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 **BAOSTEEL 宝钢特钢**

不锈钢长材产品

Catalog of Stainless Steel Long Products

Stainless Steel Long Products

不锈钢长材产品

宝钢特钢有限公司
BAOSTEEL SPECIAL METALS CO., LTD.



宝钢文化 Corporate Culture

严格苛求的精神
Stringent and exigent spirit

学习创新的道路
Learning and innovation road

争创一流的目标
Striving for first-class objective



核心价值 Core Value

诚信 Good Faith

协同 Synergy

宝钢特钢 Baosteel Special Metals

宝钢集团是中国最大、最现代化的国有钢铁联合企业，主要生产高技术含量、高附加值钢铁精品，已形成普碳钢、不锈钢、特钢三大产品系列。2012年，宝钢完成钢产量4383万吨，利润总额104亿元，居世界钢铁行业第二位。2013年，宝钢连续第十年进入美国《财富》杂志评选的世界500强榜单，位列第222位，并连续当选为“全球最受赞赏的公司”。

宝钢特钢有限公司是宝钢集团全资子公司，位于上海市宝山区吴淞工业区内，前身为上海第五钢铁厂、上海钢铁研究所和上海浦钢公司，创建于1958年，是我国最早的军工用特殊钢生产基地之一，1998年并入宝钢集团。

宝钢特钢有限公司拥有特种冶金，不锈钢、结构钢、高合金钢长材，合金板带及钢管等多条现代化的生产线，形成了以耐蚀合金、钛及钛合金、高温合金、精密合金、特殊不锈钢、特种结构钢六大类战略产品为核心，聚焦于航空航天、能源电站及交通运输等国民经济关键行业的战略产品群。产品有板、管、棒、丝、盘园、带、饼、环及异型材，广泛应用于航天、航空、核电、汽车、机械、电站、电子仪表和石油化工等行业。

宝钢特钢一直致力于向前沿技术市场、知名大公司、行业领导者、具有社会影响力的客户提供优质服务和开展广泛的合作。按照宝钢集团的发展规划，宝钢特钢将打造成为高端的新材料研发和制造基地。



Baosteel Group is China's largest, most modern state-owned iron and steel enterprises, mainly the production of high technology content, high value-added steel products, has formed the common carbon steel, stainless steel, special steel three product series. In 2012, Baosteel steel production of 43830000 tons, a total profit of 10400000000 yuan, ranking second in world steel industry. In 2013, Baosteel for tenth consecutive years to enter the American "fortune" magazine of the world's top 500 list, ranked 222nd, and was elected as a "global Most Admired Companies".

Baosteel Special Metals Co., Ltd. is a wholly owned subsidiary of Baosteel Group, located in Shanghai City, Baoshan District Wusong Industrial Area, formerly known as Shanghai the fifth steel plant, Shanghai Iron and Steel Research Institute and the Shanghai Pu steel company, founded in 1958, is China's earliest military use of special steel production base, in 1998 into the Baosteel group.

Baoshan Iron & Steel Co. Ltd. Special Steel Business Unit is located at the northeastern part of Shanghai, China. It grew out Shanghai No.5 Steel Co.(It consists of Shanghai No.5 Steel Works set up in 1958 and Shanghai Iron & Steel Research Institute) and special steel section of Shanghai No.3 Steel Works. It is one of the earliest special steel production bases in China. In 1998, it merged into Baosteel Group. In May 2005, the core assets of Shanghai No.5 Steel Co. was purchased by listed Baosteel, and it became Special Steel Branch of Baosteel. In April 2009, Baosteel set up Special Steel Business Unit with Special Steel Branch wholly affiliated to this Business Unit. With more than 50-year experience, Special Steel Business Unit possesses advanced production lines for special metallurgy, stainless steel, structural steel and high alloy long products, alloy plate & sheet and strip and seamless tube, etc. Forms of products cover bar, wire, plate & sheet, strip, seamless tube, forging, etc. The production system is formed with the dominant products as special metallurgy, stainless steel and structural steel. It focuses on applications in industries of aerospace & aviation, energy resources, automobile (transportation) and 4 key products i.e. tool & die steel, bearing steel, cold-roll & mandrel and stainless steel bar & wire.

Baosteel Special Metals has been devoting its efforts to providing quality service to customers among notable companies, industry leaders, social influential entities and frontier technology market. According to the new development strategy of Baosteel, Baosteel Special Metals will be built into an ecologically-friendly global premium special steel manufacturing base taking the leading position domestically with its comprehensive competitiveness, as well as into a special steel R & D base for new materials, new processes and new technology.



产线简介 Production Lines

宝钢特钢供应能力与优势

Baosteel Special Metals Capabilities and Advantages



- 现代化的装备能力
Modern Production Facilities
- 完善的质量控制体系
Comprehensive Quality Assurance System
- 市场驱动的材料设计理念
Market-driven Design Concepts for Materials
- 差异化的产品服务
Differentiated Products and Services

产线简介 Production Lines

不锈钢长材是宝钢特钢有限公司建设特钢精品基地的主要产品结构组成部分之一。不锈钢长材产线配备有电炉冶炼、特种冶炼、AOD(VOD)炉、模铸/连铸、热连轧、冷加工以及各种热处理、在线和离线无损检测、精整、酸洗等先进装备，并配备各类先进的检测仪器，能充分满足用户对中高端产品在质量、性能上的需求。

冶炼产线拥有40t/60t二种多台不同炉容量的电炉及相应配置的AOD氩氧炉、VOD精炼炉，多条模铸作业线和三机三流连铸坯连铸机组。

轧钢产线拥有800初轧机组、引进意大利达涅利二条全连轧和一条半连轧高合金轧制线。生产品种有线材、盘条、棒材等。轧制线后道配置在线环形热处理炉、离线带保护气氛连续式热处理炉、隧道式酸洗生产线、超声波探伤和涡流探伤的组合专业精整线，以充分满足不锈钢产品的质量、性能要求。

锻造产线拥有13MN径锻机、25MN、40MN、60MN快锻机各一台。产品品种有大规格棒材、热挤压用管坯。锻造产线后道配置热处理炉、超声波探伤、表面修磨等精整作业线，可充分满足生产各类不锈钢锻材的需求。

银亮产线拥有银剥、连拉连拔、拉丝等三条专业生产线，配备各类先进机组多达数十台，年产银亮材5万余吨。其冷加工产线可通过不同工艺组合生产剥皮、碾光、磨光等多种交货状态的棒材，尺寸公差可达到h9—h12级，同时可生产规格 ϕ 0.1—13mm盘圆、直条和银亮钢丝。



Stainless steel long product is one of the main products of Baosteel Special Metals co., Ltd. The stainless steel long product production line is equipped with advanced equipment including one 60-ton electric arc furnace, four 40-ton electric arc furnaces, special metallurgy facilities, AOD and VOD furnaces, several ingot casting lines, a three-strand continuous caster, hot continuous rolling, cold-forming facilities and various heat treatment, on-line and off-line nondestructive testing, finishing, pickling facilities and various advanced testing equipment in laboratory, which can fully satisfy customers' demands and requirements of quality and performance of high-end products.

There is an 800-mm blooming mill, two 100% continuous rolling mills imported from Danieli, Italy and a semi-continuous rolling mill for high alloy products. Products include wire rod, coil, bar, etc. In the downstream of the rolling lines there is an on-line annular heat treatment furnace, an off-line continuous heat treatment furnace with protective atmosphere, a tunnel-type pickling line, a finishing line equipped with ultrasonic testing and eddy current testing facilities to assure the quality and performance of stainless steel products.

In the forging shop there is one 13 MN radial forging press, one 25 MN forging press and one 40 MN forging press and one 60 MN forging press. Products include large-sized bars and tube blank for hot extrusion. Heat treatment furnaces, ultrasonic testing, surface grinding and other finishing facilities are equipped in the downstream of the forging line to meet requirements of production of various kinds of stainless steel forgings.

Bright steel production line consists of a peeling line, a continuous drawing line and a wire-drawing line. There equipped with dozens of advanced equipment with annual capacity of more than 50 thousand tons. With the combination of different cold working processes, bars can be delivered in peeled, calendered and polished state. The dimensional tolerance can be h9 - h12. Coiled rod, straight rod and bright wire with diameters ranging from 0.1 - 13 mm can be produced.



1962年成功生产出第一炉不锈钢，公司长期以来致力于不锈钢的研究开发。经过40多年的发展，研发的不锈钢长材钢类有奥氏体不锈钢、铁素体不锈钢、双相不锈钢、马氏体不锈钢和沉淀硬化不锈钢，品种有银亮材、冷拉棒、热轧棒、锻材、盘圆、冷拉丝等。在不锈钢的生产上，可按国标、行标、企标组织生产，同时也可根据用户的特殊要求按协议标准和国外标准组织生产。可提供规格范围大，从 ϕ 0.5mm丝材到 ϕ 400mm锻棒；盘圆规格 ϕ 5.5mm到 ϕ 40mm，卷重达1.7吨，有利于用户流水线的自动化生产。产品广泛应用于航天航空、石油化工、核电、火电、汽车、机械电子、仪器仪表等行业。

Since the first heat of stainless steel was successfully produced in 1962, the Company has been devoting its efforts in research and development of stainless steel. After 40-odd years of development, various kinds of stainless steel long products have been produced, namely, austenitic stainless steel, ferritic stainless steel, duplex stainless steel, martensitic stainless steel and precipitation hardening stainless steel. Products are in the forms of bright steel products, cold-drawn bar, hot rolled bar, forgings, coiled rod, cold-drawn wire, etc. Stainless steel are produced according to China's national standards, steel industry standards and company standards. It also can be produced according to technical agreements and/or foreign standards to meet special requirements of customers. From ϕ 0.5-mm wire to ϕ 400-mm forged bar, a wide size range is available. Coiled rods with diameters ranging from ϕ 5.5 mm to ϕ 40 mm with maximum coil weight 1.7 tons are available, which benefits customers' automated production lines. The products are widely used in aerospace, aviation, petrochemical, nuclear power, thermal power, automobile, machinery and electronics, instrumentation and other industries.

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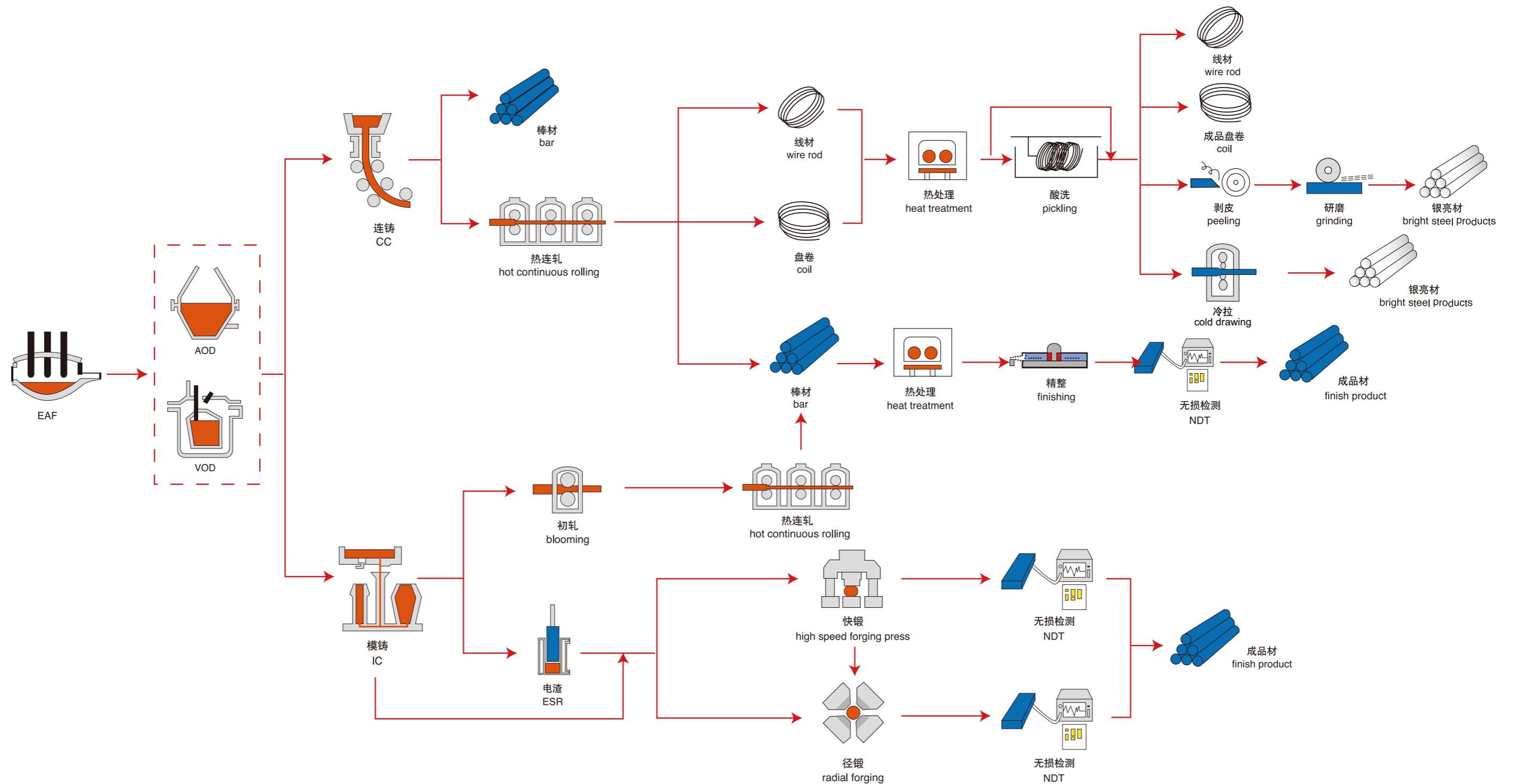


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工艺流程 Process Flow



工艺流程 Process Flow





冶炼设备及特点 Melting Equipment & Features

电炉有40t、60t，能适应不同批量供货要求。其中60t为引进超高功率交流电弧炉，电炉出钢形式有偏心底出钢和槽式出钢两种方式，以适应不同钢种的冶炼工艺特点需求。每台电炉配置容量等级相同LF、VD炉外精炼装置，确保钢液的纯净度。

There are electric arc furnaces, one imported 60-ton ultra-high power AC electric arc furnace, four 40-ton AC electric arc furnaces, which allows more flexibility in responding customers' demands in tonnage and batches. To meet various melting process requirements of different grades tapping is made via an eccentric bottom tapping hole or via a tapping spout. In the downstream of each electric arc furnace, LF, VD refining devices with the same tonnage capacity are installed to assure the cleanliness of liquid steel.



对高纯净度及有特殊要求的产品采用电渣重熔工艺。电渣炉容量从0.5t到20t，总台数达20余台，其中有引进保护气氛电渣炉2台，以适应高端产品重熔精炼。

Electroslag remelting process is adopted to produce high cleanliness steel and steel with special requirements. There are more than 20 electroslag remelting furnaces with capacity ranging from 0.5 tons to 20 tons. Two of them are imported ones with protective atmosphere for remelting high-end products.



生产装备

Production Facilities



浇铸设备及特点 Casting Equipment & Features



浇铸系统有引进的三机三流连铸机并配有连铸坯缓冷设施。模铸有多条作业线，锭型从720kg至35t共二十余种。钢锭浇铸采用氩气保护浇铸技术，钢锭冷却有热送、缓冷、退火、模冷等多种方式。

Casting system consists of an imported three-strand continuous casting machine followed with billet slow cooling facilities. There are several ingot casting operation lines. More than twenty kinds of ingots can be produced with the weight ranging from 720 kilograms to 35 tons. Argon shielding is adopted in ingot casting. Ingot may be hot charged, slow cooled, annealed or cooled in mold after casting.



轧制设备及特点 Rolling Equipment & Features

800初轧产线

800初轧产线采用 $\phi 800$ 二辊可逆式轧机。主要生产方坯、扁和圆棒，后道设有退火炉、缓冷坑及表面修磨精整探伤线。轧制规格有：100—220mm方坯、80—130×180—440mm扁钢、 $\phi 140$ —230mm圆棒。

线材生产线

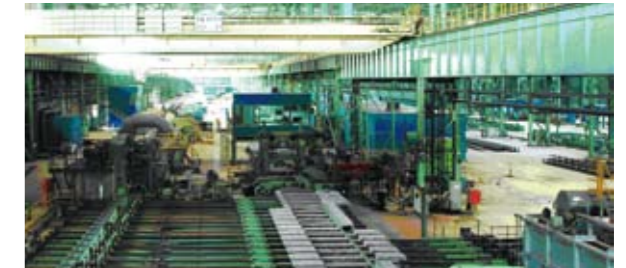
线材生产线引进DANIELI初轧机及MORGEN高速轧制技术，可生产棒材、线材和盘条，生产规格范围有： $\phi 14$ —50mm棒材、 $\phi 16$ —40mm盘圆、 $\phi 5$ —20mm盘条（线材）。后道有在线环形热处理炉、保护气氛连续退火炉、酸洗生产线等。

棒材连轧生产线

棒材连轧生产线引进DANIELI全连轧技术，生产规格范围 $\phi 20$ —90mm棒材。为满足特钢棒材产品不同的性能要求，后道配置六台连续式热处理炉，能对棒材进行球化退火、软化退火及正火处理，另外配有4条完善的精整探伤线，保证产品表面与内在质量。

高合金棒材生产线

高合金棒材生产线是引进POMINI技术，生产规格范围有： $\phi 14$ —85mm棒材、20—50mm方钢、8—20×28—75mm扁钢。产线适应高合金钢的热加工变形特性，可实现轧制中间加热。轧机采用16架45°斜轧连轧技术，使产品的尺寸精度满足高要求。产线后道有完善配套的多台连续退火炉，车底式退火炉、移罩式退火炉、固溶炉及精整探伤线等，适应高合金品种的质量要求。



Blooming Production Line

There is an 800-mm two-high reversing blooming mill followed with annealing furnaces, slow cooling pits, surface finishing facilities and flaw detection facilities. The main products are 100 - 220 mm square billets, 80 - 130 x 180 - 440 mm flat steel and $\phi 140$ - 230 mm round bars.

Wire Rod Production Line

Danieli roughing mill and Morgen high speed wire rod rolling technology are adopted in this line to produce $\phi 14$ - 50 mm bars, $\phi 16$ - 40 mm coiled bars and $\phi 5$ - 20 mm wire rods. In the downstream there is an on-line annular heat treatment furnace, continuous annealing furnaces with protective atmosphere and pickling lines.

Continuous Rolling Line for Bars

Danieli's 100% continuous rolling technology is adopted to produce $\phi 20$ - 90 mm bars. Six continuous heat treatment furnaces are installed in the downstream for spheroidal annealing, softening annealing and normalizing to meet various performance requirements of special steel bar products. There are four comprehensive finishing and flaw detection lines to assure the surface and inner quality of products.

High Alloy Bar Production Line

Imported Pomini technology is applied in high alloy bar production line to produce $\phi 14$ - 85 mm bars, 20 - 50 mm square steel and 8 - 20 x 28 - 75 mm flat steel. To meet deformation characteristics of high alloy steel during hot working, intermediate heating can be applied. The line consists of 16 mill stands with continuous 45° skew rolling technology to assure high requirements of dimensional accuracy. In the downstream of the line several continuous annealing furnaces, car-bottom annealing furnaces, hood type annealing furnaces, solution furnaces, finishing and flaw detection lines are installed to meet the quality requirements of high alloy products.

锻造设备及特点 Forging Equipment & Features

锻造产线由13MN径锻、25MN快锻、40MN快锻、60MN快锻四套锻造主机组成以及相配套的热工炉和后步热处理、精整、机加工设备等组成。13MN径锻机组由SMS—Meer公司制造，25MN快锻机组由DEMAG公司制造，40MN快锻机组由SPS公司制造。60MN快锻机组由SPS公司制造。

精整线有抛丸、砂轮剥皮/切割等处理手段。还配备有棒材超声波探伤、高精度C扫描等先进无损检测装备。

锻造产品圆棒最大规格 $\phi 1200\text{mm}$ ，最大锻件单重25t。

Forging production line consists of one 13 MN radial forging press manufactured by SMS-Meer, one 25 MN forging press manufactured by Demac, one 40 MN forging press manufactured by SPS, one 60MN forging press manufactured related heating furnaces, and downstream heat treatment furnaces, finishing facilities, machining facilities, etc.

Finishing line consists of shot blasting, abrasive wheel grinding and cutting facilities. In the downstream, there equipped with advanced nondestructive facilities including an ultrasonic tester, high precision C-scan equipment, etc.

The maximum diameter of the forged bar is 1200 mm. The maximum weight of single piece of forging is 25 tons.



为满足大型锻件产品性能的特殊要求，在后道热处理工序配置14座退火/正火炉，6座淬/回火（固溶）炉，4座淬火介质槽，可处理最大工件为20-30t。锻造后步机加工工序有锯床、立式带锯、龙门铣床、刨床、无芯剥皮机床及各类车床总数达50余台，组成完备的模块加工中心。

In order to meet special requirements of performance of large forged products, fourteen annealing/normalizing furnaces, six quenching/tempering (solution) furnaces and four quenching tanks with different quenching media are installed in the downstream of the line. The maximum weight of heat treated forging is 20 - 30 tons. In the downstream of the forging line there is a die block processing center equipped with more than fifty machines including saw machines, vertical belt saws, gantry milling machines, planers, centerless peeling machines, various lathe machines, etc.

银亮设备及特点 Bright Steel Equipment & Features

银亮产线拥有银剥、连拉/连拔、拉丝、阀门钢冷加工四条专业线，生产各类特殊钢精品。

银剥专业线由三台剥皮机、三台矫直碾光机、十九台无芯外圆磨床和一台超声波探伤机组组成。产线可通过不同工艺组合生产剥皮、剥皮碾光、剥皮磨光等多种交货状态材料。

连拉/连拔专业线由多台冷拉机和引进连拔机组组成。连拔机组具有在线探伤、在线平头、倒角功能。最大连拔机组拉力达8吨，最大成品规格 $\phi 22\text{mm}$ ，尺寸公差h8—h9。产品外形有圆、方、六角等。

拉丝专业线由单、双头盘圆拉丝机、矫直机、强对流退火炉、光亮连续退火炉、盘圆打包机等组成。产品规格 $\phi 0.1-13\text{mm}$ 。产品外形有盘圆、直条、银亮钢丝等。

阀门钢冷加工专业线由4台高速磨床、3台开卷矫直机、一台二辊矫直机及一台涡流表面探伤机组组成4条高速表面处理生产线。主要生产马氏体、奥氏体阀门钢，年产阀门钢3500t，产品规格范围为 $\phi 5-30\text{mm}$ ，尺寸公差h9级。

Bright steel production line consists of four specialized sub-lines, i.e. bright peeling, continuous drawing, wire-drawing and cold working lines for valve steel.

Bright peeling line consists of three peeling machines, three straightening calenders, nineteen centerless cylindrical grinders and one ultrasonic flaw detector. Products can be turned out in different delivery state, peeled, peeled and calendered, peeled and ground, via combination of different processes.

Continuous drawing line consists of several cold drawing machines and imported continuous drawing machines with maximum drawing force eight tons. The continuous drawing machines have the functions of on-line flaw detecting, on-line end-facing and chamfering. The round, square and hexagonal products can be drawn with maximum diameter of 22 mm. Dimensional tolerance can be h8 - h9.

Wire-drawing line consists of single/double-coil drawing machines, straightening machines, a forced convection annealing furnace, continuous bright annealing furnaces, coil rod packing press, etc. Coil rod, straight rod and bright wire can be produced with the diameters ranging from 0.1 - 13 mm.

Cold working line for valve steel consists of four high speed grinding machines, three uncoiler levellers, one two-roll reeler and one eddy current surface flaw detector. The line processes 3500 tons valve steel with diameters ranging from 5 - 30 mm and dimensional tolerance h9, mainly martensitic and austenitic valve steel.





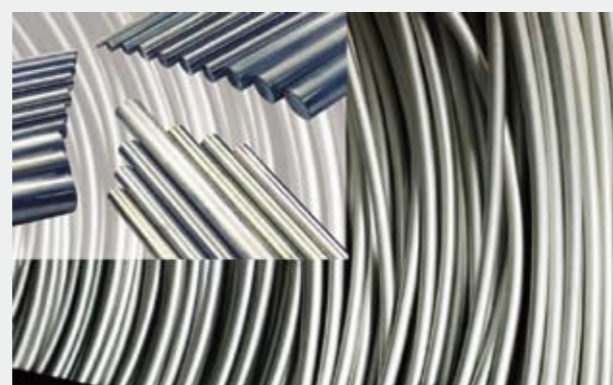
产品大纲 Product Mix

棒材类产品 Bar Products

序号 No.	产品大类 Product Categories		执行标准 Standards	代表牌号 Typical Grades	产品规格 Specifications mm	应用领域 Applications	
	钢种大类 Type of Grades	细分类 Itemized					
1		铁素体型 ferritic	GB/T1220	10Cr17	(轧)圆14 - 130 rolled round bar	化工设备 chemical equipment	
2		奥氏体型 austenitic	GB/T1220 GB/T1221 协议 or agreement	06Cr19Ni10 022Cr19Ni10 06Cr19Ni10N 022Cr17Ni12Mo2 06Cr25Ni20 06Cr18Ni10Ti 06Cr18Ni12Mo2Ti 022Cr19Ni13Mo3	(轧)圆14 - 160 rolled round bar (锻)圆90 - 260 forged round bar	机械、化工、流体设备等 mechanical, chemical, fluid equipment, etc.	
3	不锈钢 (含耐热钢) stainless steel (including heat-resistant steel)	马氏体型 martensitic	GB/T1220 GB/T1221 协议 or agreement	20 - 40Cr13 14Cr17Ni2	(轧)圆14 - 160 rolled round bar (锻)圆90 - 200 forged round bar	叶片、轴类、刀具、 医疗器械、弹簧等 blades, shafting, cutlery, medical instruments, springs, etc.	
4		双相型 duplex	GB/T1220 协议 or agreement	022Cr23Ni5Mo3N 022Cr25Ni6Mo2N 03Cr25Ni6Mo3Cu2N	(轧)圆14 - 160 rolled round bar (锻)圆90 - 400 forged round bar	石油化工强腐蚀领域 intensive corrosion area in petrochemical industry	
5		沉淀硬化型 precipitation hardening	GB/T1220 GB/T1221 协议 or agreement	05Cr17Ni4Cu4Nb 07Cr17Ni7Al 07Cr15Ni7Mo2Al	(轧)圆14 - 160 rolled round bar (锻)圆90 - 200 forged round bar	轴类、弹簧、高强度 容器等 shafting, springs, high- strength containers, etc.	
6		阀门钢 valve steel	马氏体型 martensitic	GB/T12773 协议 or agreement	45Cr9Si3 40Cr10Si2Mo 51Cr8Si2 42Cr9Si2 85Cr18Mo2V	(轧)圆14 - 85 rolled round bar	发动机气门 engine valves
7			奥氏体型 austenitic		53Cr21Mn9Ni4N 55Cr21Mn8Ni2N 33Cr23Ni8Mn3N 20Cr21Ni12N 45Cr14Ni14W2Mo 50Cr21Mn9Ni4Nb2WN	(轧)圆14 - 85 rolled round bar	发动机气门和 某些作耐 热标准件 engine valves and heat- resistant standard parts

产品大纲

Product Mix



产品大纲 Product Mix

棒材类产品 Bar Products

序号 No.	产品大类 Product categories		执行标准 Standards	代表牌号 Typical Grades	产品规格 Specifications mm	应用领域 Applications
	钢种大类 Type of Grades	细分类 Itemized				
8	专业用钢 steel for specific applications	奥氏体管坯 austenitic tube blank	协议 agreement	022Cr19Ni10 022Cr17Ni12Mo2 06Cr18Ni10Ti TP304 TP347H TP347HFG S30432 S31042	(轧)圆60 - 200 rolled round bar (锻)圆90 - 400 forged round bar	锅炉, 热交换器, 催化裂 化用管, 化学介质的流体 输送, 石油化工领域 boilers, heat exchangers, tubes for catalytic cracking, chemical media fluid transport, petrochemical industry.
9		马氏体管坯 martensitic tube blank	协议 agreement	P91 P92 T91 T92	(轧)圆60 - 90 rolled round bar (锻)圆100 - 500 forged round bar	电站锅炉用钢 boiler steel for power station
10		双相钢管坯 dual phase steel tube blank	协议 agreement GB/T1220	022Cr23Ni5Mo3N 022Cr25Ni7Mo4N 022Cr25Ni7Mo4WCuN	(轧)圆60 - 160 rolled round bar (锻)圆100 - 500 forged round bar	化工领域 chemical industry
11		易切削不锈钢 free cutting stainless steel	GB/T1220	Y10Cr17 Y12Cr13	(轧)圆14 - 50 rolled round bar	螺栓, 螺母等 bolts, nuts, etc.

盘条类产品 Wire Rod Products

序号 No.	产品大类 Product Categories		执行标准 Standards	代表牌号 Typical Grades	产品规格 Specifications mm	应用领域 Applications
	钢种大类 Type of Grades	细分类 Itemized				
1	不锈钢 stainless steel	铁素体型 ferritic	协议 agreement	00Cr17 - 1Cr17	(轧)圆5.5 - 40 rolled round bar	五金装璜等 hardware for decoration, etc.
2		奥氏体型 austenitic	协议 agreement	304, 304H, 304T 316	(轧)圆5.5 - 40 rolled round bar	弹簧, 齿条, 丝网等 springs, rack rods, wire mesh, etc.
3		马氏体型 martensitic	协议 agreement	1Cr13 - 4Cr13	(轧)圆5.5 - 20 rolled round bar	标准件, 轴类件等 standard parts, shafting, etc.

序号 No.	产品大类 Product Categories		执行标准 Standards	代表牌号 Typical Grades	产品规格 Specifications mm	应用领域 Applications
	钢种大类 Type of Grades	细分类 Itemized				
6	阀门钢 valve steel	马氏体型 martensitic	GB/T12773 协议 or agreement	45Cr9Si3, 40Cr10Si2Mo 51Cr8Si2, 42Cr9Si2 85Cr18Mo2V	(轧)圆5.5 - 14 rolled round bar	发动机气门 engine valves
7		奥氏体型 austenitic		53Cr21Mn9Ni4N 33Cr23Ni8Mn3N 20Cr21Ni12N 45Cr14Ni14W2Mo 50Cr21Mn9Ni4Nb 2WN		发动机气门用和 耐热标准件 engine valves and heat-resistant standard parts
8	专业用钢 steel for specific applications	紧固件用不锈钢 stainless steel for fasteners	协议 agreement	304C1 304HC2 304HC3	(轧)圆5.5 - 28 rolled round bar	螺母, 螺丝 nuts and screws
9		易切削不锈钢 free cutting stainless steel	协议 agreement	BT303CuS2 316Cu Y1Cr17 Y1Cr13 416	(轧)圆5.5 - 20 rolled round bar	轴类 shafting

冷拉/银亮类产品 Cold-drawn/Bright Steel Products

序号 No.	产品大类 Product Categories		执行标准 Standards	代表牌号 Typical Grades	产品规格 Specifications mm	应用领域 Applications
	钢种大类 Type of Grades	细分类 Itemized				
1	不锈钢 stainless steel	奥氏体型 austenitic	GB4226 GB4240	1Cr18Ni9Ti	(棒)圆3 - 50 round bar (丝)圆2 - 13 round wire	
2	阀门钢 valve steel	马氏体型 martensitic	GB/T12773 协议 or agreement	45Cr9Si3 40Cr10Si2Mo 51Cr8Si2 42Cr9Si2 85Cr18Mo2V	(棒)圆5.0 - 70 round bar	发动机气门 engine valves
3		奥氏体型 austenitic		53Cr21Mn9Ni4N 55Cr21Mn8Ni2N 33Cr23Ni8Mn3N 20Cr21Ni12N 45Cr14Ni14W2Mo 50Cr21Mn9Ni4Nb2WN	(棒)圆5.0 - 70 round bar	发动机气门 engine valves



牌号对照 Contrast of Grades

棒材类产品 Bar Products

序号 No.	钢种大类 Type of Grades	国标 GB		企标或协议 Corporate Standards or Agreement	美标 ASTM	日标 JIS	欧标 EN	
		新牌号 Current Grades	旧牌号 Previous Grades					
1	不锈钢 (含耐热钢) stainless steel (including heat- resistant steel)	12Cr17Ni7	1Cr17Ni7		S30100, 301	SUS301	X3CrNi17 - 7, 1.4319	
2		12Cr18Ni9	1Cr18Ni9		S30200, 302	SUS302	X10CrNi18 - 8, 1.4310	
3		06Cr19Ni10	0Cr18Ni9		S30400, 304	SUS304	X5CrNi18 - 10, 1.4301	
4		022Cr19Ni10	00Cr18Ni10		S30403, 304L	SUS304L	X2CrNi19 - 11, 1.4306	
5		07Cr19Ni10			304H	S30409, 304H	SUH304H	X6CrNi18 - 10, 1.4948
6		06Cr19Ni10N	0Cr18Ni10N		S30451, 304N	SUS304N1	X5CrNi19 - 9, 1.4315	
7		022Cr19Ni10N	00Cr18Ni10N		S30453, 304LN	SUS304LN	X2CrNi18 - 10, 1.4311	
8		20Cr25Ni20	2Cr25Ni20		S31000, 310	SUH310	X15CrNi25 - 21, 1.4821	
9		06Cr25Ni20	0Cr25Ni20		S31000S, 310S	SUH310S	X12CrNi25 - 21, 1.4845	
10		022Cr25Ni22Mo2N			S31050310MoLN		X1CrNiMoN25 - 22 - 2, 1.4466	
11		06Cr17Ni12Mo2	0Cr17Ni12Mo2		S31600, 316	SUS316	X5CrNiMo17 - 12 - 2, 1.4401	
12		022Cr17Ni12Mo2	00Cr17Ni12Mo2		S31603, 316L	SUS316L	X2CrNiMo17 - 12 - 2, 1.4404	
13		022Cr19Ni13Mo3	00Cr19Ni13Mo3		S31703, 317L	SUS317L	X2CrNiMo18 - 15 - 4, 1.4438	
14		06Cr18Ni11Ti	0Cr18Ni10Ti		S32100, 321	Sus321	X6CrNiTi18 - 10, 1.4541	
15		07Cr19Ni11Ti	1Cr18Ni11Ti		S32109, 321H	Sus321H	X6CrNiTi18 - 10, 1.4541	
16		06Cr20Ni11			S30800, 308	SUS308		
17		16Cr23Ni113	2Cr23Ni13		S30900, 309	SUH309	X15CrNiSi20 - 12, 1.4828	
18		06Cr23Ni113	0Cr23Ni13		S30908, 309	SUH309S	X12CrNiSi23 - 13, 1.4833	
19		10Cr17	1Cr17		S43000	SUS430	X6Cr17, 1.4016	
20		Y10Cr17	Y1Cr17		S43020, 430F	SUS430F	X1417CrMoS, 1.4016	
21		Y12Cr13	Y1Cr13		S41600, 416	SUS416	X12CrS13, 1.4005	
22		20Cr13	2Cr13		S42000, 420	SUS420J1	X20Cr13, 1.4021	
23		30Cr13	3Cr13		S42000, 420	SUS420J2	X30Cr13, 1.4028	
24		40Cr13	4Cr13				X39Cr13, 1.4031	
25		022Cr19Ni5Mo3Si2N	00Cr18Ni5Mo3Si2		S31500			
26		022Cr22Ni5Mo3N			S31803	SUS329J3L	X2CrNiMoN22 - 5 - 3, 1.4462	
27		022Cr23Ni5Mo3N			S32205, 2205			
28		022Cr25Ni6Mo2N			S31200		X3CrNiMo27 - 5 - 2, 1.4460	
29		022Cr25Ni7Mo4N			S32750, 2507		X2CrNiMoN25 - 7 - 4, 1.4410	
30		022Cr25Ni7Mo4WCuN			S32760		X2CrNiMoWN25 - 7 - 4, 1.4501	
31		05Cr17Ni4Cu4Nb	0Cr17Ni4Cu4Nb		S17400, 630	SUS630	X5CrNiCuNb16 - 4, 1.4542	
32		07Cr17Ni7Al	0Cr17Ni7Al		S17700, 631	SUS631	X7CrNi17 - 7, 1.4568	
33		07Cr15Ni7Mo2Al	0Cr15Ni7Mo2Al		S15700, 632		X8CrNiMoAl15 - 7 - 2, 1.4532	

牌号对照 Contrast of Grades

不锈钢标准众多，不同国家有不同的标准，同一国家不同行业标准又有所不同。目前，我国不锈钢国标主要是GB 标准体系和GJB 军标体系；国外有日本的JIS，美国的AISI、ASTM，国际标准化组织ISO，欧洲联盟的标准EN等，这样导致同一不锈钢的钢号各国标示不一。

There are various stainless steel standards in the world. Different countries adopt different standards. Even within a country standards vary among different industries. At present, China adopts national standard system GB and national military standard system GJB for stainless steel. There is JIS in Japan, AISI and ASTM in the United States, ISO and EN formulated by International Organization for Standardization and European Union respectively. Hence, designation of a stainless steel grade in different standards is different. Contrast of Grades may help readers.

牌号对照 Contrast of Grades

棒材类产品 Bar Products

序号 No.	钢种大类 Type of Grades	国标 GB		企标或协议 Corporate Standards or Agreement	美标 ASTM	日标 JIS	欧标 EN	
		新牌号 Current Grades	老牌号 Previous Grades					
34	阀门钢 valve steel	40Cr10Si2Mo	4Cr10Si2Mo		HNV1	SUH3	X45CrSiMo10 - 2, 1.4731	
35		42Cr9Si2	4Cr9Si2					
36		45Cr9Si3			HNV3	SUH1	X45CrSi9 - 3, 1.4718	
37		51Cr8Si2				SUH11		
38		85Cr18Mo2V					X85CrMoV18 - 2, 1.4748	
39		20Cr21Ni12N	2Cr21Ni12N		EV4	SUH37		
40		33Cr23Ni8Mn3N			EV16		X33CrNiMnN23 - 8, 1.4866	
41		45Cr14Ni14W2Mo	4Cr14Ni14W2Mo			SUH31		
42		50Cr21Mn9Ni4Nb2WN					X50CrMnNiNbN21 - 9, 1.4882	
43		53Cr21Mn9Ni4N	5Cr21Mn9Ni4N		EV8	SUH35	X53CrMnNiN21 - 9, 1.4871	
44		55Cr21Mn8Ni2N			EV12		X55CrMnNiN20 - 8, 1.4875	
45		专业用钢 steel for specific applications	022Cr19Ni5Mo3Si2N	00Cr18Ni5Mo3Si2		S31500		
46			022Cr22Ni5Mo3N	00Cr22Ni5Mo3N		S31803	SUS329J3L	X2CrNiMoN22 - 5 - 3, 1.446
47			022Cr23Ni5Mo3N	00Cr22Ni5Mo3N		S32205, 2205		
48	022Cr25Ni6Mo2N		00Cr25Ni6Mo2N		S31200		X3CrNiMo27 - 5 - 2, 1.4460	
49	022Cr25Ni7Mo4N				S32750, 2507		X2CrNiMoN25 - 7 - 4, 1.4410	
50	022Cr25Ni7Mo4WCuN				S32760		X2CrNiMoWN25 - 7 - 4, 1.4501	
51	12Cr18Ni9		1Cr18Ni9		S30200/02	SUS302	X10CrNi18 - 8, 1.4310	
52	022Cr19Ni10		00Cr19Ni10		S30403, 304L	SUS304L	X2CrNi19 - 11, 1.4306	
53	06Cr25Ni20		0Cr25Ni20		S31008, S310S	SUS310S	X12CrNi23 - 12, 1.4845	
54	022Cr17Ni12Mo2		00Cr17Ni14Mo2		S31603, 316L	SUS316L	X2CrNiMo17 - 12 - 2, 4404	
55	07Cr18Ni11Nb		1Cr19Ni11Nb	TP347H	S34709, 347H	SUS347H	X7CrNiNb18 - 10, 1.4912	
56	08Cr18Ni11NbFG			TP347HFG	S34710, 347HFG			
57	06Cr18Ni11Ti		0Cr18Ni10Ti		S32100, S321	SUS321	X6CrNiTi18 - 10, 1.4541	
58				S30432	S30432			
59	10Cr9Mo1VNb		11Cr9Mo1VNb	P91	K90901, P91			
60				P92	K92460, P92			
61	10Cr9Mo1VNb		11Cr9Mo1VNb	T91	K90901, T91			
62				T92	K92460, T92			
63	015Cr20Ni18Mo6CuN			S31254	S31254		X1CrNiMoN20 - 18 - 7, 1.4547	

牌号对照 Contrast of Grades

盘条类产品 Wire Rod Products

序号 No.	钢种大类 Type of Grades	国标 GB		企标或协议 Corporate Standards or Agreement	美标 ASTM	日标 JIS	欧标 EN	
		新牌号 Current Grades	老牌号 Previous Grades					
1	不锈钢 (含耐热钢) stainless steel (including heat-resistant steel)	12Cr13	1Cr13		S41000, 410	SUS410	X12Cr13, 1.4006	
2		20Cr13	2Cr13		S42000, 420	SUS420J1	X20Cr13, 1.4021	
3		30Cr13	3Cr13	420J2	S42000, 420	SUS420J2	X30Cr13, 1.4028	
4		40Cr13	4Cr13				X39Cr13, 1.4031	
5		10Cr17	1Cr17	430	S43000	SUS430	X6Cr17, 1.4016	
6			0Cr17					
7			00Cr17					
8			Y10Cr17	Y1Cr17		S43020, 430F	SUS430F	X1417CrMoS, 1.4016
9			Y12Cr13	Y1Cr13		S41600, 416	SUS416	X12CrS13, 1.4005
10			06Cr19Ni10	0Cr18Ni9		S30400, 304	SUS304	X5CrNi18-10, 1.4301
11			07Cr19Ni10		304H	S30409, 304H	SUH304H	X6CrNi18-10, 1.4948
12			022Cr19Ni10	00Cr18Ni10		S30403, 304L	SUS304L	X2CrNi19-11, 1.4306
13			06Cr17Ni12Mo2	0Cr17Ni12Mo2		S31600, 316	SUS316	X5CrNiMo17 - 12 - 2, 1.4401
14			022Cr17Ni12Mo2	00Cr17Ni12Mo2		S31603, 316L	SUS316L	X2CrNiMo17 - 12 - 2, 1.4404
15			022Cr19Ni13Mo3	00Cr19Ni13Mo3		S31703, 317L	SUS317L	X2CrNiMo18 - 15 - 4, 1.4438
16			06Cr20Ni11			S30800, 308	SUS308	
17			06Cr20Ni11			S30800, 308	SUS308	
18			16Cr23Ni113	2Cr23Ni13		S30900, 309	SUH309	X15CrNiSi20 - 12, 1.4828
19			06Cr23Ni113	0Cr23Ni13		S30908, 309	SUH309S	X12CrNiSi23 - 13, 1.4833
20					BT303CuS2			
21	阀门钢 valve steel	42Cr9Si2	4Cr9Si2	BT42Cr9Si2				
22		45Cr9Si3	4Cr9Si3	BT45Cr9Si3	HNV3	SUH1	X45CrSi9 - 3, 1.4718	
23		51Cr8Si2	5Cr8Si2	BT51Cr8Si2		SUH11		
24		40Cr10Si2Mo	4Cr10Si2Mo	BT40Cr10Si2Mo	HNV1	SUH3	X45CrSiMo10 - 2, 1.4731	
25		53Cr21Mn9Ni4N	5Cr21Mn9Ni4N	53Cr21Mn9Ni4N				
26		55Cr21Mn8Ni2N	5Cr21Mn8Ni2N	55Cr21Mn8Ni2N				
27	专业用钢 steel for specific applications			304C1	S30400, 304	SUS304	X5CrNi18 - 10, 1.4301	
28				304HC2		SUS304J3		
29				304HC3				
30				302HQ				

冷拉/银亮类产品 Cold-drawn/Bright Steel Products

序号 No.	钢种大类 Type of Grades	国标 GB		美标 ASTM	日标 JIS	欧标 EN
		新牌号 Current Grades	老牌号 Previous Grades			
1	阀门钢 valve steel	40Cr10Si2Mo	4Cr10Si2Mo	HNV1	SUH3	X45CrSiMo10 - 2, 1.4731
2		42Cr9Si2	4Cr9Si2			
3		45Cr9Si3		HNV3	SUH1	X45CrSi9 - 3, 1.4718
4		51Cr8Si2			SUH11	
5		85Cr18Mo2V				X85CrMoV18 - 2, 1.4748
6		20Cr21Ni12N	2Cr21Ni12N	EV4	SUH37	
7		33Cr23Ni8Mn3N		EV16		X33CrNiMnN23 - 8, 1.4866
8		45Cr14Ni14W2Mo	4Cr14Ni14W2Mo		SUH31	
9		50Cr21Mn9Ni4Nb2WN				X50CrMnNiNbN21 - 9, 1.4882
10		53Cr21Mn9Ni4N	5Cr21Mn9Ni4N	EV8	SUH35	X53CrMnNiN21 - 9, 1.4871
11		55Cr21Mn8Ni2N		EV12		X55CrMnNiN20 - 8, 1.4875



交货状态 Delivery State

棒材类产品 Bar Products

序号 No.	产品大类 Product Categories		热处理状态及类型 Heat Treated Condition	加工用途 Downstream Processing	表面加工状态 Surface Condition
	钢种大类 Type of Grades	细分类 Itemized			
1	不锈钢 (含耐热钢) stainless steel (including heat-resistant steel)	铁素体型 ferritic	退火或不退火 annealed or not annealed	压力加工或切削加工 press work or machining	热轧 hot rolled
2		奥氏体型 austenitic	固溶或不固溶 solution treated or not solution treated	压力加工或切削加工 press work or machining	热轧、锻造、剥皮 hot rolled, forged, peeled
3		马氏体型 martensitic	退火 annealed	压力加工或切削加工 press work or machining	热轧、锻造、剥皮 hot rolled, forged, peeled
4		双相型 duplex	固溶或不固溶 solution treated or not solution treated	压力加工或切削加工 press work or machining	热轧、锻造、剥皮 hot rolled, forged, peeled
5		沉淀硬化型 precipitation hardening	固溶或不固溶 solution treated or not solution treated	压力加工或切削加工 press work or machining	热轧、锻造、剥皮 hot rolled, forged, peeled
6	阀门钢 valve steel	马氏体型 martensitic	退火 annealed	切削加工或压力加工 machining or press work	热轧、剥皮 hot rolled, peeled
		奥氏体型 austenitic	固溶或不固溶 solution treated or not solution treated		
7	专业用钢 steel for specific applications	奥氏体管坯 austenitic tube blank	不固溶 not solution treated	切削加工或热加工 machining or hot working	热轧、锻造 hot rolled, forged
8		马氏体管坯 martensitic tube blank	退火 annealed	切削加工或热加工 machining or hot working	热轧、锻造 hot rolled, forged, peeled
9		易切削铬不锈钢 free-cutting chromium- containing stainless steel	退火 annealed	切削加工 machining	热轧、剥皮 hot rolled, peeled

盘条 Wire Rod

序号 No.	产品大类 Product Categories		热处理状态及类型 Heat Treated Condition	加工用途 Downstream Processing	表面加工状态 Surface Condition
	钢种大类 Types of Grades	细分类 Itemized			
1	不锈钢 stainless steel	铁素体型 ferritic	退火或不退火 annealed or not annealed	压力加工或切削加工 press work or machining	热轧、酸洗 hot rolled, pickled
2		奥氏体型 austenitic	固溶或不固溶 solution treated or not solution treated	压力加工或切削加工 press work or machining	热轧、酸洗 hot rolled, pickled
3		马氏体型 martensitic	退火 annealed	压力加工或切削加工 press work or machining	热轧、酸洗 hot rolled, pickled
4	阀门钢 valve steel	马氏体型 martensitic	退火 annealed	切削加工 machining	热轧 hot rolled
		奥氏体型 austenitic	固溶或不固溶 solution treated or not solution treated	切削加工 machining	热轧 hot rolled
6	专业用钢 steel for specific applications	镍不锈钢切削钢 free-cutting nickel- containing stainless steel	退火 annealed	切削加工 machining	热轧、酸洗 hot rolled, pickled
7		铬不锈钢切削钢 free-cutting chromium- containing stainless steel	退火 annealed	切削加工 machining	热轧、酸洗 hot rolled, pickled

冷拉/银亮材 Cold-drawn/Bright Steel Products

序号 No.	产品大类 Product Categories		热处理状态及类型 Heat Treated Condition	加工用途 Downstream Processing	表面加工状态 Surface Condition
	钢种大类 Type of Grades	细分类 Itemized			
1	不锈钢 stainless	奥氏体型 austenitic	固溶或不固溶 solution treated or not solution treated		冷拉、磨光、酸洗 cold-drawn, polished, pickled
2	阀门钢 valve steel	马氏体型 martensitic	退火 annealed	压力加工 press work	磨光 polished
3		奥氏体型 austenitic	固溶 solution treated	压力加工 press work	磨光 polished

交货状态 Delivery State

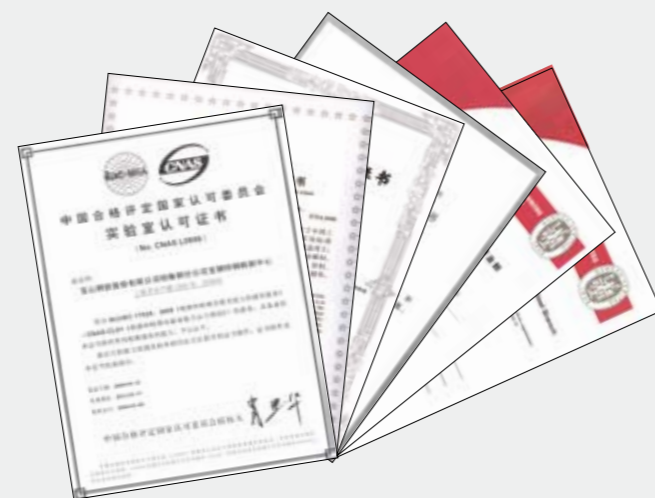




质量认证 Quality Certification

- 宝钢特钢从1995年开始逐步按照ISO9001、AS9100B、GJB9001A、HAF003、ISO/TS16949标准以及顾客的特殊要求，建立航空航天、军工、核电及汽车质量管理体系，并形成一整套质量体系文件。
- 宝钢特钢确定并运行的质量体系过程共有21个，包括：管理策划过程、管理评审过程、内部审核过程、纠正预防措施改进过程、数据分析和利用过程、顾客满意度监视和测量过程、需求识别和评审过程、设计和开发过程、生产过程、交付过程、服务过程、生产计划过程、设备和工装管理过程、文件管理过程、人力资源管理过程、采购和供方管理过程、产品防护过程、检验和试验管理过程、测量设备管理过程、标识和可追溯性管理过程、不合格品控制过程。
- 宝钢特钢通过制定和落实质量目标、定期开展内部质量审核和管理评审等，持续改进质量体系。
- 宝钢特钢的各类质量体系均通过了第三方的认证。
- Since 1995, Baosteel has established aviation and aerospace, military, nuclear and automotive quality management system and formed a complete set of quality system documents in accordance with ISO9001, AS9100B, GJB9001A, HAF003, ISO/TS16949 standard and specific requirements of customer
- Baosteel also determines and runs a quality system which has totally 21 processes, including: Management planning process, management review process, internal checking process, corrective and preventive measures to improve the process, data analysis and use processes, customer satisfaction monitoring and measurement process, needs identification and assessment process, the design and development process, production process, delivery process, service process, production planning process, equipment and tooling management processes, document management process, human resource management processes, procurement and supplier management processes, product protection, process, inspection and test management processes, measuring equipment management processes, identification and traceability management process and nonconforming product control process.
- Through the development and implementation of quality objectives, regularly carrying out internal quality checking and management reviews, etc., Baosteel continues to improve the quality system
- All kinds of quality system had gotten certificates given by the third-party.

质量保证 Quality Assurance



航空航天质量体系认证
Aerospace Quality System Certification

质量认证 Quality Certification



中国质量认证中心
ISO9001:2008质量管理体系认证
China Quality Certification Center ISO9001: 2008 quality management system certification



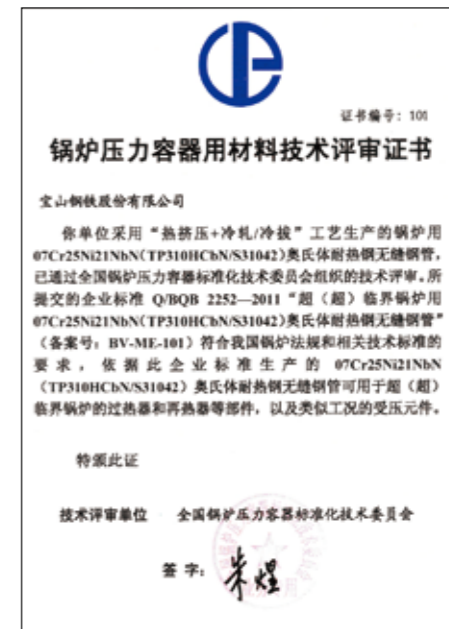
中启计量体系认证中心
ISO 10012:2003测量管理体系认证
Certificate of Conformity for Measurement Management Systems, ISO 10012:2003, issued by
Zhongqi Measuring System Certification Center



北京国金恒信管理体系
BG/T19001-2008—ISO 9001:2008质量管理体系认证
GHC BG/T19001-2008—ISO 9001, 2008 quality management system certification



S30432锅炉压力容器用材料技术评审证书
S30432 boiler and pressure vessel materials
technology assessment certificate



S31042锅炉压力容器用材料技术评审证书
S31042 boiler and pressure vessel materials
technology assessment certificate

质量认证 Quality Certification



必维国际检验集团ISO/TS16949
汽车用钢证书

ISO/TS 16949, Certificate for Automotive Steel,
issued by ANAB



船级社产品认证证书

Certificate for products issued by German Lloyd



TUV PED认证证书
TUV PED Certificate



质量检测 Quality Inspection

宝钢特钢设有独立的冶金产品及其原料的理化性能检测、无损检测和相应测试技术研究开发的综合性检验部门，配有先进、精确的检测设备和合格的检测人员，承担着事业部中间坯料、成品材的检测能力，可进行化学仪器分析、湿法分析、金相高倍检测、金相低倍检测、力学性能、物理性能检测及无损在线检测等。同时，产品检验实验室于2005年4月顺利通过了实验室国家认可。

近年来，检测中心引进了MTS810型低周疲劳试验机、HFP150型高频疲劳试验机、5585H型高温拉伸试验机、1000HDX大型液压高精度拉伸试验机、BPU200型杯突试验机等检测设备，具备了断裂韧性、轴向疲劳等项目的检测能力，有效地填补了检测中心在物理性能试验领域中的不足。同时，通过对精密仪器的功能开发，使等离子荧光仪、气体分析仪、X射线荧光仪等分析仪器的检测精度得到了进一步的提升，痕量元素的检测精度达到了ppm级。

There is an independent laboratory equipped with advanced, accurate test facilities within Baosteel Special Metals for physical and chemical examinations and nondestructive tests on finish products, blanks and raw materials and research and development of related test techniques. Qualified staff members are specialized in chemical instrument analysis, wet analysis, metallographic examinations on both macrostructure and microstructure, mechanical performance, physical properties and on-line nondestructive test. In April 2005, the laboratory was audited and obtained a Laboratory Accreditation Certificate issued by China National Accreditation Service for Conformity Assessment.

During the past several years the laboratory imported some advanced test facilities, including MTS810 low-cycle fatigue tester, HFP150 high-frequency fatigue tester, 5585H elevated temperature tensile tester, 1000HDX large hydraulic high precision tensile tester, BPU200 cupping machine, etc. to enhance its capabilities in physical properties test including fracture toughness, axial fatigue. Tapping the potentials of the existing precision test instruments, test accuracy of inductively coupled plasma spectrometers, gas analyzers, X-ray fluorescence spectrometers has been improved. Determination of trace elements can be done at ppm level.

化学检测 Chemical Analysis



PW2404 X射线荧光光谱仪
PW2404 X-ray fluorescence spectrometer



ARL4460光电直读光谱仪
ARL4460 photoelectric direct-reading spectrometer



EMIA-820V红外碳硫分析仪
EMIA-820V infrared carbon and sulfur analyzer



EMGA-620W氧氮联测仪
EMGA-620W oxygen and nitrogen analyzer



EMGA-621W氢分析仪
EMGA-621W hydrogen analyzer



电感耦合等离子体发射光谱仪
inductively coupled plasma emission spectrometer



石墨炉原子吸收光谱仪
graphite oven atomic absorption spectrometer

物理检测 Physical Test



ZOOMTESTOR布、洛、维三用硬度计
ZOOMTESTOR Brinell, Rockwell, Vickers hardness tester



YAW6106液压压力试验机
YAW6106 hydraulic pressure testing machine



Z150电子式高温拉伸试验机
Z150 electronic elevated temperature tensile tester



DIL402C膨胀仪
DIL402C dilatometer

质量检测 Quality Inspection

金相分析 Metallographic Test

1、金相显微镜 Metallographic Microscopes



Axioplan-2正置式金相显微镜
Axioplan-2 metallographic microscope for specimens upward-mounted



显微硬度计FM-700D
FM-700D microhardness tester



AXIOVERT25CA金相显微镜
AXIOVERT25CA metallographic microscope



NEOPHOT32卧式金相显微镜
NEOPHOT32 horizontal metallographic microscope

无损检测 Nondestructive Test

无损检测作为特钢产品检测不可缺少的手段之一，在产品质量保证中起着至关重要的作用。

近年来，公司先后建立了多条无损检测生产线，产品无损检测的应用范围不断扩大，检测精度在同行业中处于领先水平。其中超声波探伤生产线主要用于裂纹、缩孔、夹渣、白点等内部缺陷的探伤；涡流、漏磁、磁粉、渗透探伤生产线主要用于裂纹、折叠等表面、近表面缺陷的探伤。在产品质量保证过程中，无损检测技术已成为最有效的检测方法之一，产品探伤能力达到80%以上。

Nondestructive test is one of the indispensable test means for special steel products, which plays a very important role in product quality assurance.

During the past several years, the Company established several nondestructive test lines. Coverage of nondestructive tests on products has been extended with the test accuracy taking the leading position in the industry. Ultrasonic test lines mainly used for detection of internal flaws of products such as crack, shrinkage, slag inclusion, flake, etc. Eddy current, magnetic flux leakage, magnetic particle and penetrant flaw detection lines mainly used for detection of surface and subsurface flaws such as crack, pincher and others. Nondestructive test technology has become one of the most effective detection methods. Nondestructive test capability covers more than 80% percent of products.

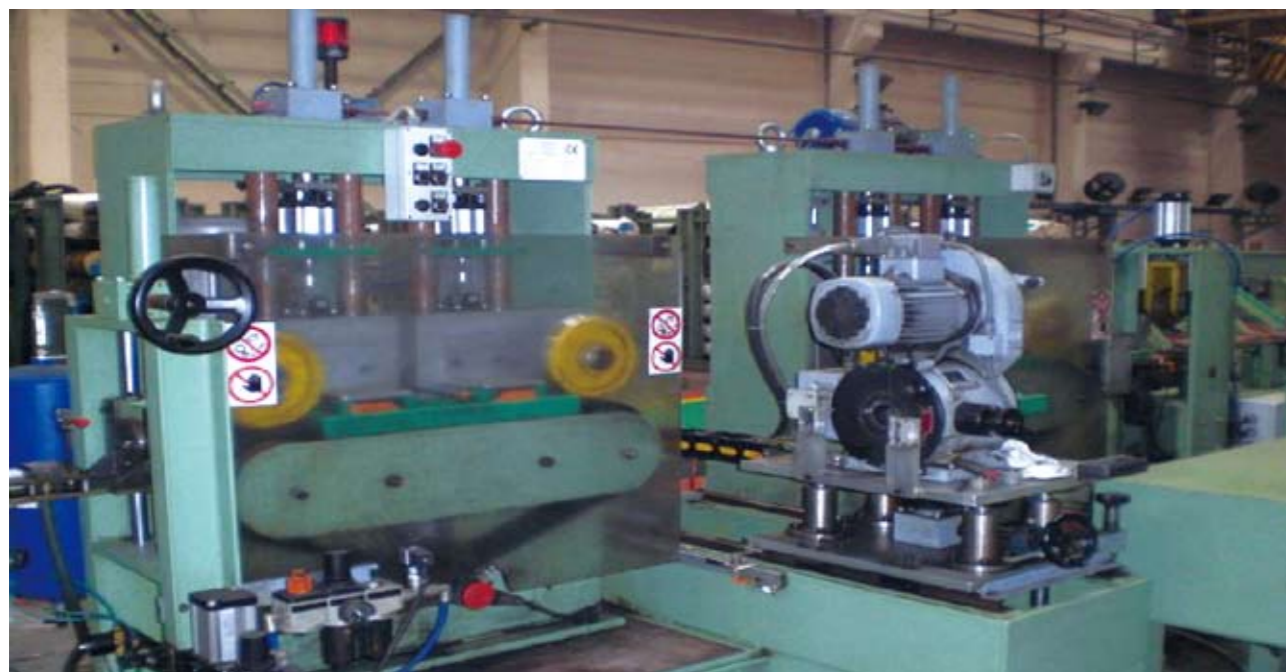


A、B、C、D线棒材漏磁探伤设备
magnetic flux leakage testing equipment for wire and bar installed in Line A, Line B, Line C and Line D

质量检测 Quality Inspection



银亮棒材超声探伤设备
ultrasonic flaw detection equipment for bright bars



棒材涡流探伤设备
eddy current flaw detection equipment for bars



用户服务 Customer Service



技术支撑 Technical support

客户代表

是用户使用宝钢特钢产品的技术联络人，负责为用户提供选材咨询、订货、物流跟踪、货款结算、质量异议处理、使用技术指导、信息沟通等全方位服务。

产品工程师

来自宝钢特钢制造单元的资深工程师，为用户提供各类产品的生产、使用技术服务，并根据用户的特殊需求进行个性化的质量设计，与客户代表共同解决技术难题，必要时提供现场服务。

技术专家与首席工程师

来自宝钢特钢研究部门、制造单元的专业技术专家与首席工程师，针对用户和市场需求，研发特钢新产品，并提供产品检测、腐蚀、焊接、热处理等用户技术服务。

产销研一体化小组

由宝钢特钢制造、销售、研发等各单元的骨干力量组成，以专业的团队方式解决用户使用及生产、研发方面的问题，提高宝钢特钢产品的市场竞争力。



Sales representative

Technical contact person, to provide customer service concerning products advisory, order placing, logistic tracing, loan and accounts, objection handling, operation guide etc.

Production engineer

Senior engineers from special steel division, to provide technical support concerning production and quality design; onsite service available if necessary

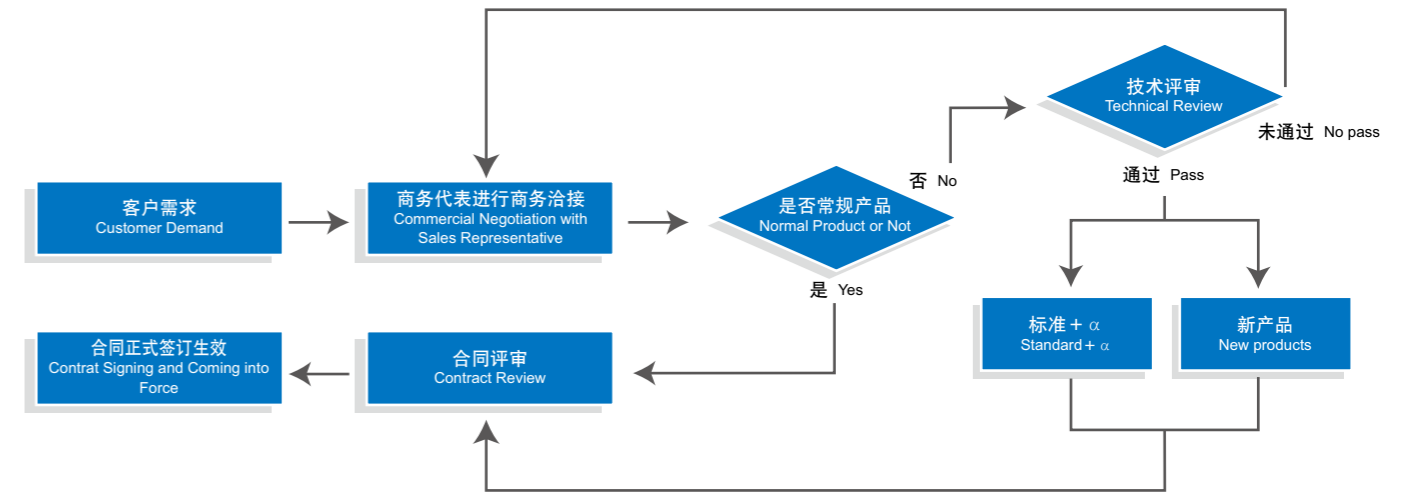
Technique experts and chief engineer

Researching on developing of new products to meet the requirements of the market; provide post service such as inspection, corrosion test, welding, heat treatment etc.

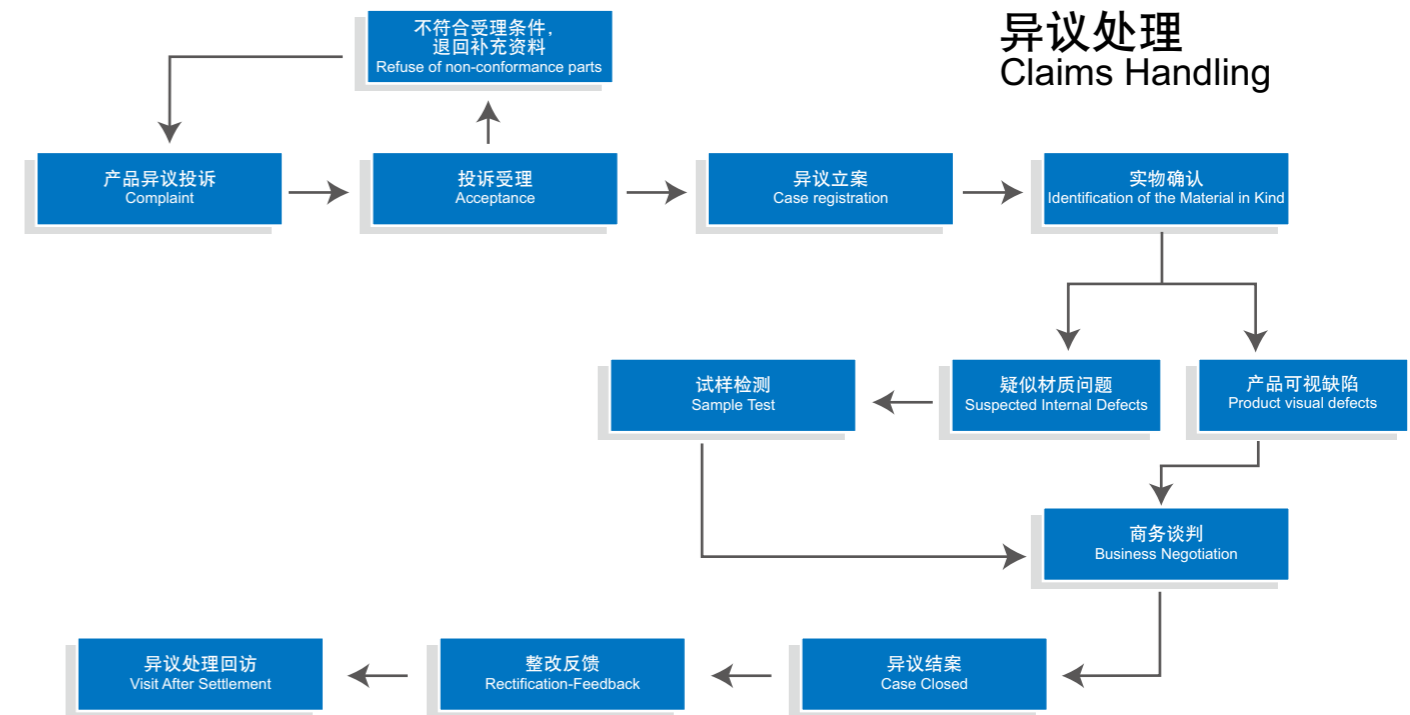
Production, sales, research team (PSRT)

Consist of people from different departments of Production, sales, research; the team is to solve the problems of the customers on using, production and researching.

合同签订流程 Procedure of Contract Signig



异议处理 Claims Handling





环境方针 Environment Policy

节约资源， 减少排放， 实行全过程污染控制， 不断减轻环境负荷。 持续改进， 遵法守约， 推行全方位清洁生产， 努力建设绿色特钢。

Saving resources, Reducing emissions, Carrying out pollution control through the process, Reducing environmental load consistently. Continuously improving , Persistently observing the law, Pursuing "clean production", Striving for "Green Special Steel".

环境目标 Environment Objective

推行清洁生产审计， 建设“绿色特钢”， 实现“世界一流清洁钢铁企业”。

Carrying out clean production audits, Building "Green Special Steel", Being a "world-class clean iron and steel enterprise."



OHSAS 18001:2007 职业健康和安全管理
OHSAS 18001:2007 Certification



ISO 14001:2004 环境体系认证证书
ISO 14001:2004 Certification

