

宝山钢铁股份有限公司

http://www.baosteel.com

BAOSHAN IRON & STEEL CO., LTD.

http://www.baosteel.com

宝山钢铁股份有限公司特钢事业部
BAOSHAN IRON & STEEL CO., LTD.
Special Steel Business Unit
1269 Shuichan Road Shanghai 200940 China

地址: 上海市宝山区水产路1269号

邮编: 200940

电话 TEL: international-86-21-56679080

传真 FAX: international-86-21-56670867

宝钢服务热线
BAOSTEEL SERVICE HOT LINE

800-820-8590

021-26648888

宝钢在线

http://www.baosteel.net.cn

国内贸易平台 Domestic

上海宝钢浦东国际贸易有限公司
SHANGHAI BAOSTEEL PUDONG
INTERNATIONAL TRADING CO., LTD

电话: 021-36014655

传真: 021-51266533

广州宝钢南方贸易有限公司
GUANGZHOU BAOSTEEL
SOUTHERN TRADING CO., LTD

电话: 020-32219999

传真: 020-32219555

天津宝钢北方贸易有限公司
TIANJIN BAOSTEEL NORTHERN
TRADING CO., LTD

电话: 022-84905800

传真: 022-84905789

成都宝钢西部贸易有限公司
CHENDU BAOSTEEL
WESTERN TRADING CO., LTD

电话: 028-85335388

传真: 028-85335696

武汉宝钢华中贸易有限公司
WUHAN BAOSTEEL CENTRAL
CHINA TRADING CO., LTD

电话: 027-84298900

传真: 027-84298938

上海宝钢不锈钢贸易有限公司
SHANGHAI BAOSTEEL STAINLESS
STEEL TRADING CO., LTD

电话: 021-66933311

传真: 021-66932879

长春宝钢钢材贸易有限公司
CHANGCHUN BAOSTEEL
STEEL TRADING CO., LTD

电话: 0431-85888912

传真: 0431-85889313

沈阳宝钢钢材配送有限公司
SHENYANG BAOSTEEL STEEL
DISTRIBUTION CO., LTD

电话: 024-62220699

传真: 024-88210189

上海宝钢特殊金属材料有限公司
SHANGHAI BAOSTEEL SPECIAL
METAL CO., LTD

电话: 021-65600968

传真: 021-55382644

上海宝钢商贸有限公司
SHANGHAI BAOSTEEL
TRADING CO., LTD

电话: 021-56121212

传真: 021-56126584

上海宝钢钢材贸易有限公司
SHANGHAI BAOSTEEL STEEL
TRADING CO., LTD

电话: 021-50509696

传真: 021-68404618

上海宝钢宝山钢材贸易有限公司
SHANGHAI BAOSTEEL BAOSHAN
STEEL PRODUCTS TRADING CO., LTD

电话: 021-36014688

传真: 021-51266500

亚澳地区 Asia and Australia

宝和通商株式会社
HOWA TRADING CO., LTD.

TEL: 0081-3-3237-9121

FAX: 0081-3-3237-9123

宝和通商首尔事务所
HOWA TRADING CO., LTD., SEOUL OFFICE

TEL: 0082-2-5080893

FAX: 0082-2-5080891

宝钢澳大利亚贸易有限公司
BAO AUSTRALIA PTY LTD.

TEL: 0061-8-94810535

FAX: 0061-8-94810536

宝钢新加坡贸易有限公司
BAOSTEEL SINGAPOER PTE LTD.

TEL: 0065-63336818

FAX: 0065-63336819

宝钢越南代表处
REPRESENTATIVE OFFICE IN VIETNAM

TEL: 0084-8-39100126

FAX: 0084-8-39100124

宝钢泰国代表处
REPRESENTATIVE OFFICE IN THAILAND

TEL: 0066-2-6543008

FAX: 0066-2-6543010

欧非地区 Europe and Africa

宝钢欧洲贸易公司
BAOSTEEL TRADING EUROPE GMBH

TEL: 0049-40-41994101

FAX: 0049-40-41994120

宝钢西班牙有限公司
BAOSTEEL ESPANA, S.L

TEL: 0034-93-4119325

FAX: 0034-93-4119330

宝钢中东代表处
BAOSTEEL MIDDLE EAST REPRESENTATIVE OFFICE

TEL: 00971-4-8810788

FAX: 00971-4-8810789

宝钢意大利钢材集散中心有限公司
BAOSTEEL ITALIA DISTRIBUTION CENTER SPA

TEL: 0039-010-530881

FAX: 0039-010-5308895

美洲地区 America

宝钢美洲贸易有限公司
BAOSTEEL AMERICA INC.

TEL: 001-201-4571144

FAX: 001-201-4570909

宝钢底特律代表处
REPRESENTATIVE OFFICE IN DETROIT

TEL: 001-248-2089918

FAX: 001-248-2080999

宝钢休斯顿代表处
REPRESENTATIVE OFFICE IN HOUSTON

TEL: 001-281-4847333

FAX: 001-281-4843655

宝钢洛杉矶代表处
REPRESENTATIVE OFFICE IN LOS ANGELES

TEL: 001-949-7526789

FAX: 001-949-7521234

宝钢里约代表处
BAOSTEEL DO BRAZIL LTDA.

TEL: 0055-21-25311363

FAX: 0055-21-25310298

宝钢股份特钢事业部
BAOSHAN IRON & STEEL CO., LTD.
Special Steel Business Unit



Stainless Steel Long Products

不锈钢长材产品

Catalog of Stainless Steel Long Products
不锈钢长材产品手册





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





特钢事业部 Special Steel Business Unit

宝钢股份特钢事业部位于中国上海市的东北部，前身为五钢公司（创建于1958年的上海第五钢铁厂及上海钢铁研究所）和上海第三钢铁厂的特殊钢及特殊合金研发生产之主业部分，是我国最早的特殊钢生产基地之一。1998年并入宝钢集团，2005年5月，五钢公司核心资产被宝钢股份收购，组建宝钢股份特殊钢分公司。2009年4月，宝钢组建特钢事业部，特殊钢分公司整体划归特钢事业部。

具有五十多年生产经验的特钢事业部已拥有特种冶金，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，产品涉及棒（线）、板、带、无缝管、锻件等品种，形成以特冶、不锈钢、结构钢三大系列为核心并聚焦于航空航天、能源、汽车（交通）三个关键行业以及模具钢、轴承钢、冷轧辊芯棒及不锈钢棒线等四大类产品体系。

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。按照宝钢新一轮发展战略，秉承“精品、精益制造、精品文化”精神，特钢事业部将建成国际一流、国内领先的、具有强大综合竞争力的生态型特钢精品制造基地和特钢新材料、新工艺、新技术的研发基地。

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 Steel Business Unit 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, Special Steel Business Unit 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 Steel's 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

不锈钢长材是宝钢股份特钢事业部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 Special Steel Business Unit. 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. 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 $\phi 0.5\text{mm}$ 丝材到 $\phi 400\text{mm}$ 锻棒；盘圆规格 $\phi 5.5\text{mm}$ 到 $\phi 40\text{mm}$ ，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 $\phi 0.5\text{-mm}$ wire to $\phi 400\text{-mm}$ forged bar, a wide size range is available. Coiled rods with diameters ranging from $\phi 5.5\text{ mm}$ to $\phi 40\text{ mm}$ 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.

目录 Contents

工艺流程
Process Flow 07

生产装备
Production Facilities 10

产品大纲
Product Mix 16



07



20

牌号对照
Contrast of Grades 20

交货状态
Delivery State 24

质量保证
Quality Assurance 26

质量检测
Quality Inspection 32

客户服务
Customer Service 38



32



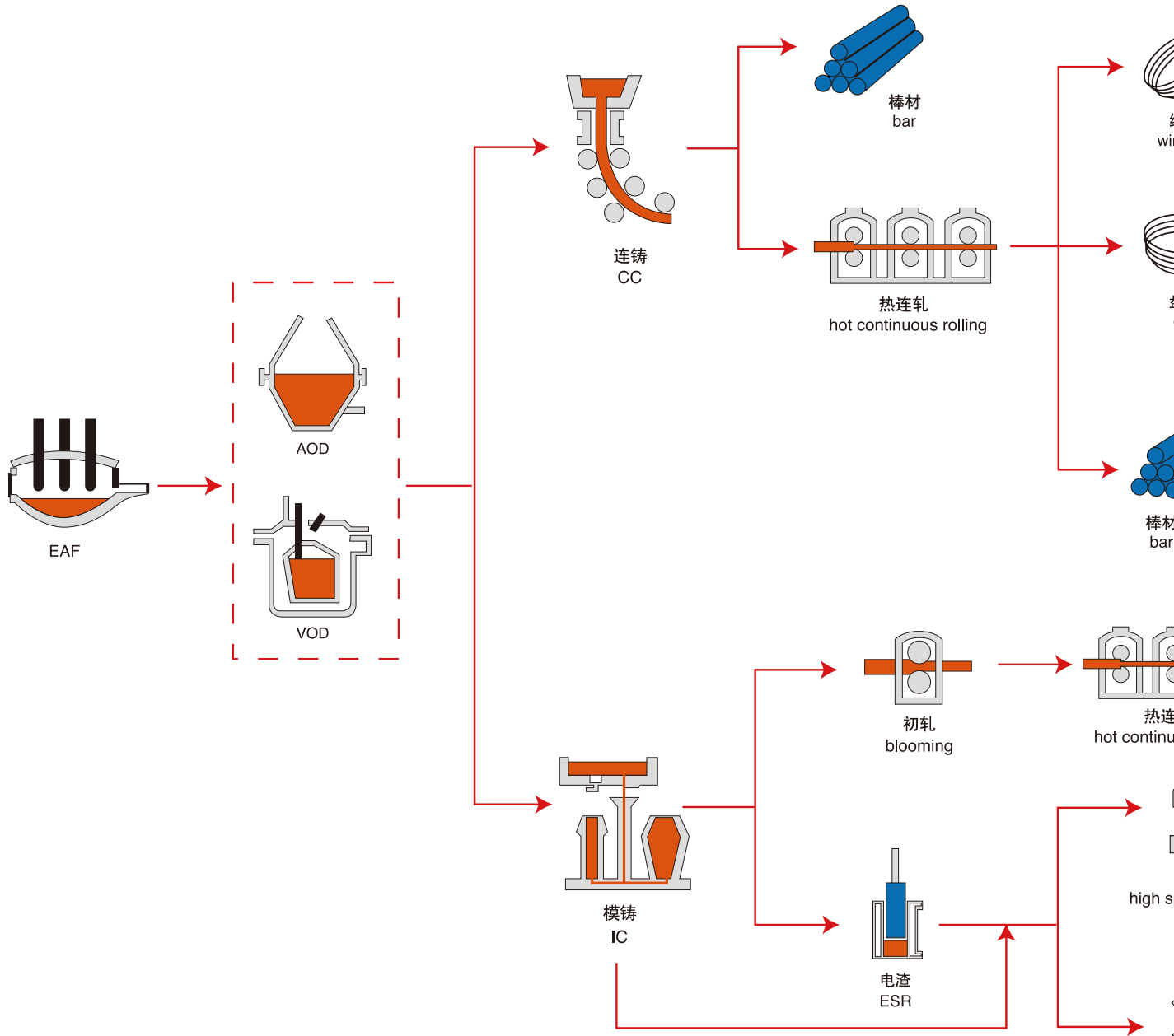
工艺流程

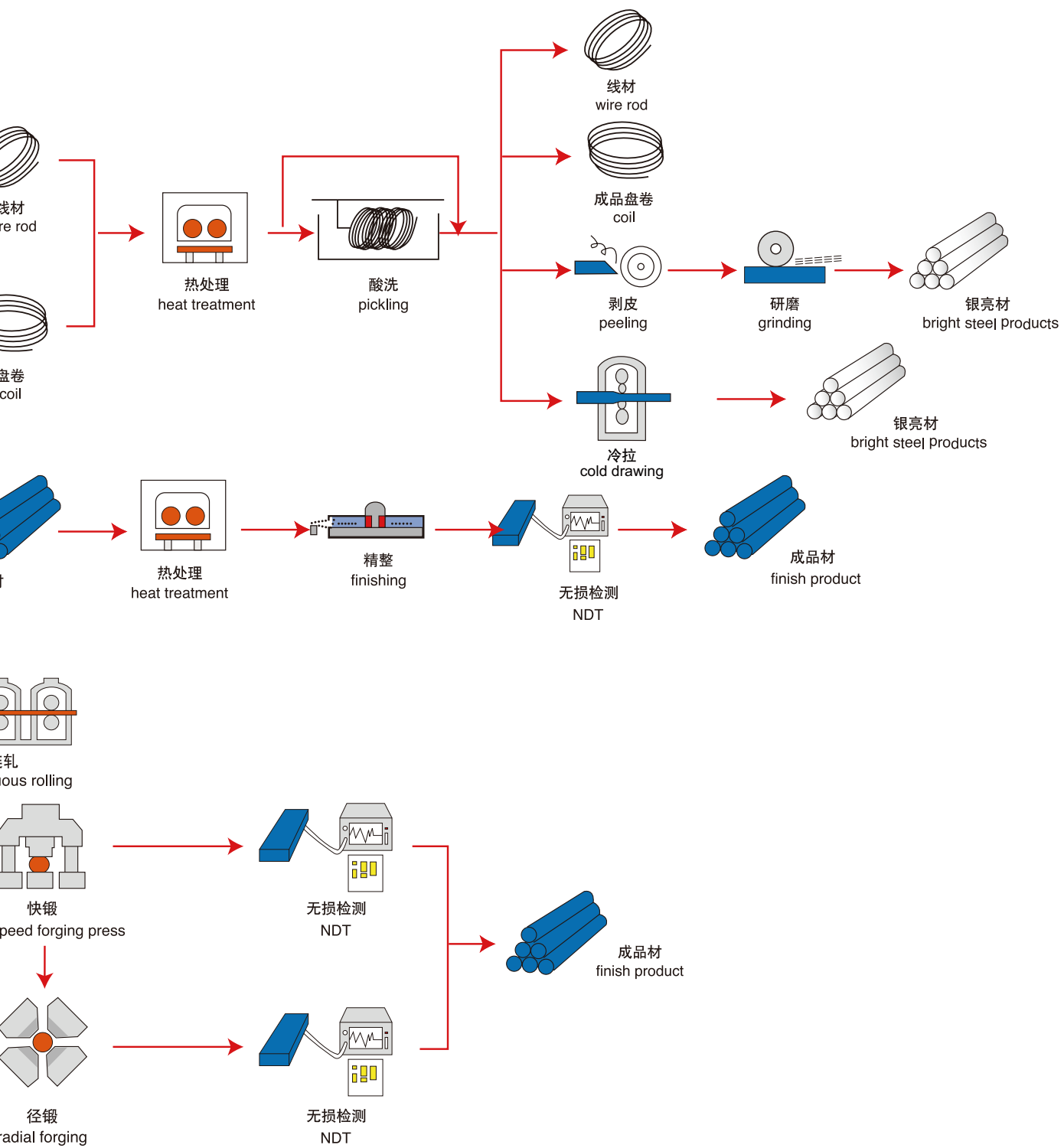
Process Flow





工艺流程 Process Flow







生产装备

Production Facilities





冶炼设备及特点 Melting Equipment & Features

电炉有40t、60t、100t三种容量等级共六座，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，100t为引进超高功率直流电弧炉，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、AOD、VOD/VD炉外精炼装置，确保钢液的纯净度。

There are six electric arc furnaces, i.e. one imported 100-ton ultra-high power DC electric arc furnace, 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, AOD, VOD/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.





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

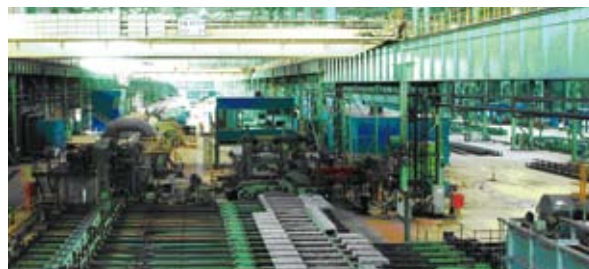
线材生产线引进DANIELI初轧机及MORGEN高线轧制技术，可生产棒材、线材和盘条，生产规格范围有： $\phi 14$ —50mm棒材、 $\phi 16$ —40mm盘圆、 $\phi 5$ —20mm盘条（线材）。后道有在线环形热处理炉、保护气氛连续退火炉、酸洗生产线等。

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快锻和40MN快锻三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DEMAC公司制造，40MN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, 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。最大连拔机组拉拔力达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.

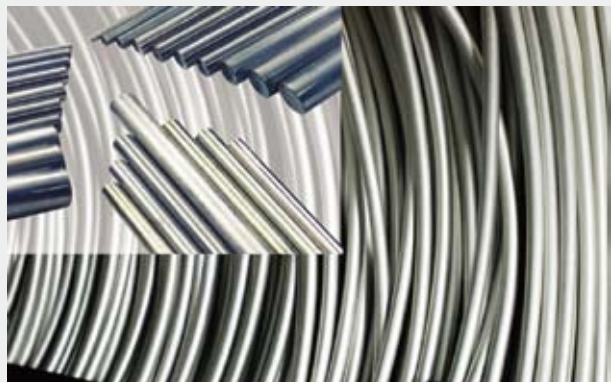
Cold working line for valve steel consists of four high speed grinding machines, three uncoiler levellers, one two-roll reeler and one eddy current surface flaw detector. The line processes 3500 tons valve steel with diameters ranging from 5 - 30 mm and dimensional tolerance h9, mainly martensitic and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





产品大纲

Product Mix





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	不锈钢 (含耐热钢) stainless steel (including heat-resistant steel)	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		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

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	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	(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

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				
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

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





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、剥皮 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 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 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 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 martensitic	退火 annealed	切削加工 machining	热轧 hot rolled
5		奥氏体 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

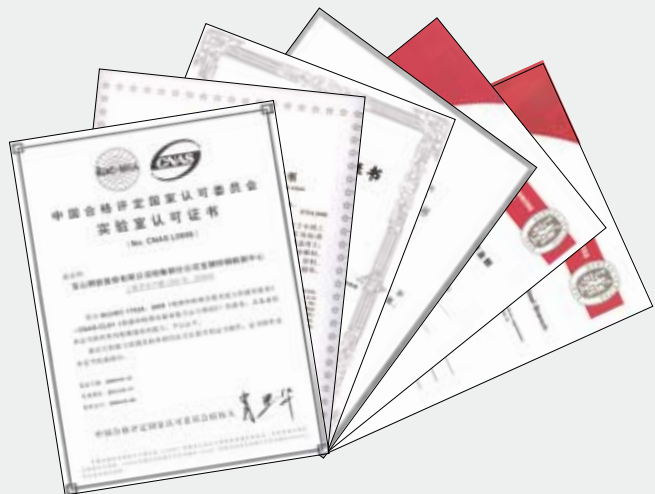
冷拉/银亮材 Cold-drawn/Bright Steel Products

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 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 martensitic	退火 annealed	压力加工 press work	磨光 polished
3		奥氏体 austenitic	固溶 solution treated	压力加工 press work	磨光 polished



质量保证

Quality Assurance





质量认证 Quality Certification

- 公司从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。
 - 特钢事业部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。
 - 特钢事业部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。
 - 特钢事业部的各类质量体系均通过了第三方的认证。
- Since 1995, the Company began to establish aviation, aerospace, military, nuclear power and automobile quality management systems according to ISO9001, AS9100B, GJB9001A, HAF003, ISO/TS16949 and specific requirements from customers and has formed a complete set of quality system documents.
 - There are 21 quality system processes have been established and kept running in the Company, i.e. management planning process, management reviewing process, internal audit process, corrective and preventive measures for improvement process, data analysis and use process, customer satisfaction monitoring and measurement process, demand identification and assessment process, design and development process, production process, delivery process, service process, production planning process, equipment and tooling management process, document management process, human resource management process, procure and supplier management process, product protection process, inspection and test management process, measuring equipment management process, identification and traceability management process and nonconforming product management process.
 - Special Steel Business Unit keeps improving quality systems persistently by formulating quality targets and adopting workable measures, carrying out internal quality audit and management review regularly.
 - All kinds of quality systems received certifications from the third party.



中国冶金质量认证中心ISO9001:2000质量管理体系认证
ISO9001:2000 Certificate issued by China Metallurgical Quality Certification Center



质量认证 Quality Certification



必维国际检验集团ISO 9001:2000 和 AS9100-B航空航天质量管理体系认证
Certificate of ISO 9001:2000 and AS9100-B issued by ANAB



中国商检质量认证中心ISO9001:2000质量管理体系认证
ISO9001:2000 Certificate issued by China Commodity Inspection Quality
Certification Centre



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



中国新时代认证中心
GJB9001A-2001军工质量管理体系认证
Certificate of Quality Management System for
Military Projects, GJB9001A-2001, issued by China
Xinshidai Quality System Certification Center



2003年获得了国家武器装备科研和生产许可证
National Licence of Research and Production of Weaponry
obtained in 2003



军工产品质量体系认证证书
Certificate of Quality System for Military Products



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



304HC2 金杯奖证书
Golden-cup Prize Certificate for 304HC2



TP347H 品质卓越产品证书
Excellent Quality Metallurgical Products Certificate for TP347H



质量检测

Quality Inspection

特钢事业部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 etc. 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 Special Steel Business Unit 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.



质量检测 Quality Inspection

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



质量检测 Quality Inspection

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

金相分析 Metallographic Test

1、金相显微镜 Metallographic Microscopes



Axioplan-2正式金相显微镜
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



质量检测 Quality Inspection

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。

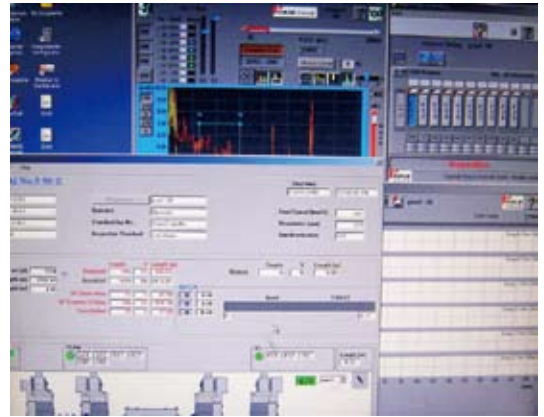
近年来，公司先后建立了多条无损检测生产线，产品无损检测的应用范围不断扩大，检测精度在同行业中处于领先水平。其中超声波探伤生产线主要用于裂纹、缩孔、夹渣、白点等内部缺陷的探伤；涡流、漏磁、磁粉、渗透探伤生产线主要用于裂纹、折叠等表面、近表面缺陷的探伤。在产品质量保证过程中，无损检测技术已成为最有效的检测方法之一，产品探伤能力达到80%以上。

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



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

来自宝钢特钢研发部门、制造单元的专业技术专家与首席工程师，针对用户和市场的需求，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 who is responsible for providing customer service concerning consultation over products, order placing, logistics tracing, settlement of payment, handling of claim on quality issue, guidance on application, information exchange, etc.

Product Engineer

senior engineer from manufacturing department who is responsible for providing technical service concerning production and application, customized quality design to meet specific requirements from customers, handling technical problems together with sales representative, and on-site service, in case of necessary

Technical Expert and Chief Engineer

technical expert and chief engineer with Baosteel research institute and manufacturing department who are responsible for developing new special steel products to meet demands of customers and the market, and providing after-sales service related with inspection, corrosion test, welding, heat treatment, etc.

Production, Sales, Research Team (PSRT)

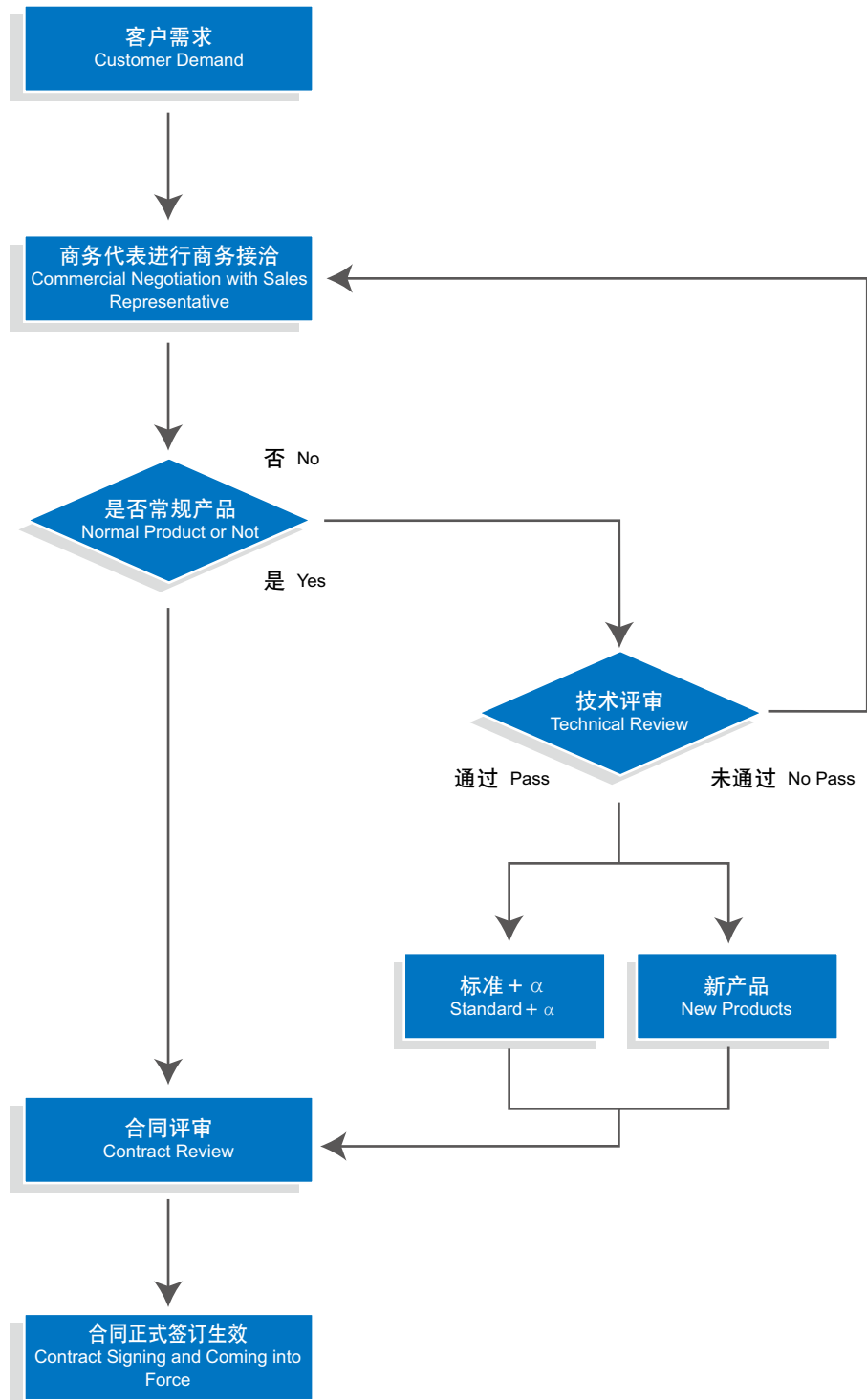
a team consists of people from manufacturing, sales, research sections who are responsible for helping customers to solve problems in application, production and research and enhancing competitiveness of Baosteel's products in the market



合同签订流程

Procedure of Contract Signing

<http://www.baosteel.com>





异议处理 Claims Handling

1 产品投诉 Complaint



2 投诉受理 Acceptance



3 异议立案 Case Registration



4 实物确认 Identification of the Material in Kind



5 商务谈判 Business Negotiation



6 异议结案 Case Closed



7 整改反馈 Rectification - Feedback



8 异议处理回访 Visit After Settlement

一旦您在使用宝钢特钢产品中出现问题，请您将存在问题的产品尽量以供货状态保留，并在第一时间联系客户代表、商务代表或合同供货方。您的投诉将被及时反馈至宝钢特钢。投诉信息应包括合同号、交货量、异议量、问题描述、联系人、联系电话等内容。

In case of any problems related with products manufactured by Baosteel Special Steel Business Unit, the customer shall try his best to keep the problem product in delivery state as much as possible, and immediately contact Sales Representative, Business Representative, or the supplier of the contract indicating the contract number, quantity of delivery, quantity of the problem product, descriptions of the problem, full name of contact person and telephone number, etc. The complaint will be forwarded to related department of the Company in time.

我们接收到您的投诉后，客户代表或地区公司商务代表将会在第一时间对您的投诉进行初步确认，协助您解决问题。对于确系由宝钢特钢产品缺陷造成无法正常使用的情况，您的投诉将转入产品异议处理程序。

On receiving the complaint, Sales Representative or Business Representative will make a preliminary investigation on the complaint immediately and assist the user to solve the problem. In case the product can not be used because of defects, the complaint will be handled via claim handling procedure.

对于确系宝钢特钢产品缺陷造成无法正常使用的情况，经特钢事业部立案确认，启动异议处理流程。

Once it is confirmed by Baosteel Special Steel Business Unit that the product can not be used because of defects, the complaint will be registered for handling.

我们将在最短时间内派出服务人员到达现场，了解钢材使用情况，必要时进行相应取样检测和现场试验，与您充分沟通，共同对异议产生的原因进行判定达成一致意见。

Service personnel will be sent to the site in the shortest time to investigate the issue. Sampling and on-site test may be done, if necessary. Discussion with the customer will be held to reach the agreement on the causes of the problem.

在实物确认的基础上，根据异议责任判定达成的共识，宝钢特钢将与您进行友好协商，在确定异议理赔处理方案后，形成《产品异议处理表》并邮寄给您开具《进货退出及索取折让证明》。

Based on the identification of material in kind and agreement on the responsible party for the problem, consultation on claim settlement will be held in a friendly way to find a solution. *Form of Claim on Products Settlement and Goods Rejection and Discount Certificate* will be sent to the customer.

我们将根据《产品异议处理表》，对您的损失作出相应赔偿，异议结案。

Compensation will be made for the related losses of the customer according to *Form of Claim on Products Settlement* and the case closed.

宝钢特钢会根据异议产生的原因对相关责任单位进行内部整改，并将整改结果反馈给用户。

Rectification will be made in the responsible manufacturing department(s) for the cause of the claim. The result of rectification will be fed back to the customer.

异议结案之后，宝钢特钢将对异议处理进行回访，并对回访中发现的问题进行跟踪落实。

After the settlement, Baosteel staff members will visit the customer tracing the settlement.



必维国际检验集团ISO 14001:2004 环境体系认证证书
ISO 14001:2004 Certificate issued by ANAB

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."



必维国际检验集团OHSAS 18001:2007职业健康和安全管理体系统认证证书
OHSAS 18001:2007 Certificate issued by ANAB