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不锈钢产品手册  
Product Manual of Stainless Steel

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## 简介 PROFILE

宝钢不锈钢有限公司(简称宝钢不锈)是我国重要的不锈钢精品制造企业，拥有上海本部、宝钢德盛不锈钢有限公司和宁波宝新不锈钢有限公司三大生产基地，具有配套完整的炼铁、炼钢、热轧、冷轧等世界一流的全流程不锈钢和碳钢联合生产线。全年可生产不锈钢270万吨、碳钢225万吨。不锈钢形成了铁素体、奥氏体、马氏体、双相钢等四大系列产品。碳钢主要有优质碳素钢、耐大气腐蚀钢、低微合金高强度钢、焊接结构钢、X管线钢等11个系列产品。

宝钢不锈上海本部坐落在上海市宝山区，占地3.53平方公里，全年可生产不锈钢150万吨、碳钢225万吨。宝钢德盛不锈钢有限公司坐落在福建省罗源湾开发区，占地2.18平方公里，全年可生产不锈钢120万吨。宁波宝新不锈钢有限公司坐落在浙江省宁波经济技术开发区，占地面积65万平方米，全年可生产冷轧不锈钢薄板66万吨，冷轧不锈钢焊管1万吨。

宝钢不锈的优质产品不仅畅销全国各地，而且远销美国、德国、罗马尼亚、韩国和台湾等国家和地区，广泛应用于交通运输、汽车制造、铁路货车、石油化工、核电工业、工业结构件、食品机械、建筑装潢、家用电器、厨房设备、餐具器皿、卫生洁具、医疗器械等各个领域。其中不锈钢产品国内市场占有率达到20%，名列世界十大不锈钢企业之一。

在宝钢新一轮发展中，宝钢不锈全体员工将以打造服务领先的、具有全球美誉度的宝钢不锈品牌为己任，弘扬“严格苛求的精神、学习创新的道路、争创一流的目标”的宝钢文化，秉承“诚信、协同”的基本价值观，践行“严格精准，快利并举，协同高效，永远不锈”的宝钢不锈精神，以世界一流的不锈钢制造和技术能力，致力于为用户提供超值的产品和服务，真诚期望与广大用户在合作中谋求发展，在发展中实现共同的辉煌。



Baosteel Stainless Steel Co., Ltd (Baosteel Stainless) is an important manufacturer of premium stainless steel products in China. It has three main production bases: Shanghai Headquarter, Baosteel Desheng Stainless Steel Co. Ltd. and Ningbo Baoxin Stainless Steel Co. Ltd. It has world-class stainless steel and carbon steel joint production lines of iron making, steel making, hot rolling and cold rolling, with an annual output of 2.7 million tons of stainless steel and 2.25 million tons of carbon steel. It can produce four series of ferritic, austenitic, martensitic, duplex stainless steel products, and many kinds of high quality carbon steel, such as low-alloyed high strength steel, structural steel, line-pipe steel and etc.

Shanghai Headquarter of Baosteel Stainless is located in Shanghai, covering an area of 3.53 km<sup>2</sup>, with an annual capacity of 1.5 million tons of stainless steel and 2.25 million tons of carbon steel. Baosteel Desheng Stainless Steel Co., Ltd. is located in Fujian province, covering an area of 2.18 km<sup>2</sup>, with an annual capacity of 1.2 million tons of stainless steel. Ningbo Baoxin Stainless Steel Co., Ltd. is located in Zhejiang province, covering an area of 650,000m<sup>2</sup>, with an annual capacity of 660,000 tons of cold rolling stainless steel and 10,000 tons of cold rolling stainless steel welded pipe.

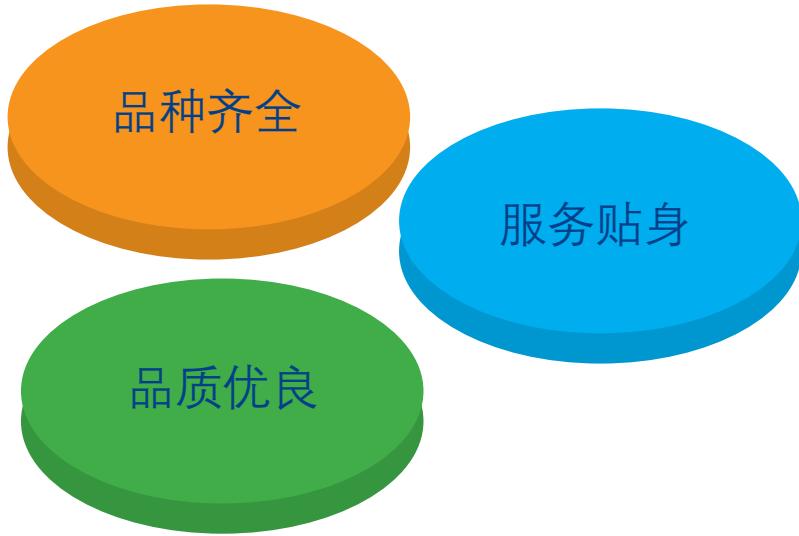
High-quality products of Baosteel Stainless are not only sold well in domestic market, but also sold well in American, European, Asian countries and regions, which are widely applied in all kinds of fields, such as transportation, auto-manufacturing, railway wagon, petrochemical industry, nuclear power station, food machinery, building decoration, household appliance, kitchen utensils, medical apparatus and instruments and etc. Its market share is over 20% in domestic and ranks among the top 10 stainless steel manufacturers in the world.

Looking into the future, all the employees of Baosteel Stainless will take the responsibilities of building our brand name with leading service and global reputation, carrying forward the Baosteel's culture of "Spirit of strictness & demanding, Road of study & innovation, Striving for the first-class target", adhering to the core value of "Good faith & Synergy", practicing the spirit of "strictness and accuracy, quick response and value creation, synergy and high efficiency, stainless forever", devoting ourselves to providing valuable products and services to our customers with cutting-edge capabilities of stainless steel manufacturing, looking forward sincerely to cooperating with clients to seek co-development and to realize common brilliance.



Baosteel Stainless

## 特点 FEATURES



### 1、齐全的品种和规格：

钢种覆盖奥氏体、铁素体、马氏体、双相钢四大系列；

规格覆盖0.2 mm~5.0 mm (冷轧)、2.0 mm~10.0 mm (热轧)、10 mm~60 mm (中厚板)，钢卷最大宽度1600 mm，可满足不同用户的需求。

### 2、优良的品质：

从原料到最终产品，科学、严谨的质量一贯制管理技术，保障了宝钢产品成分精准、性能稳定、表面优良。

### 3、贴身的用户服务：

全天候零距离响应需求，一站式贴身服务用户的服务理念，为用户提供选材咨询、使用技术指导，并可根据用户的特殊需求进行个性化的设计。

### 1. Comprehensive Series & Specifications:

The grades covers the four series of Austenitics, Ferritics, Martensitics and Duplex.

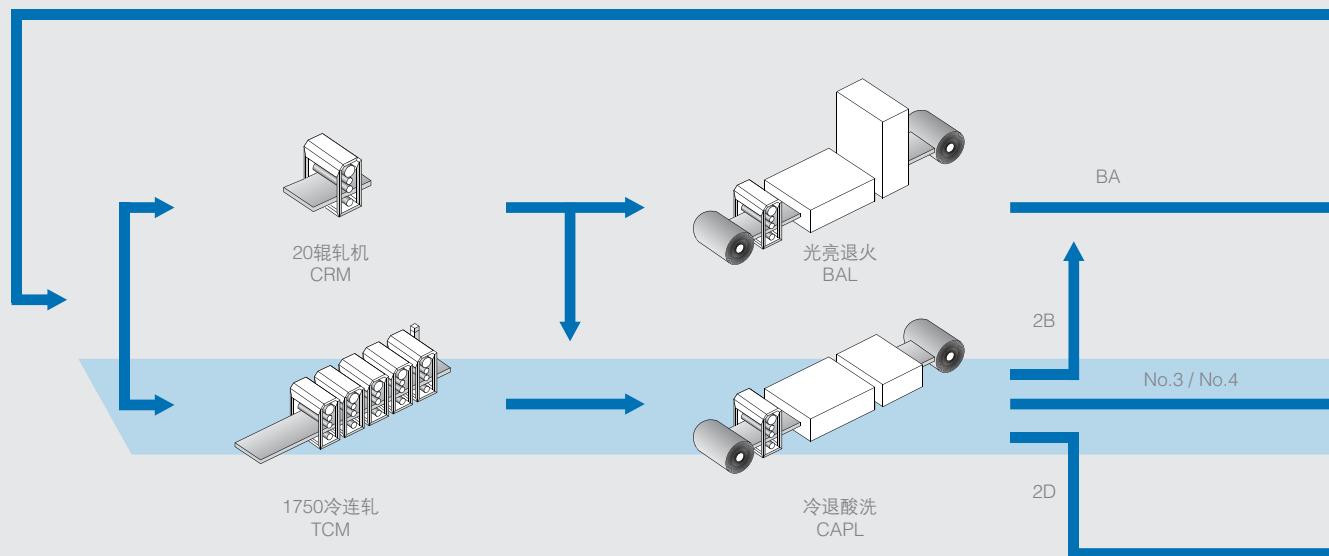
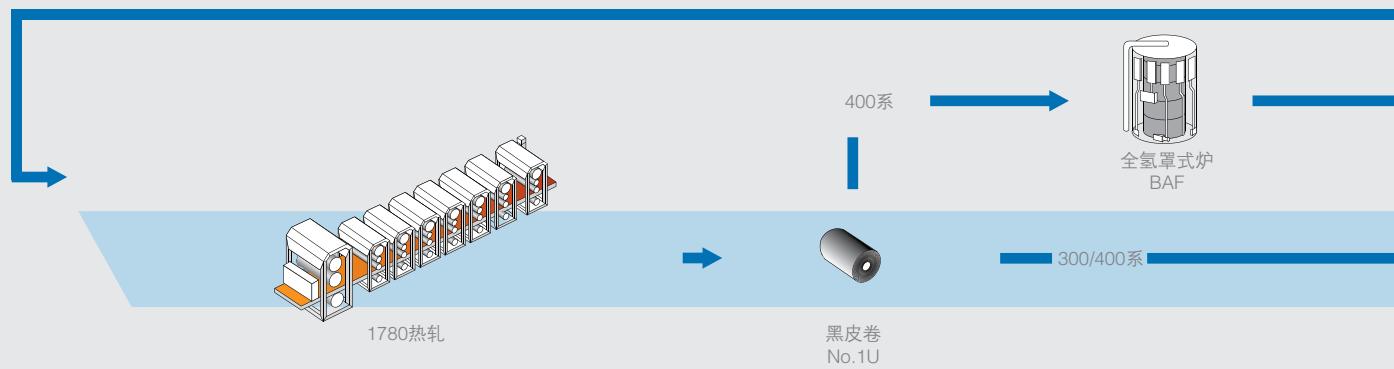
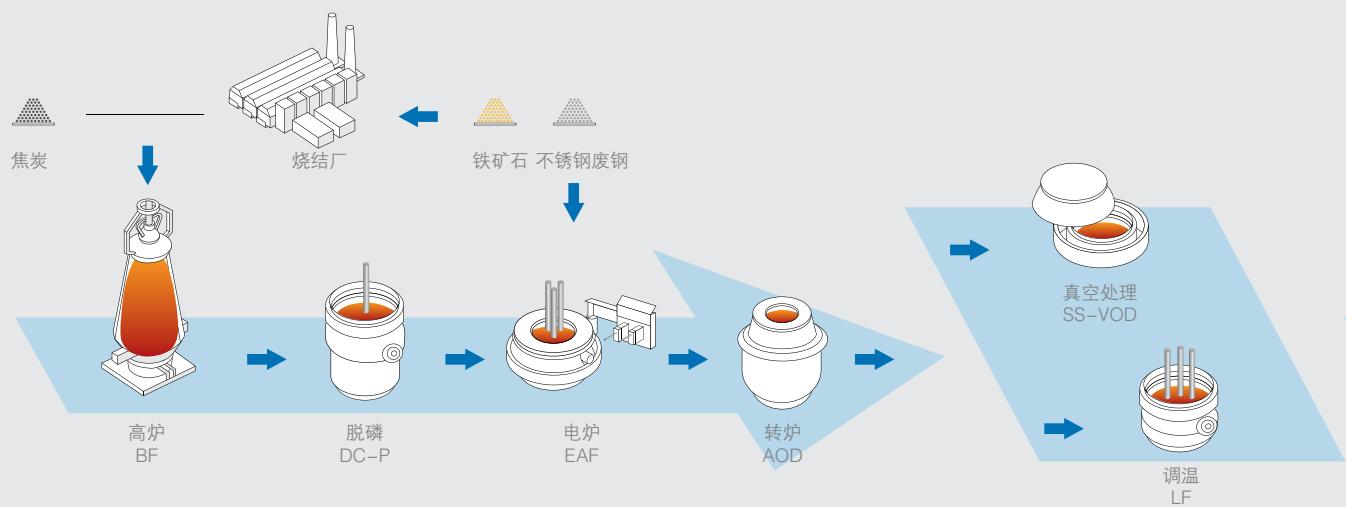
Specifications covers 0.2mm-5.0mm (cold rolled), 2.0mm-10.0mm (hot rolled), 10mm-60mm (plates) in thickness and maximum width 1600mm, which can meet the requirements of different customers.

### 2. High Quality:

The consistent quality control management technology from raw material to final products ensures our products accurate chemical composition, stable properties and good surfaces.

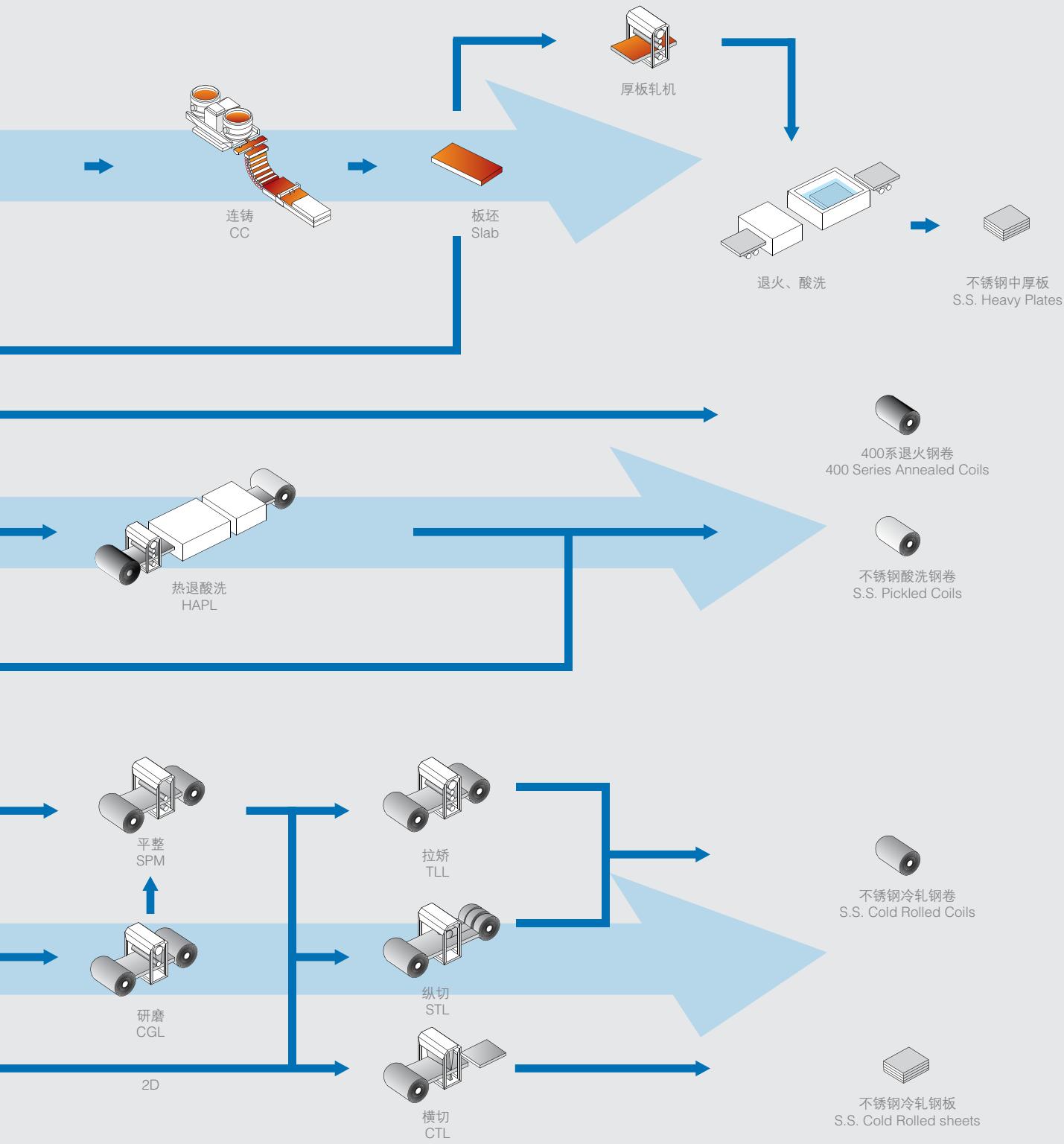
### 3. Close-to-customer services:

Bearing the service ideology of constant prompt response to demand, one-stop services to customers, material selection consultation and technical support are provided, and personalized quality design is also provided according to customers' special requirements.



# 工艺流程

## MANUFACTURING PROCESS





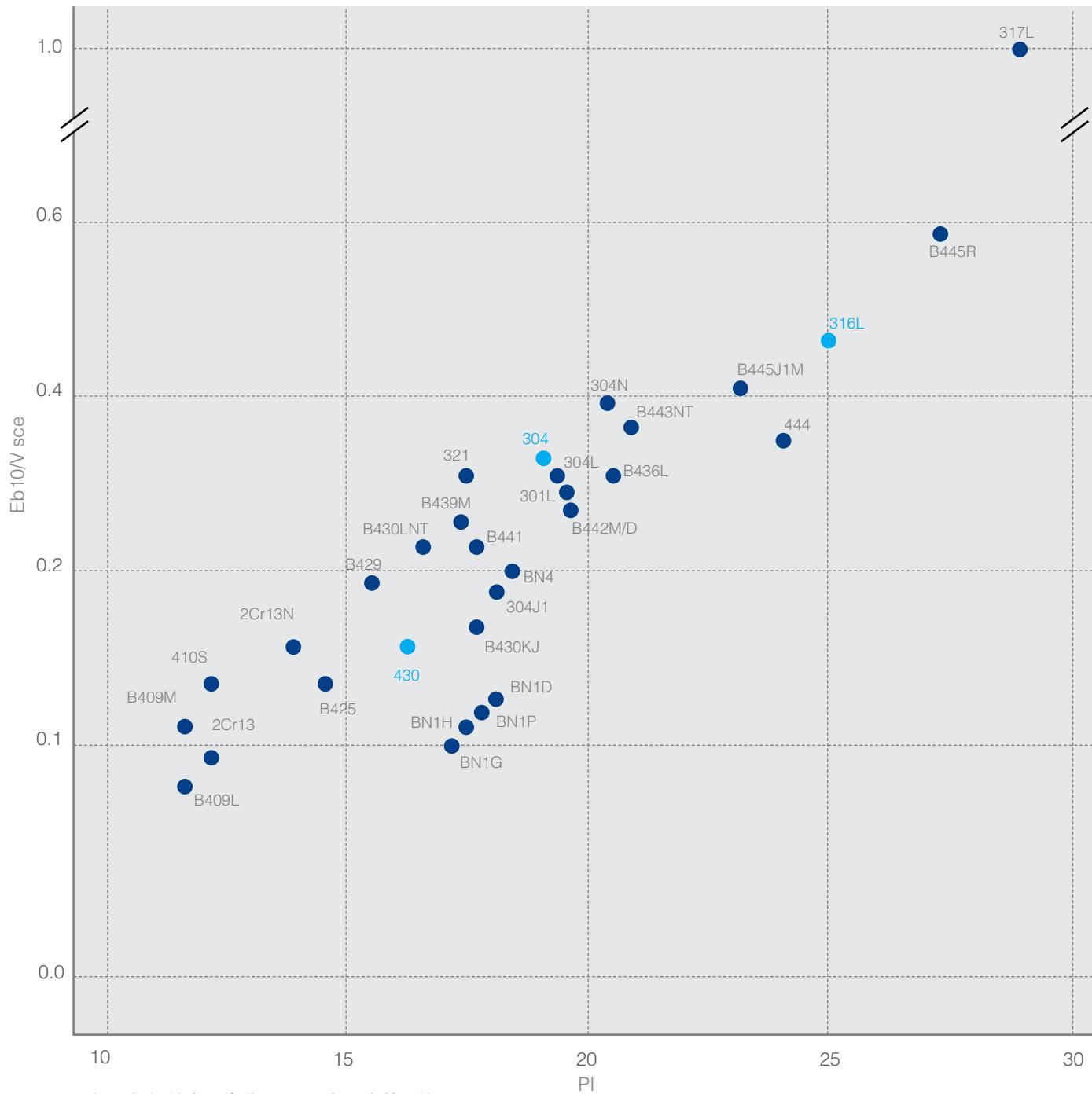
生产钢种与性能  
GRADE AND  
PROPERTIES



Baosteel Stainless

## 1 耐腐蚀性能比较

CORROSION RESISTANCE GRAPH

宝钢不锈钢的点蚀电位 $E_{b10}$ 和点蚀指数PI的关系奥氏体不锈钢:  $PI = \%Cr + 3.3\%Mo + 16\%N$ 铁素体和马氏体不锈钢:  $PI = \%Cr + 3.3\%Mo$ Pitting potential  $E_{b10}$  vs pitting index PI Graph of Baosteel Stainless Steel ProductsAustenitics:  $PI = \%Cr + 3.3\%Mo + 16\%N$ Ferritics and Martensitics:  $PI = \%Cr + 3.3\%Mo$

## ▲ 2 常用牌号、性能、用途

GENERAL GRADES, PROPERTIES  
AND APPLICATIONS

类型 Series	常用订货标准与牌号 General Standards and Grades		参照牌号 Reference Grade				
	标准 Standard	牌号 Grade	GB		JIS	ASTM	EN
BQB/协议	SUS301B SUS301S	12Cr17Ni7	2007版 2007 Version	1992版 1992 Version	SUS301	301	1.4319
JIS	SUS301L	022Cr17Ni7	—	SUS301L	301L	1.4318	
JIS	SUS304	06Cr19Ni10	0Cr18Ni9	SUS304	304	1.4301	
BQB/协议	06Cr19Ni10N	06Cr19Ni10N	0Cr19Ni9N	SUS304N1	304N	1.4315	
JIS	SUS304L	022Cr19Ni10	00Cr19Ni10	SUS304L	304L	1.4306	

注：表中“BQB/协议”表示按宝钢标准或协议供货。

REF: "BQB/协议" means supply according to Baosteel's specifications or technical agreements.



Baosteel Stainless

## 性能

## Properties

## 主要用途

## Main Applications

亚稳态奥氏体不锈钢,具有良好耐磨性和耐腐蚀性,冷作硬化率高。

Metastable stainless steel, good wearing and corrosion resistance properties, high hardening rate with cold working.

超低碳的亚稳态奥氏体不锈钢,退火后具有优异的力学性能,有优异的抗腐蚀性能和良好的焊接性能。

Ultra low carbon austenite steel in metastable condition, with excellent mechanic properties, corrosion resistance and weldability after annealing.

典型的奥氏体不锈钢,具有良好的耐蚀性、耐热性,低温强度和机械特性;冲压、弯曲等热加工性好,无热处理硬化现象、无磁性。

With good corrosion resistance, heat resistance, low temperature mechanical property, together with good hot working properties like drawing, stressing, bending, etc., No hardening after heat treatment and no collision.

在304的基础上增加了N含量,从而提高了强度30%,达到材料减薄的效果,且耐点蚀性能有所提高。

With addition of N content based on 304, strength improved by 30%, thinner material realized, and have better pitting corrosion resistance properties.

比304碳含量更低,耐晶间腐蚀性优越,避免焊接后热处理。

With lower carbon content than 06Cr19Ni10, having excellent intergranular corrosion resistance and avoiding heat treatment after welding.

建筑装潢、工程结构及机械设备制造、运输车辆、电子电器行业。

Architecture decoration, engineering structure & machinery equipment manufacture, transportation vehicle, electrical and electronic industry.

铁路客车、动车、地铁的车厢、车体框架及其它结构件。

Applied to carriages, rail wagons, precision strips industries and exhibitions architecture, etc.

广泛应用于家庭用品、食品工业、医疗器具、化工行业、管线、热水器、锅炉、汽车配件、建材,船舶部件等。

For home appliances, cabinets, indoor wires and pipes, water heaters, boilers, bathtubs, car accessories, medical facilities, building materials, chemical industry, food industry, agriculture, ship parts, etc.

压力容器、化工、电子等行业,适用于304使用的所有环境。

Pressure vessel, chemical industry, electronics, and all applications of 304.

化工、煤炭、石油等行业。

Chemical, coal, and petrol industries.

奥氏体 AUSTENITE

类型 Series	常用订货标准与牌号 General Standards and Grades		参照牌号 Reference Grade				
	标准 Standard	牌号 Grade	2007版 2007 Version	1992版 1992 Version	JIS	ASTM	EN
BQB/协议	B304DDQ	06Cr19Ni10	0Cr18Ni9	SUS304	304	1.4301	
JIS	SUS304J1	—	—	SUS304J1	—	—	
ASTM	309S	06Cr23Ni13	0Cr23Ni13	SUS309S	309S	1.4833	
ASTM	310S	06Cr25Ni20	0Cr25Ni20	SUS310S	310S	1.4845	
JIS	SUS316	06Cr17Ni12Mo2	0Cr17Ni12Mo2	SUS316	316	1.4401	

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Baosteel Stainless

## 性能

## Properties

## 主要用途

## Main Applications

在304L基础上添加Cu，改善了成型性，有利于深加工，特别是深冲加工。

家庭用品、厨卫等行业。

With addition of Cu content based on 304L, formability improved, deep drawing quality.

Household utensil, kitchenwares.

减少304钢中的Ni，添加Cu。冷成型性能特别是深冲性能优良。

保温瓶、厨房洗涤槽、锅、壶等餐具，也用于污水槽、热水槽。

With reduction of Ni based on 304 and addition of Cu, good cold formability, esp. Good deep drawing properties.

Vacuum vask, water sink, pan and pots, also for waste water and hot water tanks.

高Cr、高Ni不锈钢，良好的耐高温氧化性能和高温持久性能,耐热温度可达900℃，在无负荷的条件下,最高耐热温度达到1000℃。

热处理炉、加热炉、电站锅炉热交换器、排烟道等高温环境条件下的设备制造。

With good oxidation resistance and persistency against high temperature up to 900 °C. The peak temperature reaches up to 1000 °C under unload condition.

For equipment working under high temperature, such as heat treatment stoves, heating stoves, boiler heat exchangers of power stations, smoke funnels, etc.

耐高温性能比309S更好,耐热温度可达1000℃, 无负荷的条件下,最高耐热温度达到1100℃。

适应于309S所使用的环境。

With high temperature resistance better than 06Cr23Ni13 (up to 1000 °C). The peak temperature reaches up to 1100 °C under unload condition.

For equipments working under high temperature, such as heat treatment stoves, heating stoves, boiler heat exchangers of power stations, smoke funnels, etc.

因添加Mo，故其耐蚀性、耐大气腐蚀性和高温强度特别好，可在苛酷的条件下使用；加工硬化性优，无磁性。在海水和其它各种介质,耐腐蚀性比304好。

海水用设备，化学、染料、造纸、草酸、肥料生产设备，照相、食品工业、沿海设施等。

With addition of Mo, better corrosion resistance, especially excellent atmosphere corrosion resistance and high temperature strength, can be used under critical condition, good processing hardening properties, no magnetism, better corrosion resistance than 304 in circumstances of sea water and other mediums.

For facilities used in seawater, production machines of chemicals, dyes, papers, oxalic acids or fertilizers; photography, food industry, or facilities alongside seawater.

类型 Series	常用订货标准与牌号 General Standards and Grades		参照牌号 Reference Grade				
	标准 Standard	牌号 Grade	2007版 2007 Version	1992版 1992 Version	JIS	ASTM	EN
	JIS	SUS316L	022Cr17Ni12Mo2	00Cr17Ni14Mo2	SUS316L	316L	1.4404
	ASTM	317L	022Cr19Ni13Mo3	00Cr19Ni13Mo3	SUS317L	317L	1.4438
	GB	06Cr18Ni11Ti	06Cr18Ni11Ti	0Cr18Ni10Ti	SUS321	321	1.4541
BQB/协议	BN1D BN1P BN1H BN1G		—	—	—	—	—
BQB/协议	BN4 BNDDQ		—	—	—	—	—

注：表中“BQB/协议”表示按宝钢标准或协议供货。

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## 性能

## Properties

## 主要用途

## Main Applications

316的超低碳钢，除与316钢有相同的特性外，耐晶间腐蚀性更好。

316钢的用途中，对抗晶界腐蚀性有特别要求的产品。

Ultra low carbon steel of 316, with better intergranular corrosion resistance otherwise 316.

With special requirements of intergranular corrosion resistance in 316 applications.

在316L基础上添加Ni和Mo，具有优异的耐点蚀性能、耐均匀腐蚀性能和耐晶间腐蚀性能。

化工工业、电力工业和压力容器等领域，如处理硫、纸浆、酸性颜料、储槽等，在电力电站行业主要用于冷凝管。

With addition of Ni & Mo based on 316L, excellent pitting corrosion resistance and uniform corrosion resistance and intergranular corrosion resistance properties.

Chemical industry, power industry and pressure vessels and other areas, such as sulfur processing, pulp, acid pigment, a mixture of acetic acid and nitrate-based, flue gas desulfurization equipment and pulp and paper bleaching equipment, chemical equipment, nitric acid absorption tower, heat exchanger, tanks, etc., mainly used in the power industry, power plant condenser.

在304钢中添加Ti元素来防止晶界腐蚀；适合于在430°C–900°C温度下使用。

航空器、排气管、锅炉汽包，耐酸容器、管道、换热器和耐酸设备及衬里。

With addition of Ti based on 304 for intergranular corrosion resistance, good for use under 430 °C-900 °C.

For acid resisting aerostat, exhaust pipes, boiler drum, tubes, heat exchangers, acid resisting equipment and liners.

节镍型奥氏体不锈钢，添加Mn、N、Cu元素。具有良好的力学性能、成形性能、焊接性能和一定的耐蚀性能，可以满足一般腐蚀环境下(非强酸、强碱环境)对不锈钢材料的使用要求。

较高成形性要求，弱腐蚀环境，如水槽、室内干燥条件下用制品。浅成形要求，室内装饰用面板。

Ni-saving austenitics, with addition of Mn, N, Cu, good mechanical properties, formability, weldability, certain corrosion resistance, good for general corrosive condition(not strong acid, alkali condition).

High formability requirements, weak corrosive condition, like sink, utensil for dry indoor condition. Small formability for indoor decoration panel.

节镍型奥氏体不锈钢，具有良好的力学性能、成形性能、焊接性能和一定的耐蚀性能。

冷藏集装箱内板、制品

Ni-saving austenitics, good mechanical properties, formability, weldability, certain corrosion resistance.

Refrigerated container inside plate, utensil products.

类型 Series	常用订货标准与牌号 General Standards and Grades		参照牌号 Reference Grade				
	标准 Standard	牌号 Grade	2007版 2007 Version	1992版 1992 Version	JIS	ASTM	EN
	GB	06Cr13Al	06Cr13Al	0Cr13Al	SUS405	405	1.4002
	BQB/协议	T4003	—	—	—	S41003	1.4003
	JIS	SUH409L	022Cr11Ti	—	SUH409L	S40910	1.4512
	BQB/协议	B409M	—	—	—	S40930	—
	BQB/协议	B429	10Cr15	1Cr15	SUS429	S42900	1.4595
	BQB/协议	B432L	—	—	—	—	—
	BQB/协议	B436L	019Cr18MoTi	—	SUS436L	S43600	1.4513
	BQB/协议	B439M	022Cr17Ti	00Cr17	SUS430LX	S43035	1.4510
	BQB/协议	B441	022Cr18NbTi	—	SUS430JIL	S43940	1.4509
	BQB/协议	B444M2	019Cr19MoNbTi	—	SUS444	S44400	1.4521

注：表中“BQB/协议”表示按宝钢标准或协议供货。

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## 性能

## Properties

## 主要用途

## Main Applications

低铬铁素体不锈钢，非淬硬性钢。具有相当于低铬钢的不锈性和抗氧化性，塑性、韧性和冷成形性能优于铬含量更高的其他铁素体不锈钢。

Low Cr ferritics, Non-quenching steel, with stainless, oxidation resistance properties of low Cr steel, better plasticity, flexibility, cold forming properties than higher Cr content ferritics.

石油精制装置、压力容器衬里，蒸汽透平叶片和复合钢板等

Petrol refining device, liner of pressure vessel, Steam turbine blades, and composite steel plate.

高强度铁素体不锈钢。具有较高的屈服强度和耐候、耐磨、抗低温冲击性能，焊接性能优良。

High-strength ferritic stainless steel. High yield strength and weather resistance, abrasion resistance, low temperature impact properties, good weldability.

铁路货车车辆制造、汽车底盘、普通耐蚀焊接结构、室内外电器柜、制糖机械、矿山机械。

Railway vehicle manufacturing truck, automobile chassis, general corrosion resistance of welded structures, indoor and outdoor electrical cabinets, sugar machinery, mining machinery.

添加了Ti元素，高温耐蚀性及高温强度较好。

With addition of Ti, good high temperature corrosion resistance and strength.

汽车排气管、热交换机、集装箱等在焊接后不热处理的产品。

Automobile exhaust pipe, heat exchanger, containers, no need of heat treatment after welding.

超纯铁素体不锈钢。具有良好的耐腐蚀性能和高温强度，较低的热膨胀系数，优良的耐高温氧化和高溫疲劳性能以及良好的冷成形性能

Super purity ferritics, Has good corrosion resistance and high temperature strength, low thermal expansion coefficient, good high temperature oxidation and high temperature fatigue properties and good cold formability

汽车排气系统用零部件

Parts of automobile exhaust pipe system.

类型 Series	常用订货标准与牌号 General Standards and Grades		参照牌号 Reference Grade				
	标准 Standard	牌号 Grade	2007版 2007 Version	1992版 1992 Version	JIS	ASTM	EN
	JIS	SUS410L	022Cr12	00Cr12	SUS410L	410L	1.4003
	BQB/协议	B425	—	—	—	—	—
	JIS	SUS430	10Cr17	1Cr17	SUS430	430	1.4016
	BQB/协议	B430KJ	—	—	—	—	—
	BQB/协议	439 BX439	022Cr18Ti	00Cr17	SUS430LX	439	1.4510

注：表中“BQB/协议”表示按宝钢标准或协议供货。

REF: "BQB/协议" means supply according to Baosteel's specifications or technical agreements.



## 性能

## Properties

## 主要用途

## Main Applications

在410钢的基础上，降低了含C量，其加工性，抗焊接变形，耐高温氧化性优秀。

With reduction of C based on 410, excellent processing, anti-distortion of welding, excellent high temperature anti-oxidation.

含铬量14.5%左右，碳氮含量较低，加入了少量的钒。具有相当于430冷加工成型性能和耐腐蚀性能，成本较低。

About 14.5% chromium, carbon and nitrogen content is low, add a small amount of vanadium. With the equivalent of 430 cold forming properties and corrosion resistance, low cost.

作为铁素体钢的代表钢种，热膨胀率低，成形性及耐氧化性优。

Typical ferritics stainless steel, low thermal expansion rate, formability, and excellent oxidation resistance.

在430的基础上添加铜元素，既保持了430基本性能，又具有良好抗菌性能。

With addition of Cu based on 430, while maintaining the basic performance, but also has good antibacterial properties.

18铬基钛稳定化不锈钢,具有良好耐腐蚀性、成形性和焊接性的超低碳氮铁素体不锈钢。

18-Cr based Ti-stabilized stainless steel base, with good corrosion resistance, formability and weldability of low carbon and nitrogen ferritic stainless steel.

冷藏集装箱、汽车前管、喷嘴、锅炉燃烧室、换流罩、消音器部件、餐具。

Refrigerated containers, automotive front tube, nozzle, the boiler combustion chamber, for flow hood, muffler parts, tableware.

制品行业，如餐具、厨具和食品用具等。

Utensil industry, such as tableware, kitchenware and food utensils.

家电、餐具、厨卫、装饰、燃烧器等行业。

Home appliances, tableware, kitchen, decoration, burners and other industries.

家用电器、厨房设备、食品工业、医疗器械、水管等。

Household appliances, kitchen equipment, food industry, medical equipment, water pipes and so on.

电梯、扶梯面板、洗衣机内筒、建筑装饰板

Elevator, escalator panels, washing machine drum, architectural panels.

类型 Series	常用订货标准与牌号 General Standards and Grades		参照牌号 Reference Grade				
	标准 Standard	牌号 Grade	2007版 2007 Version	1992版 1992 Version	JIS	ASTM	EN
BQB/协议	B443NT	—	—	—	—	—	—
JIS	SUS444	019Cr19Mo2NbTi	00Cr18Mo2	SUS444	444	1.4521	—
BQB/协议	B445R	—	—	SUS445R	YUS220M 445M2 445J2	—	—
BQB/协议	B445J1M	—	—	SUS445R	—	—	—
JIS	SUS410S	06Cr13	0Cr13	SUS410S	410S	1.4000	—

注：表中“BQB/协议”表示按宝钢标准或协议供货。

REF: "BQB/协议" means supply according to Baosteel's specifications or technical agreements.



## 性能

## Properties

## 主要用途

## Main Applications

具有与304相当的耐腐蚀性和比430更加优异的成形性能，某些场合可替代304使用。

Corrosion resistance similar to 304, better formability than 430, substitute for 304 under certain conditions.

超低碳氮、含18%铬与2%钼、高耐蚀的铁素体不锈钢，采用铌或钛进行稳定化，可以避免焊接后的晶间腐蚀。具有优异的耐氯离子应力腐蚀开裂能力。

Ultra low N, C, with 18% Cr, 2%Mo, high resistance ferritics, Nb or Ti stabilized, avoiding intergranular corrosion after welding, excellent resistance to chloride stress corrosion cracking

超低碳氮、含20–24%铬、含1.2–2.0%钼、铌钛双稳定超纯铁素体不锈钢，优良的耐大气腐蚀能力和耐氯离子点腐蚀能力，良好焊接、加工性能好，容易切削、弯曲。

Ultra low N, C, with 20-24% Cr, 1.2-2.0%Mo, high resistance ferritics, Nb and Ti dual stabilized, Excellent to atmospheric corrosion resistance and pitting corrosion resistance to chloride ion capacity, good welding, machining performance, easy to cut, bend.

超低碳氮、含20–22%铬、含量小于1%、铌钛双稳定超纯铁素体不锈钢，性能与SUS444相当，是水系统用不锈钢的首选材料。

Ultra low N, C, with 20-22% Cr, below 1% Nb and Ti dual stabilized super purity ferritics, similar properties as SUS444, first choice of stainless steel used in water system.

铁素体不锈钢中含Cr量最低的一种。它具有不锈性，高韧性、耐冲击。

With lowest Cr content in ferritics grade, stainless, high toughness, good impact resistance.

建筑、电梯、制品等

Architecture, elevator, utensils.

水处理系统、太阳能热水器、印染、酿造、家电等

Water treatment systems, solar water heaters, dyeing, brewing, household appliances, etc.

公共建筑和旅游设施，如大型体育馆、博物馆、机场候机楼等建筑行业的立面、屋面、墙面幕墙

Public buildings and tourist facilities, such as large stadiums, museums, airport terminals and other construction industry, facade, roof, wall curtain.

水系统：太阳能热水器、电热水器、水箱、水车等

Water system: solar water heater, electric water heaters, water tanks, water wagons.

汽轮机叶片、结构架、衬里、螺栓螺帽。

Turbine blades, structural frame, liner, bolt nut.

类型 Series	常用订货标准与牌号 General Standards and Grades		参照牌号 Reference Grade					
	标准 Standard	牌号 Grade	GB	2007版 2007 Version	1992版 1992 Version	JIS	ASTM	EN
	JIS	SUS410	12Cr13	1Cr13	SUS410	410	1.4006	
	BQB/协议	B410DB B410M	—	—	—	—	—	—
	JIS	SUS420J1	20Cr13	2Cr13	SUS420J1	420	1.4021	
	BQB/协议	B15Cr14N ( 2Cr13N )						
	BQB/协议	B18Cr14N ( 2Cr13NH )						
	BQB/协议	B25Cr14VN ( 3Cr14N )	30Cr13	3Cr13	SUS420J2	420	1.4028	
	BQB/协议	B30Cr14N ( 4Cr14N )	40Cr13	4Cr13	—	—	1.4031	
	BQB/协议	B35Cr15MoVN ( 4Cr15MoVN )	—	—	—	—	1.4116	

注：表中“BQB/协议”表示按宝钢标准或协议供货。

REF: "BQB/协议" means supply according to Baosteel's specifications or technical agreements.



## 性能

## Properties

## 主要用途

## Main Applications

作为马氏体钢的代表钢，虽然强度高，但不适合于苛酷的腐蚀环境下使用；加工性好，热处理面硬化（有磁性）。

A representative of martensitic stainless steel, although with high strength, but not for the critical corrosive environments; good processing , surface hardening after heat treatment (magnetic).

马氏体不锈钢。无需回火处理，只需淬火即可获得HRC30~40的硬度，并可获得良好的韧性、耐磨性和耐蚀性。

Martensitic stainless steel, hardness can reach HRC30~40 after quenching, without tempering, good toughness, wearing resistance and corrosion resistance.

一般用途,刃具类。

General usage, cutting tools.

摩托车制动盘，水门、各类餐具。

Motorcycle brake disc, Watergate, all kinds of tableware.

淬火后硬度高，耐蚀性好

刀具、管嘴、法门、板尺、餐具。

High hardness after quenching, good corrosion resistance.

Tools, nozzles, valves, plate rulers, cutlery.

宝钢控氮马氏体系列不锈钢，在同类钢种基础上，降碳增氮，在获得高硬度的同时，提高耐腐蚀性能，具有更高的人体安全性。

Baosteel N-control martensitic, with C reduced and N increased based on the similar grades to obtain high hardness as well as high corrosion resistance, and good human security.

五金刀剪、食品工业刀片、餐刀、量具、剃须刀片。

Metal knives, scissors, food industry blade, knife, measuring tools, razor blades.

类型 Series	常用订货标准与牌号 General Standards and Grades		参照牌号 Reference Grade					
	标准 Standard	牌号 Grade	GB	2007版 2007 Version	1992版 1992 Version	JIS	ASTM	EN
马氏体 MARTENSITE	GB	00Cr13Ni5Mo	04Cr13Ni5Mo	—	SUSF6NM	S41500	1.4314	
双相钢 DEPLEX	BQB/协议	B2205	022Cr22Ni5Mo3N	—	—	2205	1.4462	

注：表中“BQB/协议”表示按宝钢标准或协议供货。

REF: "BQB/协议" means supply according to Baosteel's specifications or technical agreements.



## 性能

## Properties

## 主要用途

## Main Applications

低碳马氏体不锈钢，高强度又具有良好的韧性和可焊性。

Low C martensitic, high hardness, strength, and good toughness and weldability.

适用于厚截面尺寸且要求具有良好可焊性的使用条件，如大型水电站转轮、转轮下环以及石油工业耐蚀管线等。

For thick-section dimensions and requires a good weldability use conditions, such as large hydropower wheel, wheel corrosion under the ring and the oil industry pipelines.

兼有铁素体不锈钢和奥氏体不锈钢的优点，强度和韧性高，耐应力腐蚀及耐点蚀能力明显高于022Cr17Ni12Mo2。

With advantages of both ferritics and austenitics, high strength and toughness, stress and pitting corrosion resistance significantly higher than 022Cr17Ni12Mo2.

油气、石化、化肥、桥梁、建筑以及化学品船等行业。

For industries, like oil and gas, petrol and chemical, fertilizer, bridge, architecture and chemical ship building, etc.



### 3 成分/力学性能

#### CHEMISTRY/MECHANICAL PROPERTIES

类型

牌号

Series

Grade

主要化学成分 %

Chemical Composition %

	C	Si	Mn	P	S	Ni	Cr	Mo
SUS301B	0.09–0.14	1.00	1.00	0.045	0.030	6.50–8.00	16.00–18.00	
SUS301S	0.11–0.15	1.00	1.00–2.00	0.045	0.030	6.00–8.00	16.00–18.00	
SUS301L	0.030	1.00	2.00	0.045	0.030	6.00–8.00	16.00–18.00	
SUS304	0.08	1.00	2.00	0.045	0.030	8.00–10.50	18.00–20.00	
06Cr19Ni10N	0.08	1.00	2.00	0.045	0.030	8.00–11.00	18.00–20.00	
SUS304L	0.030	1.00	2.00	0.045	0.030	9.00–13.00	18.00–20.00	
304L	0.030	0.75	2.00	0.045	0.030	8.00–12.00	18.00–20.00	
B304DDQ	0.03	0.75	3.00	0.035	0.015	8.00–10.50	16.50–18.00	
SUS304J1	0.08	1.70	3.00	0.045	0.030	6.00–9.00	15.00–18.00	
309S	0.08	1.00	2.00	0.045	0.030	12.00–15.00	22.00–24.00	
310S	0.08	1.50	2.00	0.045	0.030	19.00–22.00	24.00–26.00	
SUS316	0.08	1.00	2.00	0.045	0.030	10.00–14.00	16.00–18.00	2.00–3.00
316L	0.030	0.75	2.00	0.045	0.030	10.00–14.00	16.00–18.00	2.00–3.00
SUS316L	0.030	1.00	2.00	0.045	0.030	12.00–15.00	16.00–18.00	2.00–3.00
SUS317L	0.030	1.00	2.00	0.045	0.030	11.00–15.00	18.00–20.00	3.00–4.00
06Cr18Ni11Ti	0.08	1.00	2.00	0.045	0.030	9.00–13.00	17.00–19.00	
BN1H	0.15	1.00	8.00–10.00	0.045	0.030	0.40	14.00–16.00	
BN1D	0.15	1.00	7.00–10.00	0.045	0.030	0.70–1.00	14.00–16.00	
BN1P	0.15	1.00	8.00–10.00	0.045	0.030	1.00–1.50	14.00–16.00	
BN1G	0.15	1.00	8.50–10.50	0.045	0.030	1.00–1.50	13.00–15.00	
BN4	0.10	1.00	5.50–7.50	0.045	0.030	3.50–5.50	16.00–18.00	
BNDDQ	0.15	1.00	5.50–8.50	0.045	0.030	3.50–5.50	16.00–18.00	

奥氏体 AUSTENITE

注：表中所列成分除标明范围，其余均为最大值。

REF: Chemical composition listed is the max. limit or the range.



Baosteel Stainless

力学性能 ( 固溶或退火状态 )  
Mechanical Properties (solution or annealed condition)

N	其它 Others	屈服强度N/mm <sup>2</sup> Yield strength N/mm <sup>2</sup>	抗拉强度N/mm <sup>2</sup> Tensile strength N/mm <sup>2</sup>	延伸率 % Elongation %	硬度 Hardness		冷弯180° Cold bending 180° d: 弯芯直径 Curving Diameter a: 钢板厚度 sample thickness
		不大于 ≥	HV	HRB			
		205	520	40	218	95	—
		205	520	40	218	95	—
0.20		215	550	45	218	95	—
		205	520	40	200	90	—
0.10~0.16		240	550	30	201	92	
		175	480	40	200	90	—
0.10		170	485	40	201	92	—
0.05	Cu:2.40~2.70	155	450	40	170	—	—
	Cu:1.00~3.00	155	450	40	200	90	—
		205	520	40	200	90	—
		205	520	40	200	90	—
		205	520	40	200	90	—
0.10		175	485	40	200	95	—
		175	480	40	200	90	—
		175	480	40	200	90	—
0.10	Ti:5×C~0.70	205	520	40	200	90	—
0.25	Cu: 2.00	260	610	40	270	—	—
0.25	Cu: 2.00	260	610	40	250	—	—
0.25	Cu: 1.00	260	610	40	270		
0.25	Cu: 1.00	260	610	40	290		
0.20	Cu:1.50~2.50	250	600	40	230	—	—
0.30	Cu: 3.00	230	600	40	230	—	—

铁素体 FERRITE

类型 Series	牌号 Grade	主要化学成分 %						
		Chemical Composition %						
		C	Si	Mn	P	S	Ni	Cr
	06Cr13Al	0.08	1.00	1.00	0.040	0.030	0.60	11.50–14.50
	T4003	0.030	1.00	1.00–2.50	0.040	0.015	0.60–1.00	11.00–13.00
	SUH409L	0.030	1.00	1.00	0.040	0.020		10.50–11.75
	B409M	0.020	1.00	1.00	0.040	0.020		11.00–12.00
	B429	0.025	1.20	1.20	0.040	0.020		14.00–16.00
	B432L	0.020	1.00	1.00	0.040	0.020		16.80–19.00 0.45–0.65
	B436L	0.020	1.00	1.00	0.040	0.020		17.00–19.00 0.80–1.50
	B439M	0.020	1.00	1.00	0.040	0.020		16.50–19.00
	B441	0.025	1.00	1.00	0.040	0.020		17.00–19.00
	B444M2	0.025	1.00	1.00	0.040	0.020		17.00–20.00 1.50–2.50
	SUS410L	0.030	1.00	1.00	0.040	0.030	0.60	11.00–13.50
	B425	0.05	1.00	1.00	0.035	0.030		14.00–16.00
	SUS430	0.12	0.75	1.00	0.040	0.030		16.00–18.00
	B430KJ	0.030	0.75	1.00	0.035	0.030		16.00–18.00
	439	0.030	0.75	1.00	0.035	0.030		17.00–19.00
	BX439	0.030	0.75	1.00	0.035	0.030		17.00–19.00
	B443NT	0.025	1.00	1.00	0.035	0.030		20.50–23.00
	SUS444	0.025	1.00	1.00	0.040	0.030	1.00	17.00–20.00 1.75–2.50
	B445R	0.015	1.00	1.00	0.040	0.030		22.00–24.00 1.20–2.00
	B445J1M	0.025	1.00	1.00	0.035	0.030		21.00–22.50 0.40–1.20

注：表中所列成分除标明范围，其余均为最大值。

REF: Chemical composition listed is the max. limit or the range.



## 力学性能 ( 固溶或退火状态 )

Mechanical Properties (solution or annealed condition)

N	其它 Others	屈服强度 N/mm <sup>2</sup> Yield strength N/mm <sup>2</sup>	抗拉强度 N/mm <sup>2</sup> Tensile strength N/mm <sup>2</sup>	延伸率 % Elongation %	硬度 Hardness		冷弯 180° Cold bending 180° d: 弯芯直径 Curving Diameter a: 钢板厚度 sample thickness
		不小于 ≥	不大于 ≤	HV	HRB		
	Al:0.10~0.30	175	410	20	200	88	d =0.5a
0.025	Ti:8×C~0.35	350	480	20	250	—	d =2a
0.020	Ti:≥6×C~0.75	175	360	32	150	80	d =0.5a
	Ti:≤0.40; Nb:≤0.40 C+N:≤0.030	175	380	32	150	80	d =a
0.05	Ti: ≤0.30; Nb:0.30~0.60; C+N:≤0.030	260~350	450~550	28	170	88	d =a
	Nb: 6×(C+N)~0.60; Ti: ≤0.30	210~320	390~520	30	170	—	d =a
0.030	Ti: 8×(C+N)~0.80; C+N:≤0.030	240~320	420~550	30	170	88	d =a
0.030	Ti:0.15+4×(C+N)~0.80; Nb:≤0.20; C+N:≤0.030	240~320	400~550	30	170	88	d =a
0.030	Ti:≤0.30; Nb:0.30+3×C ~1.00; C+N:≤0.030	260~350	450~550	28	170	88	d =a
0.020	Ti:≤0.30; Nb:0.30+3×C ~1.00; C+N:≤0.030	260~350	450~550	28	200	—	d =a
0.035		195	360	22	200	88	d =2a
0.020		220	400	22	200	—	d =2a
0.025		205	420	22	200	88	d =2a
	Cu:1.00~1.60	260	420	22	200	88	d =2a
	Ti:0.2+4(C+N)~0.80	205	415	22	200	—	d =2a
	Ti:10(C+N)~1.00	205	415	22	200	—	d =2a
	Ti、Nb、Zr 或 其组合:8(C+N)~0.80	205	390	25	200	90	d =2a
	(Ti+Nb):0.20+4(C+N)~0.80	245	410	20	230	96	d =2a
	Ti+Nb:≥0.35	245	410	20	230	96	d =2a
	Ti+Nb:8(C+N)~0.80	245	410	25	230	96	d =2a

类型 Series	牌号 Grade	主要化学成分 %						
		Chemical Composition %						
		C	Si	Mn	P	S	Ni	Cr
马氏体 MARTENSITE	SUS410S	0.08	1.00	1.00	0.040	0.030	0.60	11.50–13.50
	SUS410	0.15	1.00	1.00	0.040	0.030	0.60	11.50–13.50
	B410DB	0.05–0.10	1.00	1.00–2.50	0.035	0.030		11.50–14.00
	B410M	0.05–0.09	1.00	1.00	0.035	0.030		11.50–13.50
	SUS420J1	0.16–0.25	1.00	1.00	0.040	0.030	0.60	12.00–14.00
	B15Cr14N ( 2Cr13N )	0.12–0.18	1.00	1.00	0.035	0.010		13.50–14.50
	B18Cr14N ( 2Cr13NH )	0.15–0.21	1.00	1.00	0.035	0.010		13.50–14.50
	B25Cr14VN ( 3Cr14N )	0.21–0.28	1.00	1.50	0.035	0.010		13.50–14.50
	B30Cr14N ( 4Cr14N )	0.25–0.35	1.00	1.50	0.035	0.010		13.50–14.50
	B35Cr15MoVN ( 4Cr15MoVN )	0.30–0.40	1.00	1.50	0.035	0.010	14.50–15.50	0.50–1.00
双相钢 DEPLEX	00Cr13Ni5Mo	0.05	1.00	1.00	0.030	0.030	3.50–5.50	11.50–14.00
	B2205	0.030	1.00	2.00	0.030	0.020	4.50–6.50	21.00–23.00

注：表中所列成分除标明范围，其余均为最大值。

REF: Chemical composition listed is the max. limit or the range.



力学性能 ( 固溶或退火状态 )  
Mechanical Properties (solution or annealed condition)

N	其它 Others	屈服强度N/mm <sup>2</sup> Yield strength N/mm <sup>2</sup>	抗拉强度N/mm <sup>2</sup> Tensile strength N/mm <sup>2</sup>	延伸率 % Elongation %	硬度 Hardness		冷弯180° Cold bending 180° d: 弯芯直径 Curving Diameter a: 钢板厚度 sample thickness
		不大于 ≥	HV	HRB			
		205	410	20	200	88	d =2a
		205	440	20	210	93	d =2a
		340	550	31	—	82	—
0.05		350	545	34	—	82	—
		225	520	18	234	97	—
0.05–0.12		225	520	18	234	—	—
0.05–0.12		225	520	18	234	—	—
0.05–0.12	V:0.15	225	550	18	250	—	—
0.05–0.12		225	550	18	250	—	—
0.05–0.15	V:0.15	225	550	15	250	—	—
		620	795	15	32 (HRC)	—	—
0.08–0.20		450	620	25	31 (HRC)	—	—

生产规格  
SIZE RANGE



Baosteel Stainless

## 热轧产品 奥氏体 (Cr-Ni系) Austenite (Cr-Ni Series)

宽度	厚度	≤2.2	2.21–2.50	2.51–2.70	2.71–2.90	2.91–3.20	3.21–3.60	3.61–4.10	4.11–4.50	4.51–5.1	5.11–5.6	5.61–6.40	6.41–7.1	7.11–7.90	7.91–9.10	9.11–10.0
≤950																
951–1000																
1001–1050																
1051–1100																
1101–1150																
1151–1200																
1201–1250																
1251–1300																
1301–1350																
1351–1400																
1401–1450																
1451–1500																
1501–1550																
1551–1600																

注： ■ 蓝色表示常规可生产规格  
Normal Sizes ■ 橙色表示可协商生产规格  
Negotiable Sizes ■ 灰色表示不可生产规格  
Unavailable Sizes

## 热轧产品 奥氏体 (Cr-Ni-Mo系) Austenite (Cr-Ni-Mo Series)

宽度	厚度	≤2.2	2.21–2.50	2.51–2.70	2.71–2.90	2.91–3.20	3.21–3.60	3.61–4.10	4.11–4.50	4.51–5.1	5.11–5.6	5.61–6.40	6.41–7.1	7.11–7.90	7.91–9.10	9.11–10.0
≤950																
951–1000																
1001–1050																
1051–1100																
1101–1150																
1151–1200																
1201–1250																
1251–1300																
1301–1350																
1351–1400																
1401–1450																
1451–1500																
1501–1550																
1551–1600																

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Negotiable Sizes ■ 灰色表示不可生产规格  
Unavailable Sizes

## 热轧产品 铁素体 Ferritics

宽度 厚度	≤2.2	2.21-2.50	2.51-2.70	2.71-2.90	2.91-3.20	3.21-3.60	3.61-4.10	4.11-4.50	4.51-5.1	5.11-5.6	5.61-6.00	6.01-7.00	7.01-8.00	8.01-9.00	9.01-10.0
≤950	■			■								■	■		
951-1000	■			■								■	■		
1001-1100					■							■	■		
1101-1200				■								■	■		
1201-1250				■								■	■		
1251-1300					■							■	■		
1301-1350					■							■	■		
1351-1400					■							■	■		
1401-1450					■							■	■		
1451-1500					■							■	■		
1501-1550						■						■	■		
1551-1600						■						■	■		

注： ■ 蓝色表示常规可生产规格  
Normal Sizes ■ 橙色表示可协商生产规格  
Negotiable Sizes ■ 灰色表示不可生产规格  
Unavailable Sizes

## 热轧产品 马氏体 Martensitics

宽度 厚度	≤2.2	2.21-2.50	2.51-2.70	2.71-2.90	2.91-3.20	3.21-3.60	3.61-4.10	4.11-4.50	4.51-5.1	5.11-5.6	5.61-6.40	6.41-7.1	7.11-7.90	7.91-9.10	9.11-10.0
≤950	■			■											
951-1000	■														
1001-1050	■														
1051-1100				■											
1101-1150				■											
1151-1200				■											
1201-1250				■											
1251-1300					■										
1301-1350						■									
1351-1400						■									
1401-1450							■								
1451-1500								■							
1501-1550								■				■	■		
1551-1600									■			■	■		

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Normal Sizes ■ 橙色表示可协商生产规格  
Negotiable Sizes ■ 灰色表示不可生产规格  
Unavailable Sizes

## 冷轧产品 Cold Rolled Products

宽度	厚度	0.20–0.29	0.30–0.39	0.40–0.49	0.50–0.69	0.70–0.89	0.90–1.09	1.10–1.29	1.30–1.69	1.70–1.99	2.00–3.00	3.01–5.00
≤849												
850–949												
950–1249												
1250–1319												
1320–1500												

注： ■ 蓝色表示常规可生产规格  
Normal Sizes ■ 橙色表示可协商生产规格  
Negotiable Sizes ■ 灰色表示不可生产规格  
Unavailable Sizes

## 按表面精加工类型区分 Surface & Processing Range

钢种	厚度	0.20–0.249	0.25–0.29	0.30–0.349	0.35–1.20	1.21–1.50	1.51–2.00	2.01–2.49	2.50–2.99	3.00	3.01–5.00	5.01–6.00	6.01–10.0
奥氏体系列	BLACK												
	No.1												
	No.2D												
	No.2B												
	No.3												
	No.4												
	HL												
	BA												
	毛面												
铁素体系列	BLACK												
	No.1												
	No.2D												
	No.2B												
	No.3												
	No.4												
	HL												
	BA												
	毛面												

注： ■ 蓝色表示常规可生产规格  
Normal Sizes ■ 橙色表示可协商生产规格  
Negotiable Sizes ■ 灰色表示不可生产规格  
Unavailable Sizes

## 卷切板和中厚板 CMP&PMP

类型	厚度	<0.30	0.30–1.00	1.01–2.00	2.01–3.00	3.01–12.0	12.0–20.0	20.1–40.0	40.1–60.0	>60.0
纵切分条										
横切平板										
中厚板										

注： ■ 蓝色表示常规可生产规格  
Normal Sizes ■ 橙色表示可协商生产规格  
Negotiable Sizes ■ 灰色表示不可生产规格  
Unavailable Sizes



尺寸精度  
SIZE TOLERANCE



Baosteel Stainless

## 厚度精度

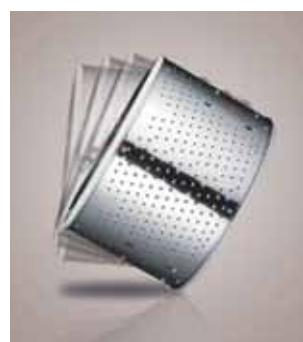
Thickness Tolerance

→ 热轧钢带和卷切钢板的厚度公差 Thickness tolerance of hot rolled coils and sheets

GB/T 4237-2007 单位: mm Unit: mm				JIS G4304-05 单位: mm Unit: mm				ASTM A480/A480M-10 单位: mm Unit: inch [mm]		
公称厚度 Nominal thickness	公称宽度 Nominal width	公称厚度 Nominal thickness	公称宽度 Nominal width	公称厚度 Nominal thickness	公称宽度 Nominal width	公称厚度 Nominal thickness	公称宽度 Nominal width	≤60[1525]	>60[1525]	
≤1200	>1200-≤1500	>1500-≤1800	<1000	≥1000- <1250	≥1250- <1600					
>2.0 -≤2.5	±0.22	±0.25	±0.29	>2.00 -≤2.50	±0.25	±0.30	-	>0.083[2.11] -≤0.098[2.49]	±0.008[0.20]	±0.011[0.27]
>2.5 -≤3.0	±0.25	±0.28	±0.31	>2.50 -≤3.15	±0.30	±0.35	±0.40	>0.098[2.49] -≤0.114[2.90]	±0.009[0.23]	±0.012[0.30]
>3.0 -≤4.0	±0.28	±0.31	±0.33	>3.15 -≤4.00	±0.35	±0.40	±0.45	>0.114[2.90] -≤0.130[3.30] >0.130[3.30] -≤0.145[3.68]	±0.011[0.27]	±0.013[0.33]
>4.0 -≤5.0	±0.31	±0.33	±0.36	>4.00 -≤5.00	±0.40	±0.45	±0.50	>0.145[3.68] -≤0.1875[4.76]	±0.013[0.33]	±0.014[0.35]
>5.0 -≤6.0	±0.33	±0.36	±0.38	>5.00 -≤6.00	±0.50	±0.55	±0.60	>0.1875[4.76] -≤0.250[6.35]	-0.010[0.25] +0.020[0.50]	-0.010[0.25] +0.020[0.50]
>6.0 -≤8.0	±0.38	±0.39	±0.40	>6.00 -≤8.00	±0.60	±0.65	±0.65	>0.250[6.35] -≤0.3125[7.94]	-0.010[0.25] +0.022[0.55]	-0.010[0.25] +0.022[0.55]
>8.0 -≤10.0	±0.42	±0.43	±0.45	>8.00 -≤10.0	±0.65	±0.65	±0.65	>0.3125[7.94] -≤0.3125[7.94]	-0.010[0.25] +0.030[0.75]	-0.010[0.25] +0.030[0.75]

热轧钢带和卷切钢板的厚度公差也可根据用户需要，供需双方协商执行较高精度。

Thickness tolerance of hot rolled coils and sheets can be tighter as per request by customers after confirmation.



→ 冷轧钢带、卷切钢板和卷切钢带的厚度公差 Thickness tolerance of cold rolled coils, sheets and strips

GB/T 3280-2007				JIS G4305-2005		
公称厚度 Nominal thickness	公称宽度 Nominal width			公称厚度 Nominal thickness	公称宽度 Nominal width	
	≤1000	>1000-≤1300	>1300-≤2100	<1250	≥1250- <1600	
≥0.30- < 0.50	± 0.040	± 0.045	—	≥0.30- < 0.60	± 0.05	± 0.08
≥0.50- < 0.60	± 0.045	± 0.050	—	≥0.60- < 0.80	± 0.07	± 0.09
≥0.60- < 0.80	± 0.050	± 0.055	—	≥0.80- < 1.00	± 0.09	± 0.10
≥0.80- < 1.00	± 0.055	± 0.060	± 0.065	≥1.00- < 1.25	± 0.10	± 0.12
≥1.00- < 1.20	± 0.060	± 0.070	± 0.075	≥1.25- < 1.60	± 0.12	± 0.15
≥1.20- < 1.50	± 0.070	± 0.080	± 0.090	≥1.60- < 2.00	± 0.15	± 0.17
≥1.50- < 2.00	± 0.080	± 0.090	± 0.100	≥2.00- < 2.50	± 0.17	± 0.20
≥2.00- < 2.50	± 0.090	± 0.100	± 0.110	≥2.50- < 3.15	± 0.22	± 0.25
≥2.50- < 3.00	± 0.110	± 0.120	± 0.120	≥3.15- < 4.00	± 0.25	± 0.30
≥3.00- < 4.00	± 0.130	± 0.140	± 0.140	≥4.00- < 5.00	± 0.35	± 0.40
≥4.00- < 5.00	± 0.140	± 0.150	± 0.150			

ASTM A480/A480M-10

单位: 英寸[mm]  
Unit: inch [mm]

公称厚度 Nominal thickness	≤40[1000]	公称宽度 Nominal width	>1000-≤1300	>1300-≤2100
>0.012[0.30]-≤0.016[0.40]	± 0.001[0.03]	—	—	—
>0.016[0.40]-≤0.020[0.50]	± 0.0015[0.04]	± 0.0015[0.04]	—	—
>0.020[0.50]-≤0.024[0.60]	± 0.0015[0.04]	± 0.0015[0.04]	—	—
>0.024[0.60]-≤0.032[0.80]	± 0.002[0.05]	± 0.002[0.05]	—	—
>0.032[0.80]-≤0.040[1.00]	± 0.002[0.05]	± 0.002[0.05]	—	—
>0.040[1.00]-≤0.047[1.20]	± 0.0025[0.06]	± 0.0025[0.06]	± 0.003[0.08]	± 0.003[0.08]
>0.047[1.20]-≤0.059[1.50]	± 0.003[0.08]	± 0.003[0.08]	± 0.003[0.08]	± 0.003[0.08]
>0.059[1.50]-≤0.079[2.00]	± 0.003[0.08]	± 0.003[0.08]	± 0.004[0.10]	± 0.004[0.10]
>0.079[2.00]-≤0.098[2.50]	± 0.004[0.10]	± 0.004[0.10]	± 0.0045[0.11]	± 0.0045[0.11]
>0.098[2.50]-≤0.118[3.00]	± 0.004[0.10]	± 0.004[0.10]	± 0.005[0.13]	± 0.005[0.13]
>0.118[3.00]-≤0.157[4.00]	± 0.005[0.13]	± 0.005[0.13]	± 0.007[0.15]	± 0.007[0.15]
>0.157[4.00]-≤0.197[5.00]	± 0.007[0.17]	± 0.007[0.17]	± 0.007[0.17]	± 0.007[0.17]



## → 冷轧钢带、卷切钢板和卷切钢带的厚度公差

Thickness tolerance of Baosteel cold rolled coils, sheets and strips

Q/BQB 4401-2012 Baosteel's specifications  
单位: mm  
Unit: mm

公差记号 Tolerance type	F	I	T			
公称厚度 Nominal thickness	上限 Max	下限 Min	上限 Max	下限 Min	上限 Max	下限 Min
0.20~ < 0.30	-0.010	-0.030	0	-0.020	+0.010	-0.010
0.30~ < 0.40	-0.015	-0.040	0	-0.020	+0.010	-0.010
0.40~ < 0.50	-0.020	-0.050	0	-0.025	+0.015	-0.015
0.50~ < 0.60	-0.025	-0.050	0	-0.025	+0.015	-0.015
0.60~ < 0.70	-0.030	-0.070	0	-0.030	+0.020	-0.020
0.70~ < 0.80	-0.035	-0.070	0	-0.035	+0.020	-0.020
0.80~ < 0.90	-0.040	-0.090	0	-0.040	+0.025	-0.025
0.90~ < 1.00	-0.045	-0.090	0	-0.045	+0.025	-0.025
1.00~ < 1.10	-0.050	-0.100	0	-0.050	+0.030	-0.030
1.10~ < 1.20	-0.055	-0.100	0	-0.055	+0.030	-0.030
1.20~ < 1.30	-0.055	-0.100	0	-0.060	+0.030	-0.030
1.30~ < 1.40	-0.065	-0.120	0	-0.065	+0.040	-0.040
1.40~ < 1.50	-0.065	-0.120	0	-0.070	+0.040	-0.040
1.50~ < 1.60	-0.065	-0.120	0	-0.075	+0.050	-0.050
1.60~ < 1.70	-0.080	-0.150	0	-0.080	+0.050	-0.050
1.70~ < 1.80	-0.080	-0.150	0	-0.080	+0.050	-0.050
1.80~ < 2.00	-0.080	-0.150	0	-0.080	+0.050	-0.050
2.00~ < 2.20	-0.090	-0.170	0	-0.100	+0.060	-0.060
2.20~ < 2.40	-0.090	-0.170	0	-0.100	+0.060	-0.060
2.40~ < 2.50	-0.090	-0.170	0	-0.100	+0.060	-0.060
2.50~ < 2.80	-0.120	-0.220	0	-0.120	+0.070	-0.070
2.80~ < 3.15	-0.120	-0.220	0	-0.140	+0.080	-0.080
3.15~ < 4.00	-0.120	-0.250	0	-0.160	+0.090	-0.090
4.00~≤5.00	-0.170	-0.350	0	-0.200	+0.100	-0.100

冷轧钢带和卷切钢板的厚度公差也可根据用户需要，供需双方协商执行其它精度。

Thickness tolerance of cold rolled coils, sheets and strips can be tighter as per request by customers after confirmation.

## 宽度精度

### Width Tolerance

交货状态 Supply Condition	公差 tolerance			单位: mm Unit: mm
	750 < 宽度 ≤ 1000 width	1000 < 宽度 ≤ 1524 width	1524以上	
冷轧钢带 Cold rolled strips	轧制边 Mill edge	0~+25	0~+30	0~+30
	切边 Slit edge	0~+5	0~+5	0~+10
热轧钢带 Hot rolled strips	轧制边 Mill edge		0~+20	
	切边 Slit edge		0~+5	



Baosteel Stainless

# 包装方式 PACKAGE

## 裸包装

适用于热轧钢卷，陆路短途驳运

### Bare package

For hot rolled coils, short distance land transport



## 防锈纸包装

适用于热轧钢卷，海路运输

### Rust-proof package

For hot rolled coils, sea transport



## 简包装

适用于冷轧钢卷，短途运输

### Simple package

For cold rolled coils, short distance transport



## 通用包装

适用于冷轧钢卷，长途运输

### General package

For cold rolled coils, long distance transport



## 木架捆扎通用包装

适用于冷轧钢卷，集装箱长途运输

### General package with pallet

For cold rolled coils, container transport



## 钢板包装

适用于钢板运输

### Sheet package

For sheet transport



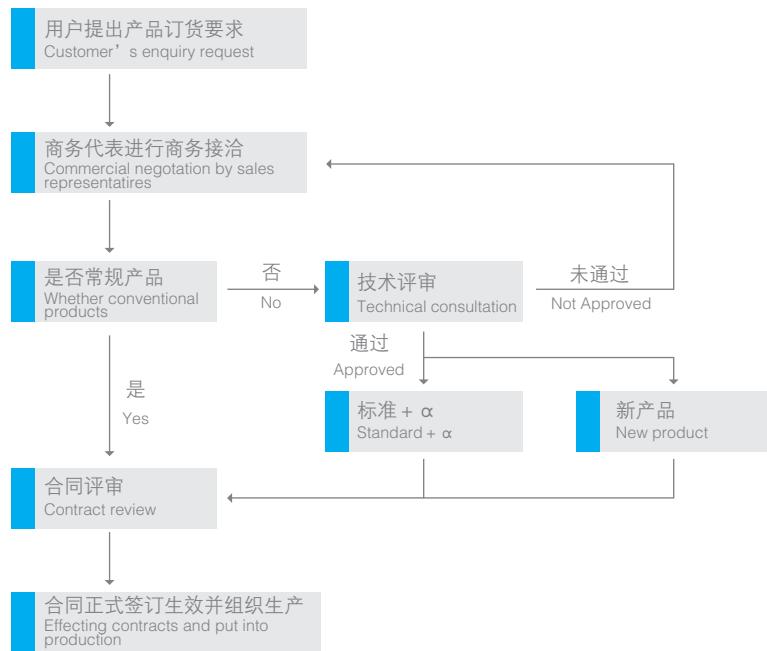
注：可依据用户需求进行包装。  
REF: packing according to customer's requirement.



Baosteel Stainless

# 订货 ORDER

## 订货流程 Order Procedures



## 订货提示 Order Notice

不锈钢产品，应根据最终产品设计要求、使用环境、用途、后续加工工艺等条件，选择最合适的钢种和表面，订货时请提供下列信息：

Stainless steel products are to be selected in grades and surfaces according to the final product design requirement, application environment, usage, following processing technology and so on, when place an order, please provide following information:

**产品标准:** 例GB、ASTM、JIS、EN、BQB等  
Standard: eg. GB, ASTM, JIS, EN, BQB, etc.

**牌号:** 例06Cr19Ni10、304、SUS304等  
Grade: eg.06Cr19Ni10, 304, SUS304.

**表面类型:** NO.1、NO.2B、NO.4、BA等  
Surface type: NO.1、NO.2B、NO.4、BA, etc.

**尺寸及其精度:** 包括厚度、宽度、长度、钢卷内径  
Specification and tolerance: incl. Thickness, width, length, I.D. of coils.

**边部:** 切边、轧制边  
Edge: slit edge, mill edge.

**包装:** 膜套、垫纸  
Package: film, paper interleaves.

**重量:** 单重 (最大、最小)  
Weight: coil weigh(Max., Min.)

**交货期、交货方式、交货地点**  
Delivery time, method, place.

**用途:** 改轧用、制管用、家电用等  
Usage: eg. Re-rolling, piping, home appliances.



质量保证

QUALITY  
CERTIFICATIONS

## 1. OVARIES AND TESTES

1. The ovaries are located in the upper right quadrant of the abdomen. They are two small, almond-shaped organs, each about 5 cm long and 2 cm wide. They produce eggs and secrete hormones, including estrogen and progesterone. They also produce small amounts of testosterone.

2. The testes are located in the scrotum, which is a sac of skin and muscle located just below the penis. They produce sperm and secrete testosterone.

1) The thyroid gland is a butterfly-shaped gland located in front of the trachea, just below the larynx. It is composed of follicular cells, which secrete thyroxine (T<sub>4</sub>) and triiodothyronine (T<sub>3</sub>). These hormones stimulate the metabolism of iodine and tyrosine. They are also involved in the production of plasma proteins, such as albumin and globulin. The thyroid gland also produces calcitonin, which helps regulate blood calcium levels.

2) The pituitary gland is a small, pea-sized gland located at the base of the brain, just above the hypothalamus. It produces several hormones, including growth hormone, prolactin, and adrenocorticotrophic hormone (ACTH).



## ▲ 体系与产品认证

### System and Product Certifications

认证机构 Certification Organization	项目 Item	标准 Standard	通过时间 Approval time
英国标准协会 ( BSI )	质量管理体系	ISO 9001: 2008	2009.8.12
英国标准协会 ( BSI )	环境管理体系	ISO 14001: 2004	2009.8.12
英国标准协会 ( BSI )	职业安全健康管理体系	OHSAS 18001: 2007	2009.8.12
英国标准协会 ( BSI )	汽车行业质量管理体系	ISO/TS 16949: 2009	2010.2.10
中启计量体系认证中心 ( CMS )	测量管理体系	GB/T19022-2003/ISO10012-2003	2010.12.7
北京国金信管理体系认证有限公司 ( GHC )	能源管理体系要求及钢铁行业能源管理体系认证实施规则	GB/T23331-2009及EnMSGT-2010	2011.8.15
国家质量监督检验检疫总局	特种设备制造许可证	GB24511-2009、GB/T4237-2007、GB150-1998	2011.1.19
通标标准技术服务有限公司 ( SGS )	有毒有害物质检测报告	欧盟RoHS指令2002/95/EC以及后续修正指令要求	2007.3.20
通标标准技术服务有限公司 ( SGS )	有毒有害物质检测报告	德国食品和日用品法 ( LFGE ) 第30条和第35条	2009.7.27
莱茵技术 ( 上海 ) ( TUV )	欧盟承压设备指令 ( PED )	97/23/EC AD2000-WO	2007.4
日本品质保证机构 ( JQA )	第三方产品认证	JIS G 4304、JIS G 4305	2011.12.13

## ▲ 质量证明书

### Quality Inspection Certificate



宝钢不锈钢有限公司

Baosteel Stainless Steel Co.,Ltd.

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传真：021-66932873

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成都宝钢西部贸易有限公司

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东北亚及澳洲大区 Northeast Asia and Oceania Region

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宝和通商首尔事务所

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宝钢澳大利亚贸易有限公司

BAO AUSTRALIA PTY LTD.

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东南亚及南亚大区 South East Asia and South Asia Region

宝钢新加坡贸易有限公司

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宝钢意大利钢材集散中心有限公司

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美洲大区 America Region

宝钢美洲贸易有限公司

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