our product quality at an industrial higher level while experimenting on lowering the cost without any compromise on quality. With great efforts come our customers' recognition on our company and our products. Built on this solid base, Rahul Ferrometal keeps growing strong, aiming to bring values to our customers, staffs and stockholders.

Nickel Alloy

2009 is the 20th anniversary of our foundation. At this juncture, we decide to evolve from ourselves and create this new brand Rahul Ferrometal. We've realized that nickel alloys will be the future of this industry. We need to embrace this ever changing market with a completely new look. Hence, we've built a professional team constituted by industrial specialists and experienced talents, studying the past, the present and the future of nickel alloys. We've also dug deep into production processes to enhance efficiency and lower the cost. In 2014, with five years' accumulation, Rahul Ferrometal has become a mature nickel alloy manufacturer. As an industrial specialist, we've provided satisfactory products and services to many customers.

Going Global

Our products finally go global after serving domestic markets for around 30 years.

In 2016, Rahul Ferrometal founded its international business department. We've built international sales and technical teams, dedicated to making our quality materials accessible to more countries at a reasonably low price.

For now, our products have been manufactured and distributed to worldwide. We've built mutual trusts with customers from Asia, Europe, America, Africa, and Oceania. We regard your repeat orders as recognition on our product. Meanwhile, we will live up to your trust and expectations, marching further to the international market. We grow with you.

SOLUTIONS

SOLUTIONS

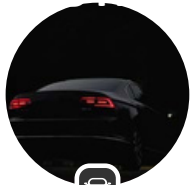
-- Nickel Alloy Applications



Aerospace

- INCONEL
- INCOLOY
- HASTELLOY

Aerospace is the industry where nickel alloys are most widely used. In aerospace engines, it is not an easy task to ensure that various components can work normally at different temperatures and in different environments. Nickel alloy is currently the most suitable material with excellent corrosion resistance and excellent mechanical properties at high temperatures. Rahul Ferrometal provides solid solution strengthened superalloys for engine containers and high-strength precipitation strengthened superalloys for engine blades.



Automotive

- MONEL
- INCONEL
- INCOLOY
- HASTELLOY

Similar to aerospace applications. With the development of the automobile industry, more and more automobile production uses nickel alloys to improve the performance of automobiles. Nowadays, superalloys are widely used in auto parts such as turbochargers, exhaust valves, ignition prechamber, exhaust gas cleaner fastener, nozzles & etc. Rahul Ferrometal produces high-performance nickel alloys to meet these needs.



Chemical Processing

- MONEL
- INCONEL
- INCOLOY
- HASTELLOY

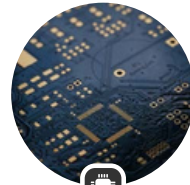
In the chemical industry, various chemical reactions need to be carried out in containers. Of course, different chemical reactions require different temperatures. The nickel alloy can not only resist the corrosion of various chemical substances, but also have good mechanical strength at both low and high temperatures. Therefore, it is the most commonly used material in the chemical industry. Rahul Ferrometal provides a variety of high-performance nickel alloys to meet the needs of our customers in the chemical industry.



Electrical Resistance

- INCONEL
- INCOLOY

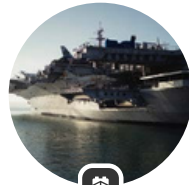
Resistance furnace is a heating furnace generate heat by pass current through the resistance wire or resistance band / strip. Among them, electric heating elements are required to have high heat resistance, high temperature strength, very low temperature coefficient of resistance and good chemical stability. Therefore, the common heating elements are nickel-chromium alloys or nickel-chromium-iron alloys (such as INCONEL and INCOLOY). Rahul Ferrometal specializes in providing high-quality nickel-chromium alloy products for resistance furnace components.



Electric & Telecom

- MONEL
- INCONEL

With the development of technology, the demand for electronic components is increasing. In order to meet this demand, Rahul Ferrometal can provide precision nickel alloy wires as welding wires for electronic components. For welding materials for electronic components, good brazing properties and low Curie temperature are very important indicators. Therefore, among the materials we produce, MONEL alloys 401 and 404 are perfect choices for soldering materials.



Marine

- MONEL
- INCONEL
- INCOLOY
- HASTELLOY

In the shipbuilding industry and other marine industries, the most important issue is how to deal with the corrosion of flowing seawater. Nickel alloy is a perfect solution, especially MONEL alloy can reduce the corrosion rate to almost negligible. At Rahul Ferrometal, we provide solid solution strengthened alloy as the material for the ship's hull. At the same time, precipitation strengthened alloys are used as practical materials for fasteners in seawater.



Oil & Gas

- MONEL
- INCONEL
- INCOLOY
- HASTELLOY

The oil is excavated from thousands of meters deep underground, where there is abnormally high temperature and pressure. In addition, the environment in some oil fields is very harsh, which can cause severe corrosion to metals. Rahul Ferrometal provides high-performance nickel alloy raw materials with excellent high-temperature corrosion resistance and high-temperature stress resistance. After being processed into casing and mandrel for drilling, it can be fully qualified for the oil exploitation environment.



Petro Processing

- INCONEL
- INCOLOY
- HASTELLOY

The principle of crude oil refining is to distill crude oil according to the different boiling points of different components in the crude oil. Different substances (such as gasoline and diesel) can be distilled at different temperatures. The distillation temperature can reach up to 800 degrees Celsius, and the composition of crude oil is very complex. Therefore, the distillation vessel must be resistant to high temperatures and resistant to various forms of corrosion. The nickel alloy materials produced by Rahul Ferrometal are perfectly qualified for this job.



Pollution & Waste

- INCONEL
- INCOLOY
- HASTELLOY

The waste in the industrial production process is generally treated by incineration. The temperature during incineration is extremely high and some waste materials are extremely corrosive. The nickel alloys we manufacture have superior high-temperature corrosion resistance, and provide guaranteed solutions for waste treatment in petroleum refining, natural gas processing, pharmaceutical, medical and other industries.



Power Generation

- INCONEL
- INCOLOY
- HASTELLOY

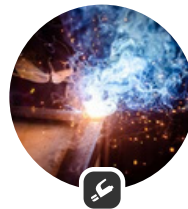
The power industry includes hydropower, coal power, gas power, and nuclear power. In addition to hydropower, other power generation methods require the support of high-temperature materials. Among them, nuclear power is one of the most widely used power generation methods of superalloys. In addition to the extreme high temperature inside the nuclear reactor, there is also a very harsh radiological environment. This makes nickel alloys an irreplaceable role in the composition of nuclear reactors.



Thermal Processing

- INCONEL
- INCOLOY
- HASTELLOY

Different metal heat treatment requires different heat treatment temperature and heat treatment time. This requires that the furnace material can withstand different degrees of high temperature for a long time without high temperature creep. Rahul Ferrometal provides high-performance nickel alloy products and selects alloys with the best high-temperature creep strength to match this demand. Our materials have been verified by various practices and can perfectly cope with various heat treatment methods.



Welding Products

- MONEL
- INCONEL
- INCOLOY
- HASTELLOY

Rahul Ferrometal produces nickel alloy welding materials corresponding to nickel alloy products. Our filler metals and welding electrodes are produced in strict accordance with AWS A5.14 and AWS A5.11 standards. And according to the standard requirements, the chemical composition of the material is fine-tuned to ensure the performance of the weld. In addition, we also provide filler metals and welding electrodes of world-renowned brands (such as Special Metals, Haynes, VDM, etc.) for you to choose from.



Nickel Alloy
Round Bar & Rod

Standards

ASTM A484, ASTM A484M, ASTM A638, ASTM A638M, ASTM B1160, ASTM B164, ASTM B166, ASTM B335, ASTM B408, ASTM B425, ASTM B446, ASTM B472, ASTM B473, ASTM B511, ASTM B512, ASTM B572, ASTM B573, ASTM B574, ASTM B581, ASTM B637, ASTM B649, ASTM B691, ASTM B805



Overview

As a leading nickel alloy bars & rods supplier in India, Rahul Ferrometal produces and manufactures cost-effective nickel alloy round bar & rod. Nickel alloy round bar & rod is a kind of nickel alloy bar with a circular cross section. Because this product form is suitable for many applications, it is the most basic and popular product among our bar & rod products. Nickel alloy round bar & rod is manufactured by hot rolling the nickel alloy ingot, which causes it to form a black oxide scale. We will further cold-draw it to a suitable size. At this time, it will have a smooth finish. If you need us to polish or grind the nickel alloy round bar & rod, we can also meet your needs.

Rahul Ferrometal supplies different nickel alloy grades: Monel(400, 401, K-500, etc), Inconel(600, 601, 625, 718, etc), Incoloy(800, 825, A-286, etc) and Hastelloy(B-2, C-22, C-276, etc). The diameter of our nickel alloy round bar & rod ranges from 4 to 300mm. Customized size is also available.

Our products have higher quality and lower price. Our sales are more professional and responsible. Please don't hesitate to contact us!

Specification

- Outside Diameter: $\Phi 4 - \Phi 300\text{mm}$
- Delivery State: Cold Drawn, Hot Rolled, Forged, Grinding, Centerless Grinding
- Finish: Bright, Polishing, Mirror, Hairline, Pickled, Peeled, Black
- Hot-selling Products:
 - a. Nickel Alloy Black Bar
 - b. Nickel Alloy Bright Bar
 - c. Nickel Alloy Hot Rolled Round Bar
 - d. Nickel Alloy Forged Bar

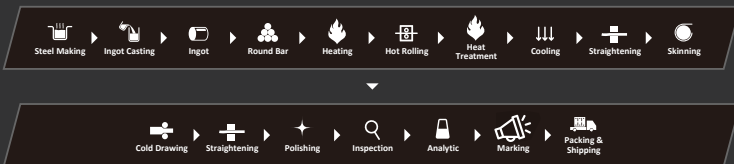
Features

Outstanding high temperature resistance and corrosion resistance, bright surface, excellent straightness.

Applications

1. Ore calciner
2. Heat treatment retort furnace, muffle furnace, fixture and basket
3. Chemical vapor deposition bell furnace
4. Vacuum furnace fixture
5. Ammonia oxidation furnace catalytic net support grid
6. High temperature processing equipment for molten glass
7. Radiant tube
8. Petrochemical converter

Manufacturing Process



Drawing & Formula



Formula: $m = D \text{ (mm)} \times D \text{ (mm)} \times L \text{ (m)} \times \rho \text{ (g/cm}^3\text{)} \times \pi \div 4000$
 $D = \text{Diameter, } L = \text{Length, } \rho = \text{Density, } \pi = 3.1415926\dots$



Tolerance

Cold Drawn			
Specified Dimension, in. (mm)	Permissible Variations from Specified Size, in. (mm)		
	Over	Under	
	Over 1/2(12.70) to 1(25.40), excl	0.002(0.05)	0.002(0.05)
1(25.40) to 3/2(38.10), incl	0.0025(0.06)	0.0025(0.06)	
3/2(38.10) to 4(101.60), incl	0.003(0.08)	0.003(0.08)	
Hot Rolled			
	Permissible Variations from Specified Size, in. (mm)		Out-of-Round in. (mm)
	Over	Under	
	Over 5/16(7.94) to 7/16(11.11), incl	0.006(0.15)		0.006(0.15)	0.009(0.23)
Over 7/16(11.11) to 5/8(15.88), incl	0.007(0.18)	0.007(0.18)	0.010(0.25)
Over 5/8(15.88) to 7/8(22.22), incl	0.008(0.20)	0.008(0.20)	0.012(0.30)
Over 7/8(22.22) to 1(25.40), incl	0.009(0.23)	0.009(0.23)	0.013(0.33)
Over 1(25.40) to 9/8(28.58), incl	0.010(0.25)	0.010(0.25)	0.015(0.38)
Over 9/8(28.58) to 5/4(31.75), incl	0.011(0.28)	0.011(0.28)	0.016(0.41)
Over 5/4(31.75) to 11/8(34.92), incl	0.012(0.30)	0.012(0.30)	0.018(0.46)
Over 11/8(34.92) to 3/2(38.10), incl	0.014(0.36)	0.014(0.36)	0.021(0.53)

Over 3/2(38.10) to 2(50.80), incl	1/64(0.40)	1/64(0.40)	0.023(0.58)
Over 2(50.80) to 2 1/2(63.50), incl	1/32(0.79)	0	0.023(0.58)
Over 2 1/2(63.50) to 3 1/2(88.90), incl	3/64(1.19)	0	0.035(0.89)
Over 3 1/2(88.90) to 4 1/2(114.30), incl	1/16(1.59)	0	0.046(1.17)
Over 4 1/2(114.30) to 5 1/2(139.70), incl	5/64(1.98)	0	0.058(1.47)
Over 5 1/2(139.70) to 6 1/2(165.10), incl	1/8(3.18)	0	0.070(1.78)
Over 6 1/2(165.10) to 8(203.20), incl	5/32(3.97)	0	0.085(2.18)

Delivery State

Delivery State Choice	Surface Condition
Forged / Solution & Aging Treated	Black
	Polished
Hot Rolled / Solution & Aging Treated	Black
	Polished
	Bright
	Pickled
Cold Drawn / Solution & Aging Treated	Polished
	Bright

Note:

1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.

FAQ

Q Can you provide nickel alloy grinding rods?

Yes, we can produce nickel alloy grinding rods with precise dimensions, better roundness and straightness than that of nickel alloy polishing rods, but the processing cost is also higher.

A

Q What is your minimum order quantity?

Our minimum order quantity is 100kg. Larger quantity, lower price.

A

Q How long is your delivery time?

It is usually 35 days, but it is also affected by your specific requirements or order quantity.

A

Q Can you provide samples?

For small parts, we can provide free samples of regular sizes, but the shipping costs must be borne by you. For large samples, we will include it in the order amount. Please confirm with our sales department according to your specific requirements.

A

Q Can I send an engineer to India?

Of course. Welcome to our factory for on-site inspection.

A

Q How do you control product quality?

From the selection of raw materials to packaging for transportation, each production process will be tested and evaluated. Only products that have passed all tests can be delivered for export.

A

Package



Plastic Bag



Wooden Case

At Rahul Ferrometal, our nickel alloy round bar & rod are packed tightly as per international standard to prevent any possible damage. By default we will use thick woven plastic bags to bundle several pieces together (always one bundle ≤1500KGs). However, for those tube pipes that are susceptible to dirt pollution, scraping, stress or man- handling damages, we suggest wooden case for protection. Please be kindly noted that wooden case can incur extra cost by its own, and at times can increase the freight, which is especially remarkable for air transportation. For enhanced user experience, we base on your specific requirements.

Logistics



By Sea



By Air

Sea transportation is the most popular for most orders, hence regarded as the default transportation mode. Accordingly, quotation is thus made as per FOB, CFR, CIF etc.. For urgent demand, we can also offer as per air transportation.



Rahul Ferrometal





Nickel Alloy
Flat Bar

Standards

ASTM A484, ASTM A484M, ASTM A638, ASTM A638M, ASTM B160, ASTM B164, ASTM B166, ASTM B408, ASTM 425, ASTM B44 6, ASTM B472, ASTM 473, ASTM B511, ASTM B512, ASTM B649, ASTM B691, ASTM B805

Overview

As a Chinese leading nickel alloy bars & rods supplier, Rahul Ferrometal produces and manufactures cost-effective nickel alloy flat bar. Nickel alloy flat bar is a nickel alloy bar with a rectangular cross-section. It has excellent corrosion resistance and high temperature resistance, and can work continuously in special environments. Depending on the size and requirements, nickel alloy flat bar can be cold drawn from nickel alloy billet or nickel alloy round bar, or it can be cut from nickel alloy plate or nickel alloy strip. In surface treatment, we can provide pickling finish, sand blasted finish and polished finish for your choice.

Rahul Ferrometal supplies different nickel alloy grades: Monel(400, 401, K-500, etc), Inconel(600, 601, 625, 718, etc), Incoloy(800, 825, A-286, etc) and Hastelloy(B-2, C-22, C-276, etc). The thickness of our nickel alloy flat bar ranges from 0.5mm to 200mm. The width of our nickel alloy flat bar ranges from 1.5mm to 250mm. Customized size is also available.

Our products have higher quality and lower price. Our sales are more professional and responsible. Please don't hesitate to contact us!

Specifications

- Dimension: Thickness: 0.5mm - 200mm Width: 1.5mm - 250mm
- Delivery State: Cold Drawn, Hot Rolled, Flat Bar Cut from Strip or Plates, Grinding, Forged, Centerless Grinding
- Finish: Pickled, Bright, Polishing, Mirror, Hairline
- Hot-selling Products: a. Nickel Alloy Hot Rolled Flat Bar
b. Nickel Alloy Pickled Flat Bar
c. Nickel Alloy Cold Drawn Flat Bar
d. Nickel Alloy Polished Flat Bar

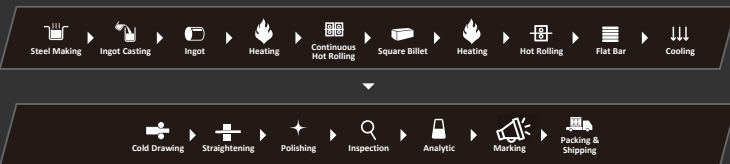
Features

Outstanding high temperature resistance and corrosion resistance, bright surface, excellent straightness.

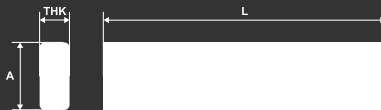
Applications

1. Ore calciner
2. Heat treatment retort furnace, muffle furnace, fixture and basket
3. Chemical vapor deposition bell furnace
4. Vacuum furnace fixture
5. Ammonia oxidation furnace catalytic net support grid
6. High temperature processing equipment for molten glass
7. Radiant tube
8. Petrochemical converter

Manufacturing Process



Drawing & Formula



Formula: $m = A \text{ (mm)} \times \text{THK} \text{ (mm)} \times L \text{ (m)} \times \rho \text{ (g/cm}^3\text{)} \div 1000$
A = Side width, THK = Thickness, L = Length, ρ = Density



Tolerance

Cold Drawn						
Specified Dimension, in. (mm)	Permissible Variations from Specified Size, in. (mm)					
	Over		Under			
Over 1/2(12.70) to 1(25.40), incl	0		0.004(0.10)			
Over 1(25.40) to 2(50.80), incl	0		0.006(0.15)			
Over 2(50.80) to 3(76.20), incl	0		0.008(0.20)			
Over 3(76.20)	0		0.010(0.25)			
Hot Rolled						
Specified Width, in. (mm)	Permissible Variations in Thickness for Thicknesses Given, in. (mm)					
	1/8(3.18) to 1/2(12.70), incl		Over 1/2(12.70) to 1(25.40), incl		Over 1(25.40) to 2(50.80), incl	
	Over	Under	Over	Under	Over	Under
To 1(25.40), incl	0.008(0.20)	0.008(0.20)	0.010(0.25)	0.010(0.25)	...	...
Over 1(25.40) to 2(50.80), incl	0.012(0.30)	0.012(0.30)	0.015(0.38)	0.015(0.38)	0.031(0.79)	0.031(0.79)
Over 2(50.80) to 4(101.60), incl	0.015(0.38)	0.015(0.38)	0.020(0.51)	0.020(0.51)	0.031(0.79)	0.031(0.79)
Over 4(101.60) to 6(152.40), incl	0.015(0.38)	0.015(0.38)	0.020(0.51)	0.020(0.51)	0.031(0.79)	0.031(0.79)
Over 6(152.40) to 8(203.20), incl	0.016(0.41)	0.016(0.41)	0.025(0.64)	0.025(0.64)	0.031(0.79)	0.031(0.79)
Over 8(203.20) to 10(254.00), incl	0.021(0.53)	0.021(0.53)	0.031(0.79)	0.031(0.79)	0.031(0.79)	0.031(0.79)
	Over 2(50.80) to 4(101.60), incl		Over 4(101.60) to 6(152.40), incl		Over 6(152.40) to 8(203.20), incl	
	Over	Under	Over	Under	Over	Under
To 1(25.40), incl	... ..	...	...	...	...	...
Over 1(25.40) to 2(50.80), incl	...	...	...	...	...	...

Over 2(50.80) to 4(101.60), incl	0.062(1.57)	0.031(0.79)	...	...	...	...
Over 4(101.60) to 6(152.40), incl	0.062(1.57)	0.031(0.79)	0.093(2.36)	0.062(1.57)	...	...
Over 6(152.40) to 8(203.20), incl	0.062(1.57)	0.031(0.79)	0.093(2.36)	0.062(1.57)	0.125(3.18)	0.156(3.96)
Over 8(203.20) to 10(254.00), incl	0.062(1.57)	0.031(0.79)	0.093(2.36)	0.062(1.57)	0.125(3.18)	W0.156(3.96)
Specified Width, in. (mm)	Permissible Variations in Width, in. (mm)					
	Over		Under			
To 1(25.40), incl	0.015(0.38)		0.015(0.38)			
Over 1(25.40) to 2(50.80), incl	0.031(0.79)		0.031(0.79)			
Over 2(50.80) to 4(101.60), incl	0.062(1.57)		0.031(0.79)			
Over 4(101.60) to 6(152.40), incl	0.093(2.36)		0.062(1.57)			
Over 6(152.40) to 8(203.20), incl	0.125(3.18)		0.156(3.96)			
Over 8(203.20) to 10(254.00), incl	0.156(3.96)		0.187(4.75)			

Delivery State

Delivery State Choice	Surface Condition
Hot Rolled / Solution & Aging Treated	Pickled
	Sand Blasted
Cold Drawn / Solution & Aging Treated	Polished
	Bright

Note:

1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.



FAQ

Q Can you polish nickel alloy flat bar to hairline finish?

Yes, we can polish nickel alloy flat bar to 180#, 320# and hairline finish for your different choice.

A

Q What is your minimum order quantity?

Our minimum order quantity is 200kg. Larger quantity, lower price.

A

Q How long is your delivery time?

It is usually 45 days, but it is also affected by your specific requirements or order quantity.

A

Q Can you provide samples?

For small parts, we can provide free samples of regular sizes, but the shipping costs must be borne by you. For large samples, we will include it in the order amount. Please confirm with our sales department according to your specific requirements.

A

Q Can I send an engineer to India?

Of course. Welcome to our factory for on-site inspection.

A

Q How do you control product quality?

From the selection of raw materials to packaging for transportation, each production process will be tested and evaluated. Only products that have passed all tests can be delivered for export.

A

Package



Plastic Bag



Wooden Case

At Rahul Ferrometal, our nickel alloy flat bar are packed tightly as per international standard to prevent any possible damage. By default we will use thick woven plastic bags to bundle several pieces together (always one bundle ≤1500KGs). However, for those tube pipes that are susceptible to dirt pollution, scraping, stress or man-handling damages, we suggest wooden case for protection. Please be kindly noted that wooden case can incur extra cost by its own, and at times can increase the freight, which is especially remarkable for air transportation. For enhanced user experience, we will pack as per your diverged requirements.

Logistics



By Sea



By Air

Sea transportation is the most popular for most orders, hence regarded as the default transportation mode. Accordingly, quotation is thus made as per FOB, CFR, CIF etc.. For urgent demand, we can also offer as per air transportation.



Rahul Ferrometal





Nickel Alloy
Square Bar

Standards

ASTM A484, ASTM A84M, ASTM A638
ASTM A6348M, ASTM B160, ASTM
B164, ASTM B166, ASTM B408, ASTM
B425, ASTM B446, ASTM B472, ASTM
B473, ASTM B511, ASTM B512, ASTM
B649, ASTM B691, ASTM B805

Overview

As a Chinese leading nickel alloy materials supplier, Rahul Ferrometal produces and manufactures Cost-effective nickel alloy square bar. Nickel alloy square bar is nickel alloy bars with square section. Due to the high degree of shape adaptability, it is also one of the most common nickel alloy bars. Nickel alloy square bar has excellent corrosion resistance and high temperature resistance, and can work well in most environments. Depending on the manufacturing process and size, nickel alloy square bars can be hot-rolled from nickel alloy billet or cold-drawn from nickel alloy round bar & rod. We provide nickel alloy square bars with polished, pickled and sandblasted finish for your choice. Rahul Ferrometal supplies different nickel alloy grades: Monel(400, 401, K-500, etc), Inconel(600, 601, 625, 718, etc), Incoloy(800, 825, A-286, etc) and Hastelloy(B-2, C-22, C-276, etc). The width of our nickel alloy square bar ranges from 2mm to 200mm. Customized size is also available. Our products have higher quality and lower price. Our sales are more professional and responsible. Please don't hesitate to contact us!

Dimension

Thickness: 0.5mm - 200mm
Width: 1.5mm - 250mm
•Delivery State: Cold Drawn, Hot Rolled, Flat Bar
Cut From Strip or Plates, Grinding, Forged,
Centerless Grinding
•Finish: Pickled, Bright, Polishing, Mirror,
Hairline
•Hot-selling Products:
a. Hot Rolled Nickel Alloy Square Bar
b. Pickled Nickel Alloy Square Bar
c. Cold Drawn Nickel Alloy Square Bar

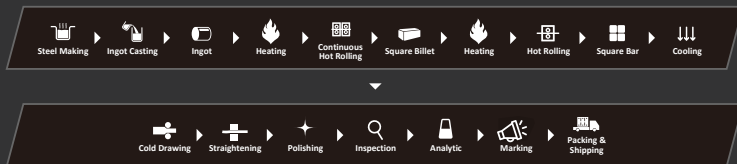
Features

Outstanding high temperature resistance and corrosion resistance, bright surface, excellent straightness.

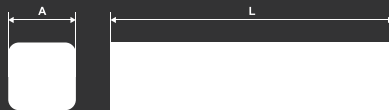
Applications

1. Ore calciner
2. Heat treatment retort furnace, muffle furnace, fixture and basket
3. Chemical vapor deposition bell furnace
4. Vacuum furnace fixture
5. Ammonia oxidation furnace catalytic net support grid
6. High temperature processing equipment for molten glass
7. Radiant tube
8. Petrochemical converter

Manufacturing Process



Drawing & Formula



Formula: $m = A \text{ (mm)} \times A \text{ (mm)} \times L \text{ (m)} \times \rho \text{ (g/cm}^3\text{)} \div 1000$
A = Side width, L = Length, ρ = Density



Size Range

Cold Drawn		
Specified Dimension, in. (mm)	Permissible Variations from Specified Size, in. (mm)	
	Over	Under
Over 1/2(12.70) to 1(25.40), incl	0	0.004(0.10)
Over 1(25.40) to 2(50.80), incl	0	0.006(0.15)
Over 2(50.80) to 3(76.20), incl	0	0.008(0.20)
Over 3(76.20)	0	0.010(0.25)

Hot Rolled			
	Permissible Variations from Specified Size, in. (mm)		Out-of-Square in. (mm)
	Over	Under	
Over 5/16(7.94) to 7/16(11.11), incl	0.006(0.15)	0.006(0.15)	0.009(0.23)
Over 7/16(11.11) to 5/8(15.88), incl	0.007(0.18)	0.007(0.18)	0.010(0.25)
Over 5/8(15.88) to 7/8(22.22), incl	0.008(0.20)	0.008(0.20)	0.012(0.30)
Over 7/8(22.22) to 1(25.40), incl	0.009(0.23)	0.009(0.23)	0.013(0.33)
Over 1(25.40) to 9/8(28.58), incl	0.010(0.25)	0.010(0.25)	0.015(0.38)
Over 9/8(28.58) to 5/4(31.75), incl	0.011(0.28)	0.011(0.28)	0.016(0.41)
Over 5/4(31.75) to 11/8(34.92), incl	0.012(0.30)	0.012(0.30)	0.018(0.46)

Over 11/8(34.92) to 3/2(38.10), incl	0.014(0.36)	0.014(0.36)	0.021(0.53)
Over 3/2(38.10) to 2(50.80), incl	1/64(0.40)	1/64(0.40)	0.023(0.58)
Over 2(50.80) to 2 1/2(63.50), incl	1/32(0.79)	0	0.023(0.58)
Over 2 1/2(63.50) to 3 1/2(88.90), incl	3/64(1.19)	0	0.035(0.89)
Over 3 1/2(88.90) to 4 1/2(114.30), incl	1/16(1.59)	0	0.046(1.17)
Over 4 1/2(114.30) to 5 1/2(139.70), incl	5/64(1.98)	0	0.058(1.47)
Over 5 1/2(139.70) to 6 1/2(165.10), incl	1/8(3.18)	0	0.070(1.78)
Over 6 1/2(165.10) to 8(203.20), incl	5/32(3.97)	0	0.085(2.18)

Delivery State

Delivery State Choice	Surface Condition
Hot Rolled / Solution & Aging Treated	Pickled
	Sand Blasted
Cold Drawn / Solution & Aging Treated	Polished
	Bright

Note:

1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.



FAQ

Q Do you have cold drawn nickel alloy square bars?

A Yes, we produce cold drawn nickel alloy square bars with excellent finish. Although cold drawn nickel alloy square bars are more expensive than hot rolled nickel alloy square bars, it has better mechanical properties and more precise dimensions.

Q What is your minimum order quantity?

A Our minimum order quantity is 500kg. Larger quantity, lower price.

Q How long is your delivery time?

A It is usually 45 days, but it is also affected by your specific requirements or order quantity.

Q Can you provide samples?

A For small parts, we can provide free samples of regular sizes, but the shipping costs must be borne by you. For large samples, we will include it in the order amount. Please confirm with our sales department according to your specific requirements.

Q Can I send an engineer to India?

A Of course. Welcome to our factory for on-site inspection.

Q How do you control product quality?

A From the selection of raw materials to packaging for transportation, each production process will be tested and evaluated. Only products that have passed all tests can be delivered for export.

Package



Plastic Bag



Wooden Case

At Rahul Ferrrometal, our nickel alloy square bar are packed tightly as per international standard to prevent any possible damage. By default we will use thick woven plastic bags to bundle several pieces together (always one bundle ≤1500KGs). However, for those tube pipes that are susceptible to dirt pollution, scraping, stress or man-handling damages, we suggest wooden case for protection. Please be kindly noted that wooden case can incur extra cost by its own, and at times can increase the freight, which is especially remarkable for air transportation. For enhanced user experience, we will pack as per your diverged requirements.

Logistics



By Sea



By Air

Sea transportation is the most popular for most orders, hence regarded as the default transportation mode. Accordingly, quotation is thus made as per FOB, CFR, CIF etc.. For urgent demand, we can also offer as per air transportation.



Rahul Ferrrometal





Nickel Alloy
Hexagon Bar



Overview

As a leading nickel alloy bars supplier in India, Rahul Ferrometal manufactures and produces nickel alloy hexagon bars of various sizes. Nickel alloy hexagon bar (hex bar, hexagonal bar) is a nickel alloy bar with a hexagon cross-section. It has good corrosion resistance and high temperature resistance, as well as good workability. Since it can be used as the raw material for many nickel alloy fasteners (such as nickel alloy screws, nickel alloy nuts, etc.), it is also one of our most popular nickel alloy bar products. We can provide hot-rolled, cold-drawn or forged nickel alloy hexagon bars. The common finish of nickel alloy hexagon bar is polished finish. If you need nickel alloy hexagon bar with other finishes such as pickling or sandblasting, please confirm with us. Rahul Ferrometal supplies different nickel alloy grades: Monel(400, 401, K-500, etc), Inconel(600, 601, 625, 718, etc), Incoloy(800, 825, A-286, etc) and Hastelloy(B-2, C-22, C-276, etc). The diameter between two adjacent side width of our nickel alloy hexagon bar ranges from 3mm to 180mm. Customized size is also available.

Our products have higher quality and lower price. Our sales are more professional and responsible. Please don't hesitate to contact us!

Specifications

Dimension: 3mm - 180mm • Delivery State: Cold Drawn, Hot Rolled, Grinding, Forged, Centerless Grinding • Finish: iPolished, Brightn, Hairline, Grinded, Sandblast, Pickled, Mill Finish

Standards

ASTM A484, ASTM A484M, ASTM A638, ASTM A638M, ASTM B160, ASTM B164, ASTM B166, ASTM B408, ASTM B425, ASTM B446, ASTM B472, ASTM B473, ASTM B511, ASTM B512, ASTM B649, ASTM B691, ASTM B805

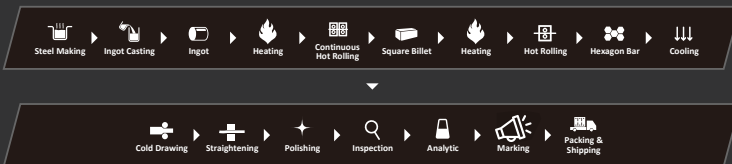
Features

Outstanding high temperature resistance and corrosion resistance, bright surface, excellent straightness.

Applications

Food equipment, chemical equipment, nuclear energy industry equipment, construction engineering, equipment and parts that require good overall performance (corrosion resistance and formability).

Manufacturing Process



Drawing & Formula



Formula: $m = D \text{ (mm)} \times D \text{ (mm)} \times L \text{ (m)} \times \rho \text{ (g/cm}^3\text{)} \times 0.866 \div 1000$
 D = Diameter between two adjacent side width, L = Length, ρ = Density

Tolerance

Cold Drawn

Specified Dimension, in. (mm)	Permissible Variations from Specified Size, in. (mm)	
	Over	Under
Over 1/2(12.70) to 1(25.40), incl	0	0.004(0.10)
Over 1(25.40) to 2(50.80), incl	0	0.006(0.15)
Over 2(50.80) to 3(76.20), incl	0	0.008(0.20)
Over 3(76.20)	0	0.010(0.25)

Hot Rolled

Specified Sizes Measured Between Opposite Sides, in. (mm)	Permissible Variations from Specified Size, in. (mm)		Maximum Difference in 3 Measurements for Hexagons, in. (mm)
	Over	Under	
1/4(6.35) to 1/2(12.70), incl	0.007(0.18)	0.007(0.18)	0.011(0.28)
Over 1/2(12.70) to 1(25.40), incl	0.010(0.25)	0.010(0.25)	0.015(0.38)
Over 1(25.40) to 1 1/2(38.10), incl	0.021(0.53)	0.021(0.53)	0.025(0.64)
Over 1 1/2(38.10) to 2(50.80), incl	1/32(0.79)	1/32(0.79)	1/32(0.79)
Over 2(50.80) to 2 1/2(63.50), incl	3/64(1.19)	3/64(1.19)	3/64(1.19)
Over 2 1/2(63.50) to 3 1/2(88.90), incl	1/16(1.59)	1/16(1.59)	1/16(1.59)

Delivery State

Delivery State Choice	Surface Condition
Hot Rolled	Pickled
	Sand Blasted
	Polished
	Bright
Cold Drawn	Pickled
	Sand Blasted
	Polished
	Bright

Note:

1. If you require different deliver state than the above listed, kindly confirm with us.
2. In case of any enquiry or order, please kindly let us know any extra requirement not indicated here.



Package



Plastic Bag



Wooden Case

At Rahul Ferrometal, our nickel alloy hexagon bar are packed tightly as per international standard to prevent any possible damage. By default we will use thick woven plastic bags to bundle several pieces together (always one bundle ≤ 1500 KGs). However, for those tube pipes that are susceptible to dirt pollution, scraping, stress or man- handling damages, we suggest wooden case for protection. Please be kindly noted that wooden case can incur extra cost by its own, and at times can increase the freight, which is especially remarkable for air transportation. For enhanced user experience, we will pack as per your diverged requirements.

Logistics



By Sea



By Air

Sea transportation is the most popular for most orders, hence regarded as the default transportation mode. Accordingly, quotation is thus made as per FOB, CFR, CIF etc.. For urgent demand, we can also offer as per air transportation.



FAQ

Q

Can you provide nickel alloy hexagon bar in round edge?

Yes, we can produce round-edge nickel alloy hexagon bars according to your requirements.

A

Q

What is your minimum order quantity?

Our minimum order quantity is 500kg. Larger quantity, lower price.

A

Q

How long is your delivery time?

It is usually 45 days, but it is also affected by your specific requirements or order quantity.

A

Q

Can you provide samples?

For small parts, we can provide free samples of regular sizes, but the shipping costs must be borne by you. For large samples, we will include it in the order amount. Please confirm with our sales department according to your specific requirements.

A

Q

Can I send an engineer to India?

Of course. Welcome to our factory for on-site inspection.

A

Q

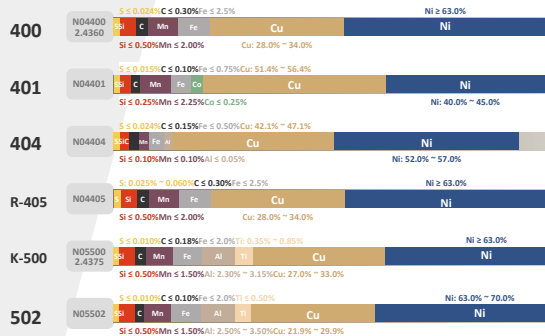
How do you control product quality?

From the selection of raw materials to packaging for transportation, each production process will be tested and evaluated. Only products that have passed all tests can be delivered for export.

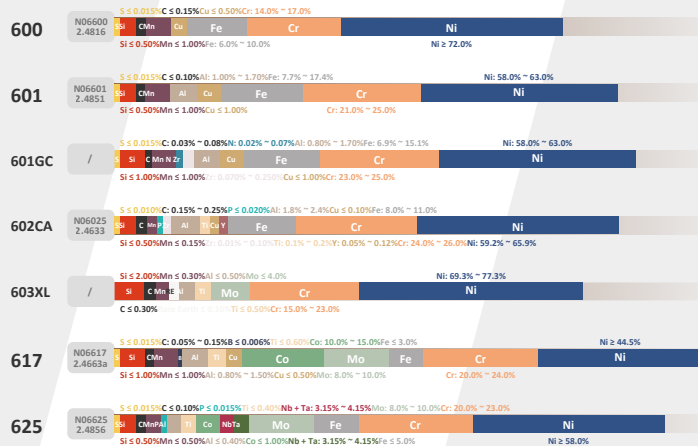
A

GRADES AVAILABLE

MONEL



INCONEL



INCONEL

625LCF

N06626
2.4856

$S \leq 0.015\%$ $C \leq 0.03\%$ $P \leq 0.015\%$ $Al \leq 0.40\%$ $Co \leq 1.00\%$ $Nb + Ta: 3.15\% \sim 4.15\%$ $Fe \leq 5.0\%$ $Ni \geq 58.0\%$
 $Si \leq 0.15\%$ $Mn \leq 0.50\%$ $N \leq 0.02\%$ $Ti \leq 0.40\%$ $Nb + Ta: 3.15\% \sim 4.15\%$ $Mo: 8.0\% \sim 10.0\%$ $Cr: 20.0\% \sim 23.0\%$

686

N06686
2.4606

$S \leq 0.020\%$ $C \leq 0.01\%$ $P \leq 0.040\%$ $W: 3.0\% \sim 4.4\%$ $Fe \leq 5.0\%$ $Ni: 49.5\% \sim 62.9\%$
 $Si \leq 0.08\%$ $Mn \leq 0.75\%$ $Ti: 0.02\% \sim 0.25\%$ $Mo: 15.0\% \sim 17.0\%$ $Cr: 19.0\% \sim 23.0\%$

690

N06690
2.4642

$S \leq 0.015\%$ $C \leq 0.05\%$ $Cu \leq 0.50\%$ $Cr: 27.0\% \sim 31.0\%$ $Ni \geq 58.0\%$
 $Si \leq 0.50\%$ $Mn \leq 0.50\%$ $Fe: 7.0\% \sim 11.0\%$

693

N06693

$S \leq 0.010\%$ $C \leq 0.15\%$ $Al: 2.50\% \sim 4.00\%$ $Cu \leq 0.50\%$ $Fe: 2.5\% \sim 6.0\%$ $Ni: 53.3\% \sim 64.3\%$
 $Si \leq 0.50\%$ $Mn \leq 1.00\%$ $Ti \leq 1.00\%$ $Nb: 0.50\% \sim 2.50\%$ $Cr: 27.0\% \sim 31.0\%$

706

N09706

$S \leq 0.015\%$ $C \leq 0.06\%$ $P \leq 0.020\%$ $Al \leq 0.40\%$ $Cu \leq 0.30\%$ $Nb: 2.5\% \sim 3.3\%$ $Fe \geq 32.5\%$ $Ni: 39.0\% \sim 44.0\%$
 $Si \leq 0.35\%$ $Mn \leq 0.35\%$ $B \leq 0.006\%$ $Ti: 1.50\% \sim 2.00\%$ $Co \leq 1.00\%$ $Ta \leq 0.05\%$ $Cr: 14.5\% \sim 17.5\%$

718

N07718
2.4668

$S \leq 0.015\%$ $C \leq 0.08\%$ $P \leq 0.015\%$ $Al: 0.20\% \sim 0.80\%$ $Cu \leq 0.30\%$ $Nb + Ta: 4.75\% \sim 5.50\%$ $Mo: 2.80\% \sim 3.30\%$ $Cr: 17.0\% \sim 21.0\%$ $Ni = 50.0\%$
 $Si \leq 0.35\%$ $Mn \leq 0.35\%$ $B \leq 0.006\%$ $Ti: 0.65\% \sim 1.15\%$ $Co \leq 1.00\%$ $Nb + Ta: 4.75\% \sim 5.50\%$ $Fe: 11.1\% \sim 22.5\%$ $Ni: 50.0\% \sim 55.0\%$

718SPF

N07719

$S \leq 0.002\%$ $C \leq 0.05\%$ $P \leq 0.015\%$ $N \leq 0.01\%$ $Ti: 0.65\% \sim 1.15\%$ $Co \leq 1.00\%$ $Ta \leq 0.05\%$ $Fe \geq 11.4\%$ $Ni: 50.0\% \sim 55.0\%$
 $Si \leq 0.35\%$ $Mn \leq 0.35\%$ $B \leq 0.006\%$ $Al: 0.20\% \sim 0.80\%$ $Cu \leq 0.30\%$ $Nb: 4.75\% \sim 5.25\%$ $Mo: 2.80\% \sim 3.30\%$ $Cr: 17.0\% \sim 21.0\%$

INCONEL

725

N07725

$S \leq 0.010\%$ $C \leq 0.03\%$ $P \leq 0.015\%$ $Ti: 1.00\% \sim 1.70\%$ $Mo: 7.0\% \sim 9.5\%$ $Cr: 19.0\% \sim 22.5\%$ $Ni: 55.0\% \sim 59.0\%$
 $Si \leq 0.20\%$ $Mn \leq 0.35\%$ $Al \leq 0.35\%$ $Nb: 2.75\% \sim 4.00\%$ $Fe: 2.3\% \sim 14.3\%$

740H

N07740

$S \leq 0.030\%$ $C: 0.005\% \sim 0.08\%$ $P \leq 0.030\%$ $Al: 0.20\% \sim 2.00\%$ $Cu \leq 0.50\%$ $Nb + Ta: 0.50\% \sim 2.50\%$ $Mo \leq 2.0\%$ $Cr: 23.5\% \sim 25.5\%$ $Ni \geq 37.9\%$
 $Si \leq 1.00\%$ $Mn \leq 1.00\%$ $B: 0.0006\% \sim 0.0060\%$ $Ti: 0.50\% \sim 2.50\%$ $Co: 15.0\% \sim 22.0\%$ $Nb + Ta: 0.50\% \sim 2.50\%$ $Fe \leq 3.00\%$

X-750

N07750
2.4669

$S \leq 0.010\%$ $C \leq 0.08\%$ $Al: 0.40\% \sim 1.00\%$ $Cu \leq 0.50\%$ $Nb + Ta: 0.70\% \sim 1.20\%$ $Fe: 5.0\% \sim 9.0\%$ $Ni \geq 70.0\%$
 $Si \leq 0.50\%$ $Mn \leq 1.00\%$ $Ti: 2.25\% \sim 2.75\%$ $Co \leq 1.00\%$ $Nb + Ta: 0.70\% \sim 1.20\%$ $Cr: 14.0\% \sim 17.0\%$

751

N07751

$S \leq 0.010\%$ $C \leq 0.10\%$ $Al: 0.90\% \sim 1.50\%$ $Cu \leq 0.50\%$ $Nb + Ta: 0.70\% \sim 1.20\%$ $Fe: 5.0\% \sim 9.0\%$ $Ni + Co \geq 70.0\%$
 $Si \leq 0.50\%$ $Mn \leq 1.00\%$ $Ti: 2.00\% \sim 2.60\%$ $Ni + Co \geq 70.0\%$ $Nb + Ta: 0.70\% \sim 1.20\%$ $Cr: 14.0\% \sim 17.0\%$

MA754

N07754

$C \leq 0.05\%$ $Ti \leq 0.50\%$ $Fe \leq 1.0\%$ $Ni = 78.0\%$
 $Al \leq 0.30\%$ $Y_2O_3 = 0.60\%$ $Cr = 20.0\%$

MA758

/

$C \leq 0.05\%$ $Ti \leq 0.50\%$ $Fe \leq 1.0\%$ $Ni = 67.6\%$
 $Al \leq 0.30\%$ $Y_2O_3 = 0.60\%$ $Cr = 30.0\%$

783

R30783

$S \leq 0.005\%$ $C \leq 0.03\%$ $P \leq 0.015\%$ $Al: 5.00\% \sim 6.00\%$ $Cu \leq 0.50\%$ $Nb: 2.50\% \sim 3.50\%$ $Fe: 24.0\% \sim 27.0\%$ $Ni: 26.0\% \sim 30.0\%$
 $Si \leq 0.50\%$ $Mn \leq 0.50\%$ $B: 0.003\% \sim 0.012\%$ $Ti \leq 0.40\%$ $Co \geq 28.0\%$ $Ta \leq 0.05\%$ $Cr: 2.5\% \sim 3.5\%$



INCOLOY

800

N08800
1.4876

$S \leq 0.015\%$ $C \leq 0.10\%$ $Al: 0.15\% \sim 0.60\%$ $Cu \leq 0.75\%$ $Cr: 19.0\% \sim 23.0\%$ $Ni: 30.0\% \sim 35.0\%$
 $Si \leq 1.00\%$ $Mn \leq 1.50\%$ $Ti: 0.15\% \sim 0.60\%$ $Fe \geq 39.5\%$

800H

N08810
1.4958

$S \leq 0.015\%$ $C: 0.05\% \sim 0.10\%$ $Al: 0.15\% \sim 0.60\%$ $Cu \leq 0.75\%$ $Cr: 19.0\% \sim 23.0\%$ $Ni: 30.0\% \sim 35.0\%$
 $Si \leq 1.00\%$ $Mn \leq 1.50\%$ $Ti: 0.15\% \sim 0.60\%$ $Fe \geq 39.5\%$

800HT

N08811

$S \leq 0.015\%$ $C \leq 0.06\% \sim 0.10\%$ $Al + Ti: 0.85\% \sim 1.20\%$ $Cu \leq 0.75\%$ $Cr: 19.0\% \sim 23.0\%$ $Ni: 30.0\% \sim 35.0\%$
 $Si \leq 1.00\%$ $Mn \leq 1.50\%$ $Al + Ti: 0.85\% \sim 1.20\%$ $Fe \geq 39.5\%$

803

S35045

$S \leq 0.015\%$ $C: 0.06\% \sim 0.10\%$ $P \leq 0.045\%$ $Ti: 0.15\% \sim 0.60\%$ $Fe: 29.4\% \sim 39.4\%$ $Ni: 32.0\% \sim 37.0\%$
 $Si \leq 1.00\%$ $Mn \leq 1.50\%$ $Al: 0.15\% \sim 0.60\%$ $Cu \leq 0.75\%$ $Cr: 25.0\% \sim 29.0\%$

825

N08825
2.4858

$S \leq 0.030\%$ $C \leq 0.05\%$ $Al \leq 0.20\%$ $Cu: 1.50\% \sim 3.00\%$ $Fe \geq 22.0\%$ $Ni: 38.0\% \sim 46.0\%$
 $Si \leq 1.50\%$ $Mn \leq 1.00\%$ $Ti: 0.60\% \sim 1.20\%$ $Mo: 2.5\% \sim 3.5\%$ $Cr: 19.5\% \sim 23.5\%$

832

/

$S \leq 0.005\%$ $C \leq 0.05\%$ $Al \leq 0.15\%$ $Cu \leq 0.75\%$ $Fe: 60.6\% \sim 68.9\%$ $Ni: 8.75\% \sim 15.5\%$
 $Si \leq 0.70\%$ $Mn \leq 0.40\%$ $Ti \leq 0.40\%$ $Mo \leq 0.4\%$ $Cr: 19.5\% \sim 21.0\%$

INCOLOY

864

S35135

$S \leq 0.015\%$ $C \leq 0.08\%$ $P \leq 0.045\%$ $Cu \leq 0.75\%$ $Fe: 29.1\% \sim 43.9\%$ $Ni: 30.0\% \sim 38.0\%$
 $Si: 0.6\% \sim 1.0\%$ $Mn \leq 1.00\%$ $Ti: 0.40\% \sim 1.00\%$ $Mo: 4.0\% \sim 4.8\%$ $Cr: 20.0\% \sim 25.0\%$

890

N08890

$S \leq 0.015\%$ $C: 0.06\% \sim 0.14\%$ $P \leq 0.030\%$ $Ti: 0.15\% \sim 0.60\%$ $Nb: 0.20\% \sim 1.00\%$ $Mo: 1.0\% \sim 2.0\%$ $Cr: 23.5\% \sim 28.5\%$
 $Si: 1.0\% \sim 2.0\%$ $Mn \leq 1.50\%$ $Al: 0.05\% \sim 0.60\%$ $Cu \leq 0.75\%$ $Ta: 0.10\% \sim 0.60\%$ $Fe \geq 17.3\%$ $Ni: 40.0\% \sim 45.0\%$

903

N19903

$Al: 0.30\% \sim 1.15\%$ $Co: 13.0\% \sim 17.0\%$ $Fe: 36.5\% \sim 47.3\%$
 $Ti: 1.00\% \sim 1.85\%$ $Nb: 2.40\% \sim 3.50\%$ $Ni: 36.0\% \sim 40.0\%$

907

N19907

$Si: 0.07\% \sim 0.35\%$ $Ti: 1.30\% \sim 1.80\%$ $Nb: 4.30\% \sim 5.20\%$ $Ni: 35.0\% \sim 40.0\%$
 $Al \leq 0.20\%$ $Co: 12.0\% \sim 16.0\%$ $Fe: 36.5\% \sim 47.1\%$

908

N09908

$S \leq 0.005\%$ $C \leq 0.03\%$ $P \leq 0.015\%$ $Al: 0.75\% \sim 1.25\%$ $Cu \leq 0.50\%$ $Nb: 2.70\% \sim 3.30\%$ $Cr: 3.75\% \sim 4.50\%$
 $Si \leq 0.50\%$ $Mn \leq 1.00\%$ $B \leq 0.012\%$ $Ti: 1.20\% \sim 1.80\%$ $Co \leq 0.50\%$ $Fe \geq 36.1\%$ $Ni: 47.0\% \sim 51.0\%$

909

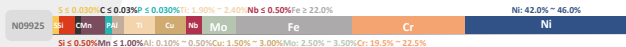
N19909

$S \leq 0.015\%$ $C \leq 0.06\%$ $P \leq 0.015\%$ $Al \leq 0.15\%$ $Cu \leq 0.50\%$ $Nb: 4.30\% \sim 5.20\%$ $Fe: 36.3\% \sim 46.9\%$ $Ni: 35.0\% \sim 40.0\%$
 $Si: 0.25\% \sim 0.50\%$ $Mn \leq 1.00\%$ $B \leq 0.012\%$ $Ti: 1.30\% \sim 1.80\%$ $Co: 12.0\% \sim 16.0\%$ $Ta \leq 0.05\%$ $Cr \leq 1.0\%$

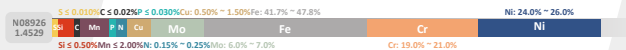


INCOLOY

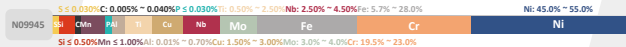
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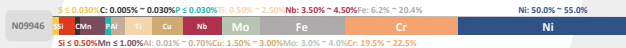
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945



945X



MA956

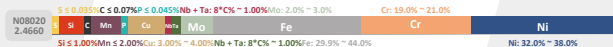


A-286

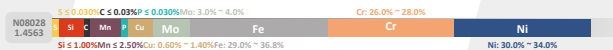


INCOLOY

020



028



DS



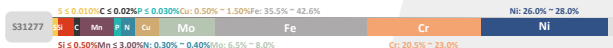
330



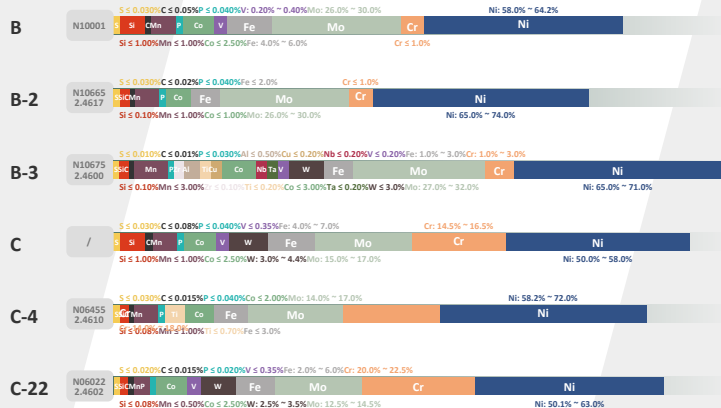
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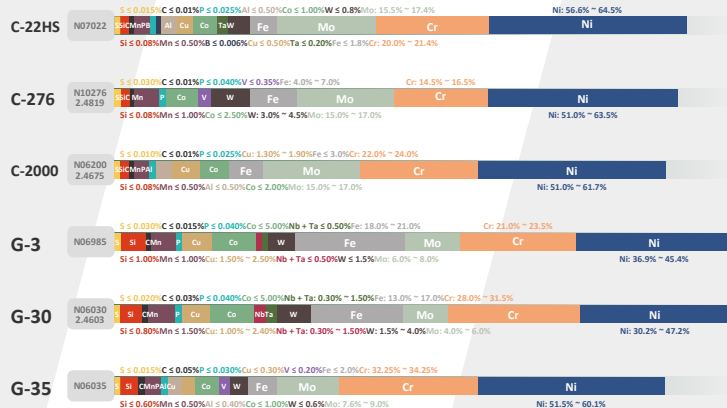
27-7MO



HASTELLOY



HASTELLOY



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