

TUBE & PIPE

为全球用户提供专业、优质的不锈钢无缝钢管

To Provide Professional And High-quality
Stainless Steel Seamless Pipe For Global Users



博盛钢业集团有限公司

BOSHENG STEEL GROUP
CO., LTD.

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扫一扫，
了解更多详情



BOSHENG STEEL TUBE

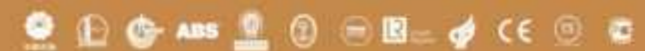
STAINLESS ESSENCE

博盛钢管 不锈钢本色

全球设备的管道安全专家

Welcome BOSHENG

www.bosheng.group



Development history of Enterprise

企业发展历程

有一段历史，无法忘却，铭记着峥嵘的岁月。
有一股激情，与时俱进，升华成感动的诗歌。
有一个团队，锐意进取，彰显出凝结的力量。
有一种理想，构筑世界，成就了品牌的辉煌。

A history, records the glory days, can not be forgotten.
A passion, sublimated into moving poetry, Keep advanced.
A team, reveals the strength of condensation, forge ahead.
An ideal, achieve the success of the brand, build a new world.

35

years



President's message

总裁致辞



博盛集团总裁：
President of Bosheng Group:

博盛，秉承高科技发展之先机，致力于创建中华民族之精品。向国内外广大用户提供优质产品及精良服务，是博盛三十多年发展历程中始终奉行的根本原则。

在不畏困难、与时俱进、推陈出新、诚实守信的企业精神的指引下，全体员工脚踏实地、励精图治使博盛不断发展壮大。优质的产品和周细的服务在业界树立了良好的口碑和品牌形象。质量是生存的根本，创新是发展的动力，我们不惜巨资引进行业先进的生产设备和优先人才，形成了完善的工艺流程和生产环境。

坚持以创新求突破，以品质求荣誉，以特色求市场，以经营求活力，以管理求效益，以诚信求发展的企业理念。博盛将一如既往的推行“质量放心，价格称心，环境舒心，服务暖心，用后开心”的五心服务工程，取得经济效益和社会效益的双赢。

在此，我谨代表集团董事会向长期以来关心支持博盛发展，并给予我们无尽关爱和大力支持的社会各界人士表示深深的谢意。在今后的岁月中，我们将与所有关心支持我们成长的朋友一起携手共赢，勇登高峰，共创精彩！

Bosheng, adhering to the opportunities of high-tech development, is committed to creating the best products of the Chinese nation. Providing high-quality products and excellent services to users at home and abroad is the fundamental principle that Bosheng has always pursued in its 30-year development process.

Under the guidance of the enterprise spirit of fearing difficulties, advancing with the times, weeding out the old and bringing forth the new, honesty and trustworthiness, all the staff are down-to-earth and strive for governance to make Bosheng grow and grow. High-quality products and meticulous services have established a good reputation and brand image in the industry. Quality is the foundation of survival and innovation is the driving force of development. We have spared no expense in introducing advanced production equipment and priority talents in the industry, thus forming a sound process and production environment.

We adhere to the enterprise concept of seeking breakthroughs by innovation, honor by quality, market by characteristics, vitality by operation, efficiency by management and development by sincerity. Bosheng will continue to implement the "quality assurance, price satisfaction, comfortable environment, warm service, happy after use" five-heart service project, and achieve win-win economic and social benefits.

On behalf of the Board of Directors of the Group, I would like to express my deep gratitude to the people from all walks of life who have long cared for and supported Bosheng's development and have given us endless care and strong support. In the years ahead, we will work together with all our friends who care about supporting our growth to win-win, peak and create brilliant!

About BOSHENG

关于博盛



博盛钢业集团有限公司创建于80年代，坐落于中国长寿之乡、历史文化名城丽水市松阳县余姚山海协作园，注册资金20088万元，厂区占地总面积120000余平方米，是一家专业生产不锈钢管，特种合金管的集团公司。

公司拥有国内先进的不锈钢无缝管生产线(冷拔机组、冷轧机组)二十余条，可生产不锈钢无缝管：外径(6-630mm)×壁厚(1-60mm)×长度(1000-30000mm)；年产能3.5万吨、镍基合金管0.5万吨，主要材质有：304、304L、304H、321、321H、316、316L、316L MOD、317L、310S(2520)、347H、904L、S32205、S32507、哈氏300 哈氏600 哈氏800及蒙乃尔系列等奥氏体不锈钢、双相钢、超级双相钢、镍基合金。

公司可按GB、ASTM/ASME、JIS、DIN、GOST、SH、HG、DL等标准生产，产品广泛应用于石油、化工、化纤、医药、机械、冶炼、航空航天、造纸、食品、造船、环保、锅炉、热交换器、压力容器、冷凝器、水利、电业等领域，打造优秀品质；

公司先后通过ISO9001、ISO14001、OHSAS18001、特种设备压力管道生产许可证(TS)A1/A2/B、ABS、DNV-GL、LR、BV和CCS等认证，并且通过中石化、中石油、中海油、中广核、中能建、中化学、赛鼎工程、东华工程、成达工程等石化、核电、水电合格供应商入网认证。

公司始终秉承“以客户为本，做品牌企业”的宗旨，大力引进先进技术和人才，提高公司的研发技术攻关能力和管理水平，积极利用国际合作机会，吸收、消化不锈钢管生产领域的高新技术，提高公司的核心竞争力，为国内外客户提供更优良的产品与服务。

Bosheng Group Co., Ltd., founded in 1980s, includes Wenzhou Bosheng Stainless Steel Manufacturing Co., Ltd. and Zhe Jiang Bosheng Stainless Steel Manufacturing Co., Ltd. who have developed into large-scale stainless seamless pipe production enterprises. Besides, it also produces various complete sets of products. The company has set up various direct-sales branches and founded sales branches in the United States, India and Korea. Bosheng Group invested in Fujian in 2011 to found Fujian Tonghai Nickel Industry Co., Ltd. In order to satisfy increasingly growing customer needs at home and abroad, it, based on the parental company-Wenzhou Bosheng Stainless Steel Manufacturing Co., Ltd., founded Wenzhou Jingli Steel Co., Ltd., Wenzhou Hongli Steel Co., Ltd. and Wenzhou Chaohong Trade Co., Ltd.

The company owns advanced equipments as well as technologically advanced stainless steel seamless pipe production line. Meanwhile, it has bought Germany-imported analyzer, several handheld spectrometers, mechanical testing, hydrostatic testing, UT ultrasonic testing ET eddy current testing and other testing facilities, as well as supporting physical and chemical analysis facilities.

As one of domestic enterprises with complete production and testing devices, the company has profound technologies and established a hi-tech scientific researchers and inspectors as well as high-quality sales team.

Bosheng stainless steel seamless pipes have been sold to the United States, Germany, Russia, Korea, Japan, Europe, India and Southeast Asia. Its shares in export market continue to grow year by year. It ranks top among peers in export stainless steel seamless pipes in 2014 and 2015. The products have been widely applied to domestic petroleum, chemistry, machinery, electricity, shipbuilding, foods, pharmacy, environmental protection, etc. and won users' favorable comments and trust.



Enterprise qualification honour

企业资质荣誉

时光，见证荣耀； TIME WITNESSES GLORY.

岁月，镌刻辉煌。 YEARS, ENGRAVE BRILLIANCE.

博盛钢管始终不忘初心，时刻牢记使命，以创新的科研技术、精细的生产过程、严格的质量管理、生产出优质的不锈钢无缝钢管。

Bosheng Steel Pipe is always forgetting its original intention and always keeping its mission in mind. With innovative scientific research technology, fine production process, strict quality management, we can produce high quality stainless steel seamless steel pipe.



About team

关于团队

自主科技创新团队 推动博盛走向成功

Independent scientific and technological innovation team to promote the success of Bosheng



博盛始终坚持员工是企业最有价值的资产，是博盛的未来；坚持把选才、育才、用才放在企业发展的首位，将人才引进作为一种具有最高收益率的投资行为。我们把人才当做第一资源进行有效管理，追求员工个人发展与企业发展高度和谐统一。

我们鼓励你拥有特别的视角，独立思考问题，善于组织各方资源。在每项工作中始终能保持对结果负责的态度和积极向上乐于分享的团队精神。

Bosheng always insists that personnel are the most valuable assets and the future of our enterprise, places talent recruitment, cultivation and employment at the first place of enterprise development and regards talent introduction as an investment activity that has the highest rate of return. We carry out effective management by viewing talents as the first resources and seek high harmony and unity between employees' personal development and enterprise development.

We encourage you to have special perspectives, to think of questions independently, to be good at organizing all resources, to be always responsible for results and keep the spirit of optimism and willingness to share in doing each task.



Production workshop

生产车间

规模化的制造，铸就企业实力和品牌

Scale manufacturing casts enterprise strength and brand

我们拥有先进的生产装备，运用崭新的工业概念及强大的技术力量，生产出符合国际标准的高品质产品。

We will produce high quality ultimate products that are in accordance with international standards by adopting world advanced production equipments, brand new industrial conception and powerful technical strength.



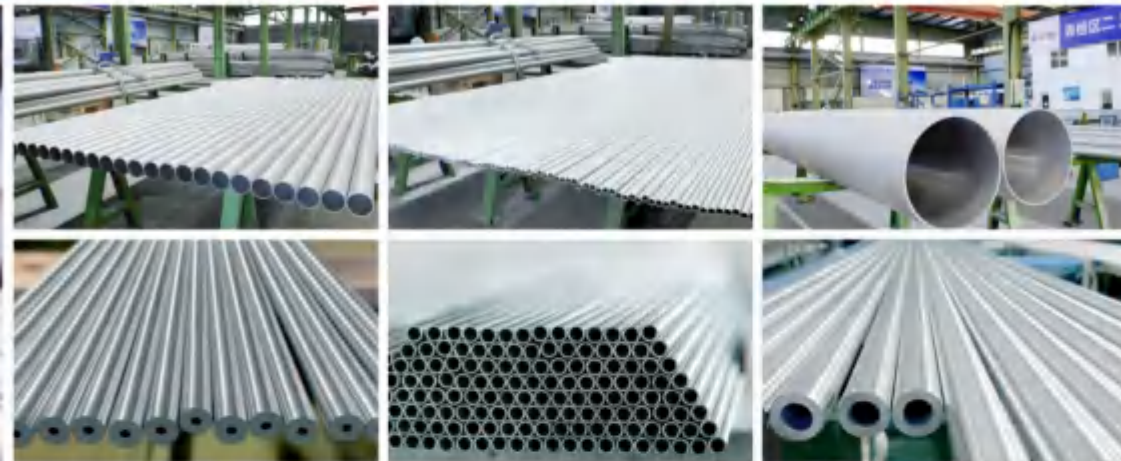
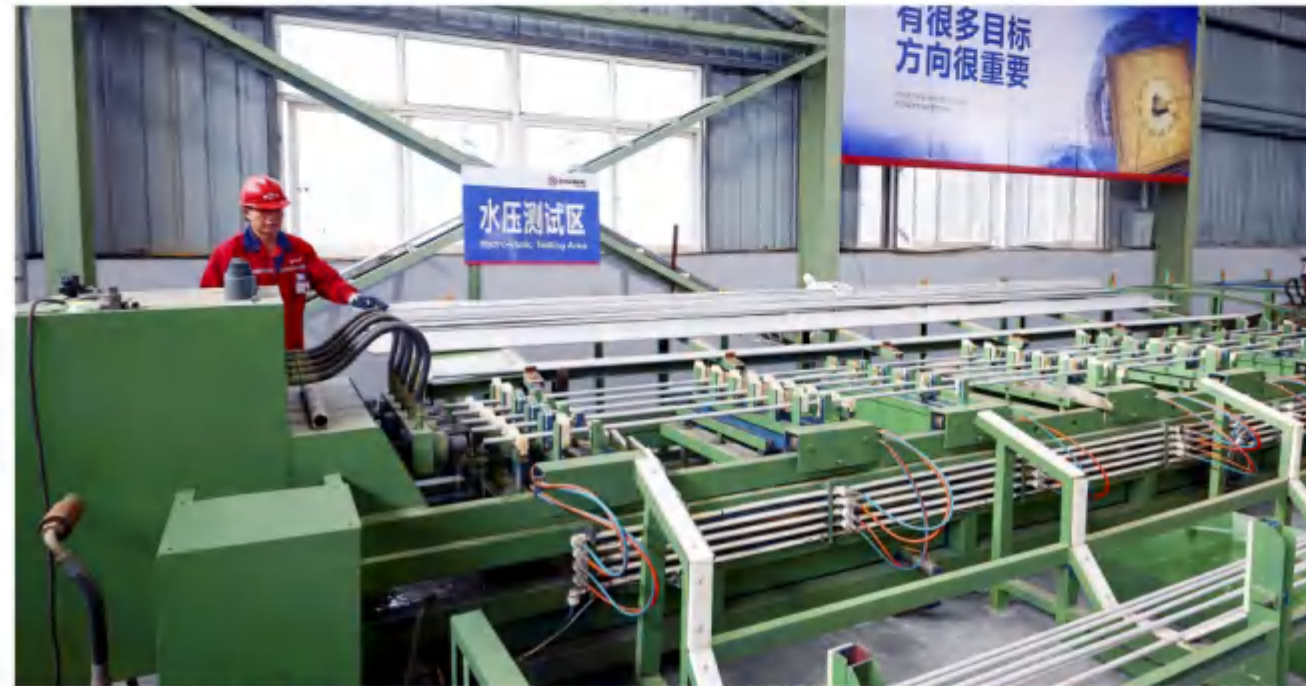
Production workshop

生产车间

规模化的制造，铸就企业实力和品牌

Scale manufacturing casts enterprise strength and brand

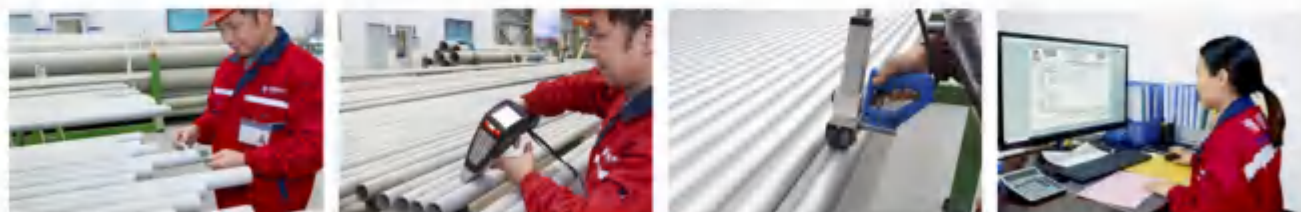
产品质量决定企业的成败。从企业诞生起，博盛致力于产品品质的不断提升，秉持“品质好、效率高、不断改善”的品质政策，不断更新和完善制造设备和技术，确保客户的品质。



Success of failure is decided by product quality. Since the beginning point, Bosheng has been devoted itself to the constant improvement of product quality and insisted the quality policy of "top quality, high efficiency and constant improvement", it continuously modifies and consummates manufacturing equipment and technology to ensure the customers' confidence on our products.

Inspection equipment 检测设备

匠心、耐心、专业、专注
Originality, patience, profession and focus



质量是企业生命，这句话实实在在烙印在每一个博盛人的心中。凭借精良的设备、先进的技术和科学的管理，确保博盛整个生产过程严格受控于ISO9001质量体系。通过提高工作质量保证产品的稳定性，同时加强客户服务的管理，决不让一件不合格的产品出厂，我们相信这既是对客户负责，更是对我们自己负责。

Quality is the life of an enterprise, which is really imprinted in the hearts of every Bosheng people. With sophisticated equipment, advanced technology and scientific management, we ensure that the whole production process of Bosheng is strictly controlled by the quality system of ISO 9001. By improving the quality of work and ensuring the stability of products, and strengthening the management of customer service, we will never let an unqualified product leave the factory. We believe that this is not only responsible for customers, but also for ourselves.

匠心品质

质量是产品的生命，是企业发展的基础，
严把质量关，保证产品质量的稳定和可靠性。

匠心品质，才能立足于天地之间……

Craftsmanship

Quality is the life of products and the basis of enterprise
development. Strict quality control to ensure the stability and reliability of
product quality.

Only by the quality of ingenuity can we stand between heaven and
earth...

Stainless seamless steel tube technological process

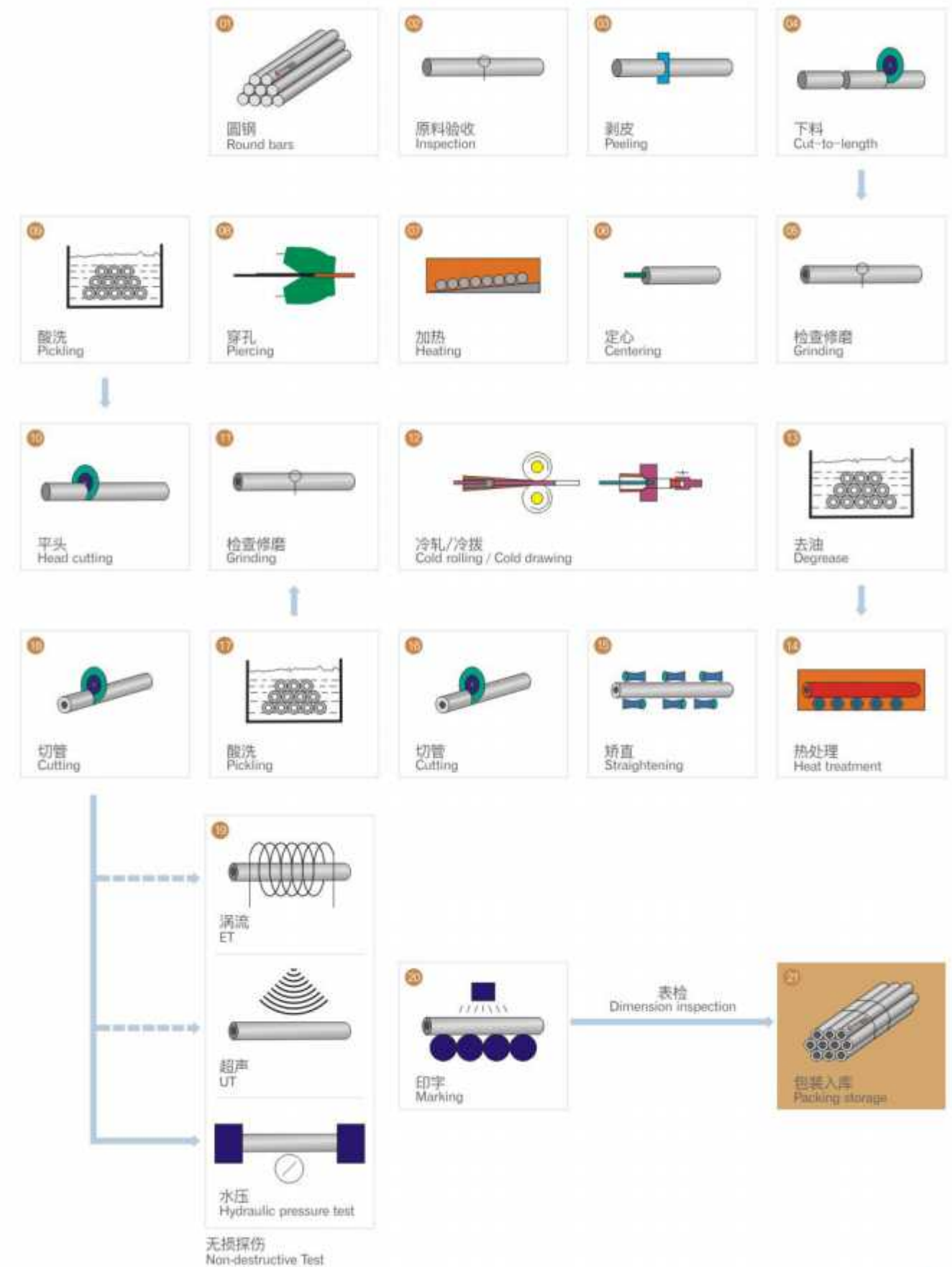
不锈钢无缝钢管 工艺流程

关注点滴细节，
精致造就非凡

Focusing on every detail,
creating prominence by delicacy.

“以事实为依据，用数据来说话”这是博盛人管理和做事的自我要求。用专业打造品质；博盛人以科学的态度对待每一项工作，“注重目标的可衡量性和计划的可操作性”；博盛人以精益求精的精神对待每一件产品，保证了产品的品质才能始终如一地保证您的利益和价值。

“Based on facts, speak with data” is the self-requirement of Bosheng people to manage and do things; to build quality with profession; Bosheng people Scientific attitude to every work, “focus on the measurability of goals and the operability of plans”; Bosheng people treat with the spirit of excellence Only by ensuring the quality of each product can you consistently guarantee your interests and values.





Product specification

Outside diameter:6-762mm Wall thickness:0.5-50mm
 Maximum length:18000mm
 Special specifications are available through negotiation.

Product texture

TP304(06Cr19Ni10)、TP304L(022Cr19Ni10)、
 TP321(06Cr18Ni11Ti)、TP321H(07Cr19Ni11Ti)、
 TP316(06Cr17Ni12Mo2)、TP316L(022Cr17Ni12Mo2)、
 TP316Ti(06Cr17Ni12Mo3Ti)、TP310S(06Cr25Ni20)、
 TP347(06Cr18Ni11Nb)、TP317L(022Cr19Ni13Mo3)、
 531803(022Cr22Ni5Mo3N)、S32750(022Cr25Ni7Mo4N)、
 316L MOD/724L(OOCr18Ni15Mo2)、
 904L(OOCr20Ni25Mo4.5Cu)

Product technical standards

(For structural use,for the use of fluid transportation, for the use of boiler's heat exchangers, for the use of petroleum cracking process and for the use of high-pressure boilers)

GB/T14975-2012、GB/T14976-2012、GB13296-2013、
 GB9948-2013、GB5310-2013、GB/T21833-2008、
 ASTM/A312、ASTM/A213、ASTM/A269、
 ASTM/A789、ASTM/A790、ASTM/A511、JISG3463、
 JISG3459、DIN2462、DIN17456、DIN17458、
 GOST9941-81、GOST9940-81、EN10216-2-14、
 EN10216-5-13.

Industrial clients

The "Bosheng" product series, including stainless steel seamless tubes, boiler tubes, trivoltine tubes, precision and bright tubes and so on, are popular among the industry of petroleum, aviation, smelting, food, water conservancy, electricity, chemical engineering, chemical fibers and pharmaceutical machinery.

Stainless steel seamless steel tube

不锈钢无缝钢管

产品规格

外径:6-762mm,壁厚:0.5-50mm,最大长度:18000mm,
 特殊规格经协商可生产供应。

产品材质

TP304(06Cr19Ni10)、TP304L(022Cr19Ni10)、
 TP321(06Cr18Ni11Ti)、TP321H(07Cr19Ni11Ti)、
 TP316(06Cr17Ni12Mo2)、
 TP316L(022Cr17Ni12Mo2)、
 TP316Ti(06Cr17Ni12Mo3Ti)、TP310S(06Cr25Ni20)、
 TP347(06Cr18Ni11Nb)、
 TP317L(022Cr19Ni13Mo3)、531803(022Cr22Ni5Mo3N)、
 S32750(022Cr25Ni7Mo4N)、
 316L MOD/724L(OOCr18Ni15Mo2)、
 904L(OOCr20Ni25Mo4.5Cu)

产品技术标准

(结构用、流体输送用、锅炉热交换器用、石油裂化用、高压锅炉用)

GB/T14975-2012、GB/T14976-2012、GB13296-
 2013、GB9948-2013、GB5310-2013、GB/T21833-
 2008、ASTM/A312、ASTM/A213、
 ASTM/A269、ASTM/A789、ASTM/A790、ASTM/A511、
 JISG3463、JISG3459、DIN2462、DIN17456、
 DIN17458、GOST9941-81、
 GOST9940-81、EN10216-2-14、EN10216-5-13.

产品服务行业

"博盛"牌系列不锈钢无缝管、锅炉管、三化管、精密光亮管等产品,深受石油、航空、冶炼、食品、水利、电力、化工化学、化纤、医药机械等行业的青睐。



Stainless steel welded pipe

不锈钢焊管

产品规格

Ø6mm-2020mmx0.6mm-40mm ,最大长度:18000mm ,
特殊规格经协商可生产供应。

产品技术标准

(结构用、流体输送用、锅炉热交换器用、石油裂化用、高压锅炉用)

GB/T12771-2008、GB/T12770-2002、ASTM A789/A789 M-05b、ASTM A928/A928 M-05、ASTM A790/A790M-05a

产品材质

TP304(06Cr19Ni10)、TP304L(022Cr19Ni10)、
TP321(06Cr18Ni11Ti)、TP321H(07Cr19Ni11Ti)、
TP316(06Cr17Ni12Mo2)、
TP316L(022Cr17Ni12Mo2)、
TP316Ti(06Cr17Ni12Mo3Ti)、TP310S(06Cr25Ni20)、
TP347(06Cr18Ni11Nb)、
TP317L(022Cr19Ni13Mo3)、531803(022Cr22Ni5Mo3N)、
S32750(022Cr25Ni7Mo4N)、
316LMO/724L(OOCr18Ni15Mo2)、
904L(OOCr20Ni25Mo4.5Cu)



Product specification

Ø6mm-2020mmx0.6mm-40mm ,
Maximum length:18000mm
Special specifications are available through negotiation.

Product technical standards

(For structural use,for the use of fluid transportation, for the use of boiler's heat exchangers, for the use of petroleum cracking process and for the use of high-pressure boilers)

GB/T12771-2008、GB/T12770-2002、ASTM A789/A789 M-05b、ASTM A928/A928 M-05、ASTM A790/A790M-05a

Product texture

TP304(06Cr19Ni10)、TP304L(022Cr19Ni10)、
TP321(06Cr18Ni11Ti)、TP321H(07Cr19Ni11Ti)、
TP316(06Cr17Ni12Mo2)、TP316L(022Cr17Ni12Mo2)、
TP316Ti(06Cr17Ni12Mo3Ti)、TP310S(06Cr25Ni20)、
TP347(06Cr18Ni11Nb)、TP317L(022Cr19Ni13Mo3)、
531803(022Cr22Ni5Mo3N)、S32750(022Cr25Ni7Mo4N)、
316LMO/724L(OOCr18Ni15Mo2)、
904L(OOCr20Ni25Mo4.5Cu)

Stainless steel precision bright tube

不锈钢精密光亮管



气体及实验设备用管

实验室系统常用规格:

Ø6.35x0.89mm、Ø9.53x0.89mm、Ø12.7x0.89mm、
Ø12.7x1.24mm、Ø12.7x165mm、Ø8.0x2.0mm等

直径控制: 公差 ± 0.08mm(0.1%)

表面粗糙度: BA管Ra ≤ 0.4 μm

清洗: 超声波清洗, 内孔白布清洁, 保证管子内孔洁净度。

半导体及微电子用管

半导体及微电子用管常用规格:

Ø6.35x0.89mm、Ø9.53x0.89mm、Ø12.7x0.89mm等

直径控制: 公差 ± 0.03mm(0.1%)

表面粗糙度: BA管Ra ≤ 0.4 μm

清洗: 超声波清洗, 内孔白布清洁, 保证管子内孔洁净度。

Gas Pipe And Laboratory Equipment

Laboratory system specifications:

Ø6.35x0.89mm、Ø9.53x0.89mm、Ø12.7x0.89mm、
Ø12.7x1.24mm、Ø12.7x165mm、Ø8.0x2.0mm etc.

Diameter control: tolerance ± 0.08mm(0.1%)

Surface roughness: BA tube Ra ≤ 0.4 μm

Cleaning: ultrasonic cleaning, inner hole white cloth cleaning, to ensure the pipe inner hole cleanliness.

Tube For Semiconductor And Microelectronics

Semiconductor and microelectronics pipe specification:

Ø6.35x0.89mm、Ø9.53x0.89mm、Ø12.7x0.89mm etc.

Diameter control: tolerance ± 0.03mm (0.1%)

Surface roughness: BA tube Ra ≤ 0.4 μm

Cleaning: ultrasonic cleaning, inner hole white cloth cleaning, to ensure the pipe inner hole cleanliness.

医疗机械用光亮管

医疗机械系统用管常用规格:

Ø10x0.8mm、Ø11.4x0.56mm、Ø12.7x0.56mm、
Ø16.9x0.56mm、Ø14.28x0.71mm、Ø22x0.91mm等

直径控制: 公差 ± 0.05mm(0.1%)

表面粗糙度: BA管Ra ≤ 0.4 μm

清洗: 超声波清洗, 内孔白布清洁, 保证管子内孔洁净度。

Medical Machinery With Light Tube

Medical mechanical system pipe specifications:

Ø10x0.8mm、Ø11.4x0.56mm、Ø12.7x0.56mm、
Ø16.9x0.56mm、Ø14.28x0.71mm、Ø22x0.91mm etc.

Diameter control: tolerance ± 0.05mm (0.1%)

Surface roughness: BA tube Ra ≤ 0.4 μm

Cleaning: ultrasonic cleaning, inner hole white cloth cleaning, to ensure the pipe inner hole cleanliness.

汽车、轨道交通用精密管

汽车油路管规格: Ø6x1.5mm

机车制动系统常用规格:

Ø12x1.5mm、Ø15x1.5mm、Ø18x1.5mm、
Ø22x1.5mm、Ø30x2mm等

Automobile, Rail Transit Use Precision Tube

Car oil pipe specification: Ø6x1.5mm

Locomotive Brake System Specifications:

Ø12x1.5mm、Ø15x1.5mm、Ø18x1.5mm、
Ø22x1.5mm、Ø30x2mm etc.

精密光亮管、抛光管

外径: 3-133mm

壁厚: 0.3-30mm

酸洗管、精密管实际抛光目数(粗糙度)可根据客户具体要求定制

Precision bright tube, polishing tube

Outer diameter: 3-133mm

Wall thickness: 0.3-30mm

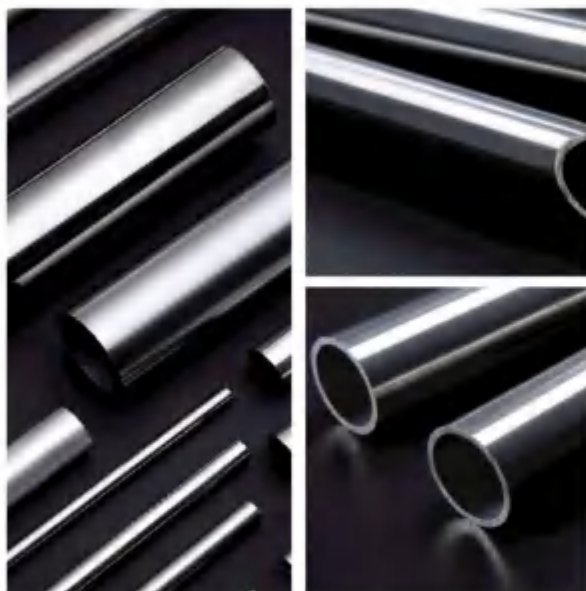
The actual number of polishing mesh (roughness) of pickling pipe and precision pipe can be customized according to the specific requirements of customers.

产品服务行业

气体及仪表等设备用管、半导体及微电子用管、汽车轨道交通用精密管、医疗机械领域等对精度和表面粗糙度特殊要求可按要求定制。

Product service industry

In the fields of gas and instruments, semiconductor and microelectronics, precision tubes for rail transit, medical machinery, etc., the precision and surface roughness can be customized as required.



Special pipes 特殊管材



Pipe & flange series 管件法兰系列

管件系列 Pipes series



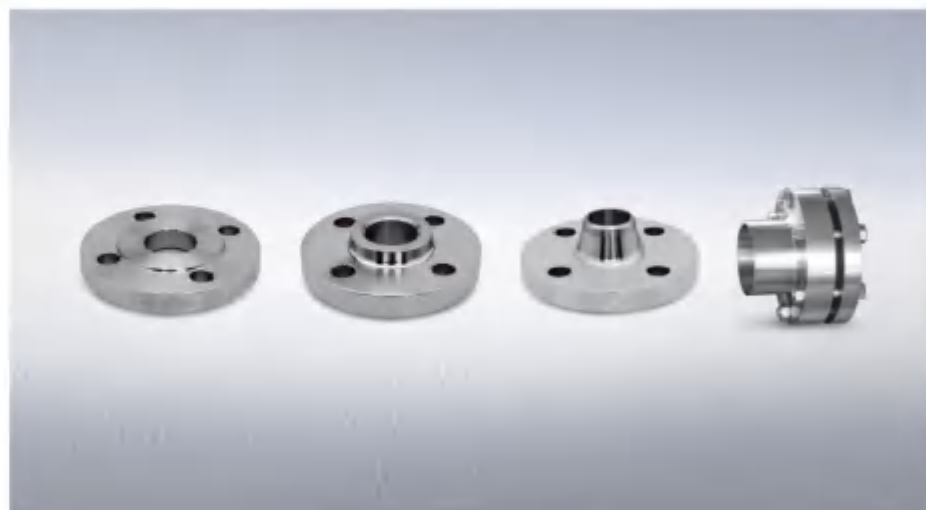
Pipe & flange series

管件法兰系列

承插管件系列 Socket pipes series



法兰系列 Flange series



Chemical composition requirements

化学成分要求

牌号 Grade	WS 代号 ^a	化学成分% (Chemical Composition%)															
		碳(C)	锰(Mn)	磷(P)	硫(S)	硅(Si)	镍(Ni)	铬(Cr)	钼(Mo)	钛(Ti)	Cu	氮(N)	钡(Ba)	铜(Cu)	铈(Ce)	硼(B)	铝(Al)
TP304	S30400	0.08	2.00	0.045	0.030	1.00max	8.00-11.00	18.0-20.0	-	-	-	-	-	-	-	-	-
TP304H	S30409	0.04-0.10	2.00	0.045	0.030	1.00max	8.00-11.00	18.0-20.0	-	-	-	-	-	-	-	-	-
TP304L	S30403	0.035	2.00	0.045	0.030	1.00max	8.00-13.0	18.0-20.0	-	-	-	-	-	-	-	-	-
TP304N	S30451	0.08	2.00	0.045	0.030	1.00max	8.00-18.00	18.0-20.0	-	-	-	-	0.10-0.16	-	-	-	-
TP304LN	S30453	0.035	2.00	0.045	0.030	1.00max	8.00-12.00	18.0-20.0	-	-	-	-	0.10-0.16	-	-	-	-
TP309CB	S30940	0.08	2.00	0.045	0.030	1.00max	12.0-16.0	22.0-24.0	0.75max	-	10xCmin 1.10max	-	-	-	-	-	-
TP309H	S30909	0.04-0.10	2.00	0.045	0.030	1.00max	12.0-15.0	22.0-24.0	-	-	-	-	-	-	-	-	-
TP309HCB	S30941	0.04-0.10	2.00	0.045	0.030	1.00max	12.0-16.0	22.0-24.0	0.75max	-	10xCmin 1.10max	-	-	-	-	-	-
TP309S	S30908	0.08	2.00	0.045	0.030	1.00max	12.0-15.0	22.0-24.0	0.75max	-	-	-	-	-	-	-	-
TP310CB	S31040	0.08	2.00	0.045	0.030	1.00max	19.0-22.0	24.0-26.0	0.75max	-	10xCmin 1.10max	-	-	-	-	-	-
TP310H	S31009	0.04-0.10	2.00	0.045	0.030	1.00max	19.0-22.0	24.0-26.0	-	-	-	-	-	-	-	-	-
TP310HCB	S31041	0.04-0.10	2.00	0.045	0.030	1.00max	19.0-22.0	24.0-26.0	0.75max	-	10xCmin 1.10max	-	-	-	-	-	-
TP310S	S31008	0.08	2.00	0.045	0.030	1.00max	19.0-22.0	24.0-26.0	0.75max	-	-	-	-	-	-	-	-
	S31272	0.08-0.12	2.00	0.030	0.015	0.3-0.7	14.0-16.0	14.0-16.0	1.0-1.4	0.3-0.6	-	-	-	-	-	0.004-0.008	-
TP316	S31600	0.08	2.00	0.045	0.030	1.00max	11.0-14.00	16.0-18.0	2.00-3.00	-	-	-	-	-	-	-	-
TP316H	S31609	0.04-0.10	2.00	0.045	0.030	1.00max	11.0-14.00	16.0-18.0	2.00-3.00	-	-	-	-	-	-	-	-
TP316L	S31603	0.035	2.00	0.045	0.030	1.00max	10.0-14.00	16.0-18.0	2.00-3.00	-	-	-	-	-	-	-	-
TP316N	S31651	0.08	2.00	0.045	0.030	1.00max	11.0-14.00	16.0-18.0	2.00-3.00	-	-	-	0.10-0.16	-	-	-	-
TP316LN	S31653	0.035	2.00	0.045	0.030	1.00max	11.0-14.0	16.0-18.0	2.00-3.00	-	-	-	0.10-0.16	-	-	-	-
TP317	S31700	0.08	2.00	0.045	0.030	1.00max	11.0-15.0	18.0-20.0	3.00-4.00	-	-	-	-	-	-	-	-
TP317L	S31703	0.035	2.00	0.045	0.030	1.00max	11.0-15.00	18.0-20.0	3.00-4.00	-	-	-	-	-	-	-	-
TP321	S32100	0.08	2.00	0.045	0.030	1.00max	9.00-12.00	17.0-19.0	-	-	-	-	-	-	-	-	-
TP321H	S32109	0.04-0.10	2.00	0.045	0.030	1.00max	9.00-12.00	17.0-19.0	-	-	4(C+N)min0.70max	-	-	-	-	-	-
TP347	S34700	0.08	2.00	0.045	0.030	1.00max	9.00-13.00	17.0-19.0	-	-	-	-	-	-	-	-	-
TP347H	S34709	0.04-0.10	2.00	0.045	0.030	1.00max	9.00-13.00	17.0-19.0	-	-	-	-	-	-	-	-	-
TP348	S34800	0.08	2.00	0.045	0.030	1.00max	9.00-13.00	17.0-19.0	-	-	-	0.10	-	-	-	-	-
TP348H	S34809	0.04-0.10	2.00	0.045	0.030	1.00max	9.00-13.00	17.0-19.0	-	-	-	0.10	-	-	-	-	-
TPXM-10	S21900	0.08	8.00-10.00	0.045	0.030	1.00max	5.50-7.50	19.0-21.5	-	-	-	-	0.15-0.40	-	-	-	-
TPXM-11	S21904	0.04	8.00-10.00	0.045	0.030	1.00max	5.50-7.50	19.0-21.5	-	-	-	-	0.15-0.40	-	-	-	-
TPXM-15	S38100	0.08	2.00	0.030	0.030	1.00max	15.0-2.50	17.5-18.5	17.0-19.0	-	-	-	-	-	-	-	-
TPXM-19	S20910	0.06	4.00-6.00	0.045	0.030	1.00max	11.5-13.5	20.5-23.5	1.50-3.00	-	0.10-0.30	-	0.20-0.40	0.10-0.30	-	-	-
TPXM-29	S24000	0.08	11.5-14.5	0.060	0.030	1.00max	2.30-3.70	17.0-19.0	-	-	-	-	0.20-0.40	-	-	-	-
	S31254	0.020	1.00	0.030	0.010	0.80max	17.5-18.5	19.5-20.5	6.00-6.50	-	-	-	0.18-0.22	-	0.50-0.10	-	-
	S30615	0.14-0.24	2.00	0.03	0.03	3.2-4.0	13.5-16.0	17.0-19.5	-	-	-	-	-	-	-	-	0.8-1.5
	S30815	0.05-0.10	0.80	0.040	0.030	1.40-2.00	10.0-12.0	20.0-22.0	-	-	-	0.14-0.20	-	0.03-0.08	-	-	-
	S31050	0.25	2.00	0.020	0.015	0.4	20.2-23.5	24.0-26.0	1.6-2.5	-	-	0.09-0.15	-	-	-	-	-
	S30600	0.018	2.00	0.02	0.02	3.7-4.3	14.0-15.5	17.0-18.5	0.20max	-	-	-	-	0.50max	-	-	-
	S31725	0.03	2.00	0.040	0.030	0.75	13.5-17.5	18.0-20.0	4.0-5.0	-	-	-	0.10	-	0.75max	-	-
	S31726	0.03	2.00	0.040	0.030	0.75	13.5-17.5	17.0-20.0	4.0-5.0	-	-	-	0.10-0.20	-	0.75max	-	-
	S32615	0.07	2.00	0.045	0.030	4.8-6.0	19.0-22.0	16.5-19.5	0.3-1.5	-	-	-	-	1.5-2.5	0.05-0.10	-	-
	S33228	0.04-0.08	1.0	0.020	0.015	0.30max	31.0-33.0	26.0-28.0	-	-	0.6-1.0	-	-	-	-	-	0.025max
	S24565	0.03	5.0-7.0	0.030	0.010	1.00max	16.0-18.0	23.0-25.0	4.0-5.0	-	0.1max	-	0.4-0.6	-	-	-	-
	S30415	0.04-0.06	0.80	0.045	0.030	1.00-2.00	9.00-10.0	18.0-19.0	-	-	-	-	0.12-0.18	-	0.03-0.08	-	-
	S32654	0.020	2.00-4.00	0.030	0.005	0.50max	21.0-23.0	24.0-25.0	7.00-8.00	-	-	-	0.45-0.55	-	0.30-0.05	-	-
904L	00028N29M4 SG	0.03	2.00	0.035	0.03	1.00	23.0-25.0	18.0-20.0	-	-	-	-	-	-	4.0-5.0	-	-

- A. 按照ASTM A312/A312M-14标准。
- B. 最大值，除非另有规定。
- C. 氮的分析方法应该需方与生产厂协商同意。
- D. 牌号TP316L、TP316N、TP316LN和TP316H的焊接钢管，其含镍量应在10.0-14.0%范围内。
- E. 需要多次拉拔的小直径或薄壁钢管或小直径薄壁钢管，其牌号TP304L和TP316L的含碳量必须不大于0.040%，小直径钢管外径小于0.500英寸(12.7毫米)的钢管，而薄壁钢管是指平均壁厚小于0.069英寸(1.20毫米)[最小壁厚0.044英寸(1.10毫米)]钢管。
- F. 钛含量应不小于含碳量的五倍，但不大于0.070%。
- G. 钛含量应该不小于含碳量的四倍，但不大于0.060%。
- H. 铌加钽含量应不小于含碳量的十倍，但不大于1.00%。
- I. 铌加钽含量应不小于含碳量的八倍，但不大于1.0%。
- J. 焊接钢管，其含碳量应不大于0.045%。

Common standards Inspection testing items 常用标检验测试项目

	化学成份	拉伸试验	洛氏硬度	压扁	扩口	水压①	超声	涡流	晶间腐蚀④	晶粒度	表面质量	尺寸
ASTM A312	●	●	○	●	○	●	○	○	○	○②	●	●
ASTM A312	●	●	●	●	●	●	○	○	○	○②	●	●
ASTM A269	●	○	●	○	●	●	○	○	○	○	●	●
ASTM A511	●	○	○	○	○	○	○	○	○	○	●	●
JIS G3459	●	●	○	●	○	●	○	○	○	○②	●	●
JIS G3463	●	●	○	●	●	●	○	○	○	○②	●	●
DIN 17456	●	●	○	○	○	●	○	○	○	○	●	●
DIN 17458	●	●	○	●	●	●	●③	●③	○	○	●	●
GB/T 14975-20	●	●	○	●	○	●	○	○	○	○	●	●
GB/T 14976-20	●	●	○	○	○	●	○	○	●	○	●	●
GB 13296-2007	●	●	●	●	●	●	●	●	●	○	●	●
GB 5310-2008	●	●	●	●	○	●	●	●	○	●	●	●
GB 9948-2006	●	●	○	●	●	●	●	●	○	○	●	●

- 必做项目
- 协议测试项目或补充要求
- ① 水压测试可用超声或涡流替代
- ② H级牌号应做晶粒度设计
- ③ 外径 ≤ 101.6mm, 壁厚 ≤ 5.6mm 的管子仅依订货协议
- ④ 船用管要求全做晶间腐蚀测试
- Mandatory
- Optional/Supplementary
- ① NDT can replace HT
- ② H grad requires grain size test
- ③ Pipes with OD ≤ 101.6mm, WT ≤ 5.6mm is subjected to agreement
- ④ Marine pipe requires I.C. test.

中国与部分国家不锈钢号近似对照表 Approximate contrast form of stainless steel grade number between China and parts of other countries

中国GB		日本	美国		德国		注册商标 Registered logo	钢号 Steel grade	规格 size	产品标准 Standard	TS证号 TS number	炉号 Heat number
新牌号 New steel No.	旧牌号 Old steel No.	JIS	AISI/ ASTM	UNS 代号	DIN17006	DIN17007						
06Cr19Ni10	0Cr18Ni9 0Cr18Ni9	SUS 304	304	S30400	X6CrNi18-10	1.4301	①	06Cr19Ni10	73X6	GB/T14976-2012 HEAT	TS271049A-2021	NO.181129A89
022Cr19Ni10	00Cr19Ni10	SUS 304L	304L	S30403	X2CrNi18-11	1.4308						
06Cr25Ni20	00Cr25Ni20	SUS310S	310S	S31008	X8CrNi25-21	1.4845	②	06Cr19Ni10	73X6	GB/T14976-2012 HEAT	TS271049A-2021	NO.181129A89
06Cr17Ni12Mo2	0Cr17Ni12Mo2	SUS316	316	S31600	X6CrNiMo17-12-2	1.4401						
07Cr17Ni12Mo2	1Cr17Ni12Mo2	-	316H	S31609	X3CrNiMo17-13-3	1.4436	③	06Cr19Ni10	73X6	GB/T14976-2012 HEAT	TS271049A-2021	NO.181129A89
022Cr17Ni12Mo2	00Cr17Ni14Mo2	SUS316L	316L	S31603	X2CrNiMo17-12-2	1.4404						
06Cr19Ni13Mo3	0Cr19Ni13Mo3	SUS317	317	S31700	-	-	④	06Cr19Ni10	73X6	GB/T14976-2012 HEAT	TS271049A-2021	NO.181129A89
022Cr19Ni13Mo3	00Cr19Ni13Mo3	SUS317L	317L	S31703	X2CrNiMo18-15-4	1.4438						
022Cr18Ni14Mo3	00Cr17Ni14Mo3	-	-	-	-	-	⑤	06Cr18Ni11Ti	73X6	GB/T14976-2012 HEAT	TS271049A-2021	NO.181129A89
06Cr18Ni11Ti	0Cr18Ni10Ti	SUS321	321	S32100	X6CrNiTi18-10	1.4541						
06Cr18Ni11Nb	0Cr18Ni11Nb	SUS347	347	S34700	X12CrNiNb18-10	1.4550						

理论重量
Theoretic weight

Cr-Ni奥氏体不锈钢 $W=0.02491t(D-t)$
Cr-Ni-Mo奥氏体不锈钢 $W=0.02507t(D-t)$
式中:W-第米理论重量(kg/m) t -壁厚(mm) D -外径(mm)
Cr-Ni austenitic stainless steel $W=0.02491t(D-t)$
Cr-Ni-Mo austenitic stainless steel $W=0.02507t(D-t)$
In the formula: W-Dimi theoretical weight (kg/m) t -wall thickness (mm)
 D -outside diameter (mm)Cr-Ni austenitic stainless steel $W=0.02491t(D-t)$
Cr-Ni-Mo austenitic stainless steel $W=0.02507t(D-t)$
In the formula: W-Dimi theoretical weight (kg/m) t -wall thickness (mm)
 D -outside diameter (mm)

New products 新产品

一、马氏体2Cr13 TP420

化学成分	力学性能
碳C: 0.16-0.25 磷P ≤ 0.035 硅Si: ≤ 1.00 铬Cr: 12.00-14.00 锰Mn: ≤ 1.00 镍Ni: 允许含有 ≤ 0.60 硫S: ≤ 0.030	抗拉强度σ _b (MPa) 淬火回火, ≥ 635 条件屈服强度σ _{0.2} (MPa): 淬火回火, ≥ 440 伸长率δ ₅ (%): 淬火回火, ≥ 20 断面收缩率ψ(100%): 淬火回火, ≥ 50 冲击功Ak _v (J): 淬火回火, ≥ 63 硬度: 退火, ≤ 229HB; 淬火回火, ≥ 192HRC

二、高温高镍合金钢如蒙乃尔Monel400、哈氏合金incoloy600系、800系等

1. 蒙乃尔Monel400

产品名称: 蒙乃尔400
产品特性: 在氟气盐酸、硫酸、氢氟酸以及它们的混合物中有极优秀的耐蚀性, 在海水中比铜基合金更具耐蚀性
产品用途: 硫酸设备、氢氟酸设备、耐海水设备、舰艇配件、化工、化学设备

产品介绍

以下为典型化学成份及机械性能(ASTM)参考

品名	化学成分(重量百分比) Chemical composition(WT%)								机械性能 Mechanical properties				
	镍(Ni)	碳(C)	锰(Mn)	铬(Cr)	硅(Si)	铁(Fe)	铜(Cu)	硫(S)	状态	温度(°C)	抗拉强度(Mpa)	不小于伸长率(%)	不小于硬度(HB)
Monel400	66.5 MAX	0.15 MAX	1.00 MAX	16.0 18.0	0.25 MAX	1.25 MAX	31.5 MAX	0.012 MAX	冷 拔 态	负79 负253	810 980	22 38	#

2. 哈氏合金800系

产品名称: NS111(Incoloy800)
产品特性: 抗氧化性介质腐蚀, 高温下抗渗碳性良好
产品用途: 热交换器及蒸汽发生器管、合成纤维的加热线、高温电子配件

产品名称: NS142(Incoloy825)
产品特性: 耐氧化物应力腐蚀及氧化-还原性复合介质腐蚀
产品用途: 热交换器及冷凝器, 含多种离子的硫酸环境、耐酸、耐冷, 耐热配件设备

产品介绍

以下为典型化学成份及机械性能(ASTM)参考

品名	化学成分(重量百分比) Chemical composition(WT%)											机械性能 Mechanical properties				
	C	Mn	Ni	Cr	Cu	Si	Mo	P	S	Ti	Fe	Al	抗拉强度	屈服强度	伸长率(%)	推荐的热处理温度/°C
800 NS111	0.10 MIN	1.50 MIN	30.00 35.00	19.00 23.00	0.75 MIN	1.00 MIN	-	0.030 MIN	0.15 MIN	0.15 0.60	余量	0.15 0.60	515 MIN	205 MIN	30 MIN	1000-1060
825 NS142	0.05 MIN	1.00 MIN	38.00 46.00	19.50 23.50	1.50 3.00	0.50 MIN	2.50 3.50	0.030 MIN	0.030 MIN	0.60 1.20	余量	0.20 MIN	590 MIN	240 MIN	30 MIN	1000-1050

备注: 可依客户要求, 同时可生产: GB/T1220-07, JIS G4303, EN 10088-05标准等

品质特性、尺寸公差及表面

尺寸(mm)	尺寸公差 (mm)					
	h8	h9	h10	h11	M2	M3
4.5 ≤ φ ≤ 6.0	0/-0.018	0/-0.030	0/-0.048	0/-0.075	0/-0.120	0/-0.180
6.0 < φ ≤ 10	0/-0.022	0/-0.036	0/-0.058	0/-0.090	0/-0.150	0/-0.220
10 < φ ≤ 18	0/-0.027	0/-0.043	0/-0.070	0/-0.110	0/-0.180	0/-0.270
18 < φ ≤ 30	0/-0.033	0/-0.052	0/-0.084	0/-0.130	0/-0.210	0/-0.330
30 < φ ≤ 50	0/-0.039	0/-0.062	0/-0.100	0/-0.160	0/-0.250	0/-0.390
50 < φ ≤ 80	0/-0.046	0/-0.074	0/-0.120	0/-0.190	0/-0.300	0/-0.460
80 < φ ≤ 101.6	0/-0.054	0/-0.087	0/-0.140	0/-0.220	0/-0.350	0/-0.540
101.6 < φ ≤ 120				0/-0.220	0/-0.350	0/-0.540
120 φ ≤				0/-0.250	0/-0.400	0/-0.630
表面状况	0.8级类无缺陷	1.6光亮	1.6光亮	3.2光亮	3.2光亮	6.4粗车面

Duplex stainless steel

双相不锈钢

双相不锈钢一般可分为低合金型、中合金型、高合金型和超级双相不锈钢四类。
Duplex stainless steel can be divided into four types: low alloy, medium alloy, high alloy and super duplex stainless steel

常用双相不锈钢牌号和各国牌号的近似值对照
Comparison of Approximate Values of Common Duplex Stainless Steel Grades and Grades of Different Countries

型号/国家 Type/Country	中国 China	美国 USA	瑞典 Swdden	德国 Germany	法国 France	日本 Japan
低合金型 low alloy	00Cr23Ni4N	UNS S32304	S32327(SAF2304)	W.Nr.1.4362	UR35N	DP11
中合金型 Medium alloy	00Cr18Ni5Mo3Si2 00Cr22Ni5Mo3N	UNS S31500 UNS S31803	S32376(3RE60) S32377(SAF2205)	W.Nr.1.4417 W.Nr.1.4462	UR45N	DP1 DP8
高合金型 High alloy	0Cr25Ni5Mo2 00Cr25Ni7Mo3W2CuN	UNS S32900 UNS S31260	S32324(10RE51)	W.Nr.1.4460 W.Nr.1.4501		329J1 329J2L
超级双相钢 Super duplex stainless steel	00Cr25Ni7Mo4N 00Cr25Ni6Mo3CuN	UNS S32750 UNS S32550	S32328(SAF2507)	W.Nr.1.4410 W.Nr.1.4507	UR47N+ UR52N+	

本公司双相不锈钢产品采用的相关标准
Related standard of stainless steel products adopted by our company

无缝和焊接管 Seamless and welded tubes	标准 Standard
双相不锈钢 Duplex stainless steel	ASTMA789 ASTMA790 ASTMA450 ASTMA999

常用双相不锈钢的性能 Performance of common duplex stainless steel

1、化学成分(%) Chemical components(%)

钢号 Grade	C ≤	Mn ≤	Si ≤	S ≤	P ≤	Cr ≤	Ni	Mo	Cu ≤	N
S32750(SAF2507) 00Cr25Ni7Mo4N	0.03	1.20	0.80	0.020	0.035	24.0/26.0	6.0/8.0	3.0/5.0	0.50	0.24/0.32
S31803(SAF2205) 00Cr22Ni5Mo3N	0.03	2.00	1.0	0.020	0.030	21.0/23.0	4.50/6.50	2.50/3.50		0.08/0.20
S31500(3RE60) 00Cr18Ni5Mo3Si2	0.03	1.2/2.00	1.4/2.00	0.030	0.030	18.0/19.0	4.25/5.25	2.50/3.00		0.05/0.10

2、机械性能 Mechanical performance

钢号 Grade	项目 Item	热处理制度(°C) Heat treatment system(°C)	a b(Mpa) ≥	as(Mpa) ≥	R ≥	硬度 ≤ Hardness S	
						布氏 Brinell	洛氏 Rockwell
S32750(SAF2507) 00Cr25Ni7Mo4N		1025-1125 水淬	800	550	15	310	32
S31803(SAF2205) 00Cr22Ni5Mo3N		1120-1100 水淬	620	450	25	290	30.5
S31500(3RE60) 00Cr18Ni5Mo3Si2		980-1040 水淬	630	440	30	290	30.5

Chinese and foreign stainless steel, Heat-resistant steel table

中外不锈钢、耐热钢钢号对照表

标准 牌号	GB		ASTM/ASME		JIS	EN
	新牌号	旧牌号	AISI	UNS		
奥氏体不锈钢 Austenitic Stainless steel	06Cr19Ni10	0Cr18Ni9	TP304	S30400	SUS304	X5CrNi18-10 1.4301
	022Cr19Ni10	00Cr19Ni10	TP304L	S30403	SUS304L	X2CrNi19-11 1.4306
	07Cr19Ni10		TP304H	S30409	SUS304H	X6CrNi18-10 1.4948
	10Cr18Ni9NbCu38N			S30432		
	06Cr25Ni20	0Cr25Ni20	TP310S	S31008	SUS310S	X12CrNi23-12 1.4845
	07Cr25Ni21NbN		TP310HCBN	S31042		
	06Cr17Ni12Mo2	0Cr17Ni12Mo2	TP316	S31600	SUS316	X5CrNiMo17-12-2 1.4401
	022Cr17Ni12Mo2	00Cr17Ni14Mo2	TP316L	S31603	SUS316L	X2CrNiMo17-12-2 1.4404
	07Cr17Ni12Mo2	1Cr17Ni12Mo2	TP316H	S31609		X3CrNiMo17-13-2 1.4436
	06Cr17Ni12Mo3Ti	0Cr18Ni12Mo3Ti	TP316Ti	S31635	SUS316T	X6CrNiMo17-12-2 1.4571
	06Cr18Ni11Ti	0Cr18Ni10Ti	TP321	S32100	SUS321	X6CrNiTi18-10 1.4541
	07Cr19Ni11Ti	1Cr18Ni11Ti	TP321H	S32109	SUS321H	X6CrNiTi18-10 1.4541
	06Cr18Ni11Nb	0Cr18Ni11Nb	TP347	S34700	SUS347	X6CrNiTi18-10 1.4550
	07Cr18Ni11Nb	1Cr19Ni11Nb	TP347H	S34709	SUS347H	X7CrNiNb18-10 1.4912
	08Cr18Ni11NbFG		TP347HFG	S34710		
	双相不锈钢 Duplex Stainless steel	16Cr20Ni14Si2	1Cr20Ni14Si2			
		00Cr14Ni14Si4				
		00Cr25Ni6Mo3N		S32900	SUS329J1L	
022Cr22Ni5Mo3N				S31803	SUS329J3L	X2CrNiMoN22-5-3 1.4462
022Cr23Ni5Mo3N				S32205.2205		
合金 Alloy	022Cr25Ni7Mo4N			S32750.2507		X2CrNiMoN25-7-4 1.4410
	022Cr19Ni5Mo3Si2N	00Cr18Ni5Mo3Si2		S31500	(3RE60)	
		10Cr9Mo1VNb	T91/P91	K90901	(HCM95)	X10CrMoVNb9-1
	10Cr9MoW2VNbBN	T92/P92	K92460	(NF616)	X10CrMoVNb9-2	

Boiler heat exchanger Stainless steel tubes

锅炉热交换器不锈钢管

Scope:Boiler Heating tubes. Chemical Industrial Process Tubes. Petro-Chemical Process Tubes.

O.D. (mm)	W.T (mm)																
	1.2	1.6	2.0	2.3	2.6	2.9	3.2	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	8.0	9.5
15.9	0.439	0.570	0.692	0.779	0.861	0.939											
19.0	0.532	0.693	0.847	0.957	1.06	1.16											
21.7	0.613	0.801	0.981	1.11	1.24	1.36	1.47										
25.4	0.723	0.949	1.17	1.32	1.48	1.63	1.77	1.91									
27.2	0.777	1.02	1.26	1.43	1.59	1.76	1.91	2.07	2.31								
31.8	0.915	1.20	1.48	1.69	1.89	2.09	2.28	2.47	2.77	3.06							
34.0		1.29	1.59	1.82	2.03	2.45	2.46	2.66	2.99	3.31	3.61						
38.1		1.45	1.80	2.05	2.30	2.54	2.78	3.02	3.40	3.77	4.12	4.47					
42.7			2.03	2.31	2.60	2.88	3.15	3.42	3.86	4.28	4.70	5.10	5.49				
45.0			2.14	2.45	2.75	3.04	3.33	3.62	4.09	4.54	4.98	5.41	5.83	6.23			
48.6			2.32	2.65	2.98	3.30	3.62	3.93	4.44	4.94	5.43	5.90	6.37	6.82	7.25		
50.8			2.43	2.78	3.12	3.46	3.79	4.12	4.66	5.19	5.70	6.21	6.70	7.17	7.64	8.53	9.77
54.0			2.59	2.96	3.33	3.69	4.05	4.40	4.98	5.55	6.10	6.64	7.17	7.69	8.20	9.17	10.5
57.1			2.75	3.14	3.53	3.92	4.30	4.67	5.29	5.90	6.49	7.07	7.46	8.19	8.74	9.78	11.3
60.3			2.90	3.32	3.74	4.15	4.55	4.95	5.61	6.25	6.89	7.51	8.12	8.71	9.29	10.4	12.0
63.5				3.51	3.94	4.38	4.81	5.23	5.93	6.61	7.29	7.95	8.59	8.23	9.85	11.1	12.8
65.0				3.59	4.04	4.49	4.93	5.36	6.08	6.78	7.47	8.15	8.82	9.47	10.1	11.4	13.1
70.0				3.88	4.37	4.85	5.32	5.80	6.58	7.34	8.10	8.84	9.57	10.3	11.0	12.4	14.3
76.2				4.23	4.77	5.30	5.82	6.34	7.19	8.04	8.87	9.69	10.5	11.3	12.1	13.6	15.8
82.6							6.33	6.90	7.83	8.75	9.67	10.6	11.4	12.3	13.2	14.9	17.3
88.9							6.83	7.45	8.46	9.46	10.4	11.4	12.4	13.3	14.3	16.1	18.8
101.6								8.55	9.72	10.9	12.0	13.2	14.3	15.4	16.5	18.7	21.8
114.3									11.0	12.3	13.6	14.9	16.2	17.5	18.7	21.2	24.8
127.0									12.3	13.7	15.2	16.6	18.1	19.5	20.9	23.7	27.8
139.8											18.4	20.0	21.6	23.2	26.3	30.8	

Pipe-matching Stainless steel tube

配管用不锈钢管

Scope:Boiler heating tubes, chemical industrial process tubes. petro-chemical process tubes.

JISG 3459 Unit:kg/m

Nominal diameter		O.D. (mm)	Nominal wall thickness														
			SCH 5S		SCH 10S		SCH 20S		SCH 40S		SCH 80S						
			W.T (mm)	Weight(kg/m) TYPE	W.T (mm)	Weight(kg/m) TYPE	W.T (mm)	Weight(kg/m) TYPE	W.T (mm)	Weight(kg/m) TYPE	W.T (mm)	Weight(kg/m) TYPE					
A	B		304 304L	316 316L		304 304L	316 316L		304 304L	316 316L		304 304L	316 316L		304 304L	316 316L	
6	1/8	10.5	1.0	0.237	0.238	1.2	0.278	0.280	1.5	0.336	0.338	1.7	0.373	0.375	2.4	0.484	0.487
8	1/4	13.8	1.2	0.377	0.379	1.65	0.499	0.503	2.0	0.588	0.592	2.2	0.636	0.640	3.0	0.807	0.812
10	3/8	17.3	1.2	0.481	0.484	1.65	0.643	0.647	2.0	0.762	0.767	2.3	0.859	0.865	3.2	1.12	1.13
15	1/2	21.7	1.65	0.824	0.829	2.1	1.03	1.03	2.5	1.20	1.20	2.7	1.32	1.33	3.7	1.66	1.67
20	3/4	27.2	1.65	1.05	1.06	2.1	1.31	0.32	2.5	1.54	1.55	2.9	1.76	1.77	3.9	2.26	2.28
25	1	34.0	1.65	1.33	1.34	2.8	2.18	2.19	3.0	2.32	2.33	3.4	2.59	2.61	4.5	3.31	3.33
32	1 1/4	42.7	1.65	1.69	1.40	2.8	2.78	2.80	3.0	2.97	2.99	3.6	3.51	3.53	4.9	4.61	4.64
40	1 1/2	48.6	1.65	1.93	1.61	2.8	3.19	3.21	3.0	3.41	3.43	3	4.14	4.16	5.1	5.53	5.56
50	2	60.5	1.65	2.42	2.43	2.8	4.02	4.05	3.5	4.97	5.00	3.9	5.50	5.53	5.5	7.54	7.58
65	2 1/2	76.3	2.1	3.88	3.91	3.0	5.48	5.51	3.5	6.35	6.39	5.2	9.21	9.26	7.0	12.1	12.2
80	3	89.1	2.1	4.55	4.58	3.0	6.43	6.48	4.0	8.38	8.53	5.5	11.5	11.5	7.6	15.4	15.5
90	3 1/2	101.6	2.1	5.20	5.24	3.0	7.37	7.42	4.0	9.72	7.79	2.7	13.6	13.7	8.1	18.9	19.0
100	4	114.3	2.1	5.87	5.91	3.0	8.32	8.37	4.0	11.0	11.1	6.0	16.2	16.3	8.6	22.6	22.8
125	5	139.8	2.8	9.56	9.62	3.4	11.6	11.6	5.0	16.8	16.9	6.6	21.9	22.0	9.5	30.8	31.0
150	6	165.2	2.8	11.3	11.4	3.4	13.7	13.8	5.0	20.0	20.1	7.1	28.0	28.1	11.0	42.3	42.5
200	8	216.3	2.8	14.9	15.0	4.0	21.2	21.3	6.5	34.0	34.2	8.2	42.5	42.8	12.7	64.4	64.8
250	10	267.4	3.4	22.4	22.5	4.0	26.2	26.4	6.5	42.2	42.5	9.3	59.8	60.2	15.1	94.9	95.5
300	12	318.5	4.0	31.3	31.5	4.5	35.2	35.4	6.5	50.5	50.8	10.3	79.1	79.6	17.4	131	131
350	14	355.6										11.1	95.3	95.9	19.0	159	160
400	16	406.4										12.7	125	125	21.4	205	207
450	18	457.2										14.3	158	159	23.8	257	259
500	20	508.0										15.1	185	187	26.2	314	316
550	22	558.8										15.9	215	216	28.6	378	380
600	24	609.6										17.5	258	260	31.0	447	450
650	26	660.4										18.9	30	304	34.0	531	534

Austenitic stainless steel Seamless and welded steel tube

奥氏体不锈钢无缝和焊接钢管

Scope:Boiler heating tubes, chemical industrial process tubes. petro-chemical process tubes.

A312/A312M-04

NPS designator	outside diameter		Nominal wall thickness							
			Schedule 5SA		Schedule 10SA		Schedule 40S		Schedule 80S	
			in	mm	in	mm	in	mm	in	mm
1/8	0.405	10.29	-	-	0.049	1.24	0.068	1.73	0.095	2.41
1/4	0.540	13.72	-	-	0.065	1.65	0.88	2.24	0.119	3.02
3/8	0.675	17.15	-	-	0.065	1.65	0.091	2.31	0.126	3.20
1/2	0.840	21.34	0.065	1.65	0.083	2.11	0.109	2.77	0.147	3.73
3/4	1.050	26.67	0.065	1.65	0.083	2.11	0.113	2.87	0.154	3.91
1.0	1.315	33.40	0.065	1.65	0.109	2.77	0.133	3.38	0.179	4.55
1 1/4	1.660	42.16	0.065	1.65	0.109	2.77	0.140	3.56	0.191	4.85
1 1/2	1.900	48.26	0.065	1.65	0.109	2.77	0.145	3.68	0.200	5.08
2	2.375	60.33	0.065	1.65	0.109	2.77	0.154	3.91	0.218	5.54
2 1/2	2.875	73.03	0.083	2.11	0.120	3.05	0.203	5.16	0.276	7.01
3	3.500	88.90	0.083	2.11	0.120	3.05	0.216	5.49	0.300	7.62
3 1/2	4.000	101.60	0.083	2.11	0.120	3.05	0.226	5.74	0.318	8.08
4	4.500	114.30	0.083	2.11	0.120	3.05	0.237	6.02	0.337	8.56
5	5.563	141.30	0.109	2.77	0.134	3.40	0.258	6.55	0.375	9.52
6	6.625	168.28	0.109	2.77	0.134	3.40	0.280	7.11	0.432	10.97
8	8.625	219.09	0.109	2.77	0.148	3.76	0.322	8.18	0.500	12.70
10	10.750	273.05	0.134	3.40	0.165	4.19	0.365	9.27	0.500	12.70
12	12.750	323.85	0.156	3.96	0.180	4.57	0.375	9.53	0.500	12.70
14	14.000	355.60	0.156	3.96	0.188	4.78				
16	16.000	406.40	0.165	4.19	0.188	4.78				
18	18.000	457.20	0.165	4.19	0.188	4.78				
20	20.000	508.00	0.188	4.78	0.218	5.54				
22	22.000	558.80	0.188	4.78	0.218	5.54				
24	24.000	609.60	0.218	5.54	0.250	6.35				
30	30.000	762.00	0.250	6.35	0.312	7.92				

A schedules 5S and 10S wall thicknesses do not permit threading in accordance with the American National Standard for Pipe Threads(ANSI B1.20.1).
 B These do not conform to the American National Standard for Welded and Seamless Wrought Steel Pipe(ANSI B36.10-1979).

Domestic and international Dimension deviation comparison

国内国际尺寸偏差对照

标准 (SPECIFICATION)	尺寸 (SIZE)	PERMISSIBLE VARIATION 外径 允许偏差		SIZE 尺寸	PERMISSIBLE VARIATION 厚度 允许偏差		SIZE 尺寸	PERMISSIBLE VARIATION 长度 允许偏差		
		普通	高					L1	L2	L3
GB/T14975-2012	[10-30]	+0.30/-0.30	±0.20	S ≤ 3	(+/-)14%	±12.5%S		L1	0-20	
	[30-50]	+0.40/-0.40	±0.30	S > 3	(12%/-10%)	-10		L2	0-10	
	[D > 50]	(+/-)0.9%D	±0.8%D			±10%S		L3	0-5	
GB/T14976-2012	[6-10]	+0.20/-0.20	±0.15	≤ 3	±12%S	±10%S		L1	0-20	
	[10-30]	+0.30/-0.30	±0.20	(1.0.3)				L2	0-10	
	[30-50]	+0.40/-0.40	±0.30	S > 3	(12.5%/-10%)S	±10.5S		L3	0-5	
GB13296-2007	[6-30]	+0.15/-0.20		D ≤ 38	+20% 0					
	[> 30-50]	±0.30		D > 38	+22% 0			0-10		
	[> 50]	±0.75%D								
ASTM/A213	[D < 25.4]	+0.10/-0.10		D ≤ 38.1	+20%/-0				+3/-0	
	[25.4-38.1]	+0.15/-0.15								
	[38.1-50.8]	+0.20/-0.20								
	[50.8-63.5]	+0.25/-0.25		D > 38.1	+22%/-0		D > 50.8	+5/-0		
	[63.5-76.2]	+0.30/-0.30								
	[76.2-101.6]	+0.38/-0.38								
[101.6-190.5]	+0.38/-0.64									
[190.5-228.6]	+0.38/-1.14									
ASTM/A269	[D < 12.7]	+0.13/-0.13			(+/-)15%		D > 50.8		+3.2/-0	
	[12.7-38.1]	+0.25/-0.25								
	[38.1-88.9]	+0.38/-0.38								
	[88.9-139.7]	+0.76/-0.76								
ASTM/A312	[10.29-49.26]	+0.40/-0.80			+20%t-12.5%t			+6/-0		
	[48.26-73.03]	+0.80/-0.80								
	[73.03-88.9]	+0.80/-0.80								
	[88.9-114.3]	+0.80/-0.80								
	[114.3-219.06]	+1.6/-0.80								
	[219.08-457.2]	+2.4/-0.80								
	+3.2/-0.80									
	+4.0/-0.80									
JISG3459	[D < 30]	+0.30/-0.30		S < 2	(+/-)20					
	[D ≥ 30]	+1%/-1%		S ≥ 2	(+/-)10%					

Domestic and international Dimension deviation comparison

国内国际尺寸偏差对照

标准 (SPECIFICATION)	尺寸 (SIZE)	SIZE 尺寸	PERMISSIBLE VARIATION 外径 允许偏差	SIZE 尺寸	PERMISSIBLE VARIATION 厚度 允许偏差	SIZE 尺寸	PERMISSIBLE VARIATION 长度 允许偏差	
JISG 3463	[D < 40]					D ≤ 50 L ≤ 7	+7/-0	
	[40,50]		+0.25/-0.25	D < 40 S < 2	+0.40/0	D < 50 L > 7	长度每增加3m或其零数在上面的正允许偏差加上3mm 最大15mm	
	[50,60]							
	[60,80]		+0.30/-0.30					
		[80,100]		+0.40/-0.40				
		[100,120]		+0.40/-0.60			D > 50 L ≤ 7	+10/-0
		[120,160]		+0.40/C.80			D > 50 L > 7	与D < 50 L ≥ 7m 内容相同
		[160,200]		+0.40/1.20	D > 40	+22%/0		
		[D ≥ 200]		+0.40/-1.60				
DIN 17456 DIN 17458	D2		(+/-)1.0% (+/-)0.5min	T3	(+/-)10% 0.2min	D ≤ 40 L 1m	+1/-0	
	D3		(+/-)0.75% (+/-)0.3min	T4	(+/-)7.5% 0.15min	D ≤ 40 L [1-2]m	+2/-0	
			D ≤ 40 L [2-3]m			+3/-0		
			D ≤ 40 L [3-4]m			+4/-0		
	D4		(+/-)0.5% (+/-)0.1min			D ≤ 40 L [4-8]m	+5/-0	
						40 < D < 168		
						L ≤ 6m	+5/-0	
						L > 6m	+10/-0	
ASTM/A511 TABLE4	[D < 12.7]		+0.13/-0.13		(+/-)15%		+3.2/-0	
	[12.7,38.1]							
	[38.1,88.9]		+0.25/-0.25					
	[88.9,139.7]		+38/-0.38			(+/-)10%	+4.8/-0	
	[139.7,203.2]		+0.76/-0.76					
	[203.2,219.8]		+1.14/-1.14					
	[219.8,323.85]		+1.57/-1.57					
ASTM/A511 TABLE4	[D ≤ 76.2]		+0.56/+0.58	S ≤ 277	(+/-)16.5%			
				277 < S ≤ 437	(+/-)15%			
				437 < S ≤ 516	(+/-)14%			
				S > 516	(+/-)12.5%			
				S ≤ 277	(+/-)16.5%			
				277 < S ≤ 437	(+/-)15%		+4.76/-0	
				437 < S ≤ 516	(+/-)14%			
				S > 516	(+/-)12.5%			
				437 < S ≤ 516	(+/-)14%			
				S > 516	(+/-)12.5%			
	[139.7 203.2]		+1.19/-1.19					

American standard size

美标尺寸

Nominal diameter in inches	External diameter in millimeters	ANSI B36.19 Nominal thickness and weight/mt								ANSI B36.10 Nominal thickness and weight/mt							
		5S		10S		Sches.40S		Sches.80S		10		20		30		Standard	
		mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m
1/8	10.29	-	-	1.24	0.281	1.73	0.371	2.41	0.467	-	-	-	-	-	-	1.73	0.371
1/4	13.72	-	-	1.65	0.499	2.24	0.644	3.02	0.809	-	-	-	-	-	-	2.24	0.644
3/8	17.15	-	-	1.65	0.64	2.31	0.858	3.2	1.118	-	-	-	-	-	-	2.31	0.858
1/2	21.34	1.65	0.814	2.11	1.016	2.77	1.26	3.73	1.62	-	-	-	-	-	-	2.77	1.26
3/4	26.67	1.65	1.034	2.11	1.298	2.87	1.68	3.91	2.19	-	-	-	-	-	-	2.87	1.68
1	33.4	1.65	1.312	2.77	2.125	3.38	2.50	4.55	3.23	-	-	-	-	-	-	3.38	2.5
1 1/4	42.16	1.65	1.674	2.77	2.732	3.56	3.38	4.85	4.46	-	-	-	-	-	-	3.56	3.38
1 1/2	48.26	1.65	1.926	2.77	3.155	3.68	4.05	5.08	5.4	-	-	-	-	-	-	3.68	4.05
2	60.33	1.65	2.424	2.77	3.992	3.91	5.43	5.54	7.47	-	-	-	-	-	-	3.91	5.43
2 1/2	70.03	2.11	3.747	3.05	5.345	5.16	8.62	7.01	11.4	-	-	-	-	-	-	5.16	8.62
3	88.9	2.11	4.585	3.05	6.557	5.49	11.28	7.62	15.25	-	-	-	-	-	-	5.49	11.28
3 1/2	101.6	2.11	5.272	3.05	7.526	5.74	13.56	8.08	18.62	-	-	-	-	-	-	5.74	13.56
4	114.3	2.11	5.945	3.05	8.496	6.02	16.06	8.56	22.29	-	-	-	-	-	-	6.02	16.06
5	141.3	2.77	9.639	3.4	11.740	6.55	21.76	9.52	30.92	-	-	-	-	-	-	6.55	21.76
6	168.28	2.77	11.514	3.4	14.037	7.11	28.23	10.97	42.52	-	-	-	-	-	-	7.11	28.23
8	219.08	2.77	15.049	3.76	20.334	8.18	42.49	12.7	64.57	-	-	6.35	33.28	7.04	36.8	8.18	42.4
10	273.05	3.40	23.028	4.19	28.290	9.27	60.24	12.7	81.46	-	-	6.35	41.7	7.8	51	9.27	60.24
12	323.85	3.96	31.806	4.57	36.633	9.52	73.76	12.7	97.36	-	-	6.35	49.68	8.38	65.14	9.52	73.76
14	355.6	3.98	34.99	4.78	42.102	-	-	-	-	6.35	54.63	7.92	67.98	9.52	81.21	9.52	81.21
16	406.4	4.19	42.35	4.78	48.22	-	-	-	-	6.35	62.58	7.92	77.90	9.52	93.13	9.52	93.18
18	457.2	4.19	47.7	4.78	54.300	-	-	-	-	6.35	70.5	7.92	87.80	11.13	122.12	9.52	105.05
20	508	4.77	60.32	5.53	69.766	-	-	-	-	6.35	78.47	9.52	116.97	12.7	155.66	9.52	116.97
22	558.8	4.77	-	5.53	-	-	-	-	-	6.35	86.42	9.52	128.89	2.7	170.86	9.52	128.89
24	609.6	5.54	84.10	6.35	96.215	-	-	-	-	6.35	96.215	9.52	140.8	14.7	209.54	9.52	140.81
26	660.4	-	-	-	-	-	-	-	-	7.92	127.58	12.7	202.65	-	-	9.52	152.73
28	711.6	-	-	-	-	-	-	-	-	7.92	137.52	12.7	218.54	15.88	271.94	9.52	164.65
30	762	6.35	120.59	7.92	147.45	-	-	-	-	7.92	147.45	12.7	234.44	15.88	291.94	9.52	176.57
32	812.8	-	-	-	-	-	-	-	-	7.92	157.39	12.7	250.33	15.88	311.67	9.52	188.50
34	863.6	-	-	-	-	-	-	-	-	7.92	167.32	12.7	266.22	15.88	331.54	9.52	200.42
36	914.4	-	-	-	-	-	-	-	-	7.92	177.26	12.7	282.18	15.88	351.41	9.52	212.34

American standard size 美标尺寸

Nominal diameter in inches	External diameter in millimeters	ANSI B36.10 Nominal thickness and weight																	
		40		60		Extra Strang		80		100		120		140		160		XXS	
		mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m	mm	kg/m
1/8	10.29	1.73	0.371	-	-	2.41	0.476	2.41	0.467	-	-	-	-	-	-	-	-	-	-
1/4	13.72	2.24	0.644	-	-	3.02	0.809	3.02	0.809	-	-	-	-	-	-	-	-	-	-
3/8	17.15	2.31	0.858	-	-	3.20	1.118	3.20	1.118	-	-	-	-	-	-	-	-	-	-
1/2	21.34	2.77	1.26	-	-	3.73	1.62	3.73	1.62	-	-	-	-	-	-	4.78	1.95	7.47	2.54
3/4	26.67	2.07	1.68	-	-	3.91	2.19	3.91	2.19	-	-	-	-	-	-	5.56	2.89	7.82	3.63
1	33.4	3.37	2.50	-	-	4.55	3.23	4.55	3.23	-	-	-	-	-	-	6.35	4.23	9.09	5.45
1-1/4	42.16	3.56	3.58	-	-	4.85	4.46	4.85	4.46	-	-	-	-	-	-	6.35	5.60	9.70	7.75
1-1/2	48.26	3.68	4.05	-	-	5.08	5.40	5.08	5.4	-	-	-	-	-	-	7.14	7.23	10.16	9.54
2	60.33	3.91	5.43	-	-	5.54	7.47	5.54	7.47	-	-	-	-	-	-	8.74	11.10	11.07	13.44
2-1/2	73.03	5.16	8.02	-	-	7.01	11.40	7.01	11.4	-	-	-	-	-	-	9.52	14.90	14.02	20.39
3	88.9	5.49	11.28	-	-	7.62	15.25	7.62	15.25	-	-	-	-	-	-	11.13	21.30	15.24	27.65
3-1/2	101.6	5.74	13.56	-	-	8.08	19.62	8.08	18.62	-	-	-	-	-	-	-	-	-	-
4	114.3	6.02	16.06	-	-	8.56	22.29	8.56	22.29	-	-	11.13	28.25	-	-	13.50	33.50	17.12	40.99
5	141.3	6.55	21.76	-	-	9.52	30.92	9.52	30.92	-	-	12.70	40.20	-	-	15.90	49.00	19.05	57.37
6	168.28	7.11	28.23	-	-	10.97	42.52	10.97	42.52	-	-	14.30	54.20	-	-	18.20	67.40	21.95	79.11
8	219.08	8.18	42.49	10.30	53.00	12.7	64.57	12.7	64.57	15.10	75.70	16.20	90.20	20.60	100.80	23.00	111.20	22.22	107.76
10	273.05	9.27	60.24	12.70	81.46	12.7	81.46	15.09	95.84	18.26	114.59	21.44	132.85	25.40	154.97	28.58	172.11	-	-
12	323.85	10.31	79.71	14.27	108.97	12.7	97.36	17.48	131.81	21.44	159.67	25.40	186.70	28.58	207.87	33.32	238.60	-	-
14	355.6	11.13	94.31	15.09	126.51	12.7	107.28	19.05	157.90	23.83	194.64	27.79	224.36	31.75	253.32	35.71	281.49	-	-
16	406.4	12.70	123.81	16.66	160.04	12.7	123.18	21.44	203.26	26.19	245.34	30.96	286.33	36.53	332.72	40.49	364.94	-	-
18	457.2	14.27	155.920	19.05	205.60	12.7	139.07	23.83	254.24	29.36	309.55	34.92	363.33	39.67	408.21	45.24	459.18	-	-
20	508	15.09	183.14	20.62	247.79	12.7	154.97	26.19	310.91	32.54	381.20	38.10	441.06	44.45	507.63	50.01	564.24	-	-
22	558.8	15.87	213.80	22.22	293.80	12.7	170.86	28.57	373.27	34.92	450.75	41.27	526.24	47.52	599.76	53.79	671.26	-	-
24	609.6	17.48	254.71	24.61	354.82	12.7	186.75	30.98	441.30	38.89	546.84	46.02	639.18	52.37	719.19	59.54	800.71	-	-
26	660.4	-	-	-	-	12.7	202.65	-	-	-	-	-	-	-	-	-	-	-	-
28	711.6	-	-	-	-	12.7	218.54	-	-	-	-	-	-	-	-	-	-	-	-
30	762	-	-	-	-	12.7	234.44	-	-	-	-	-	-	-	-	-	-	-	-
32	812.8	17.48	242.17	-	-	12.7	250.33	-	-	-	-	-	-	-	-	-	-	-	-
34	863.6	17.18	364.01	-	-	12.7	256.22	-	-	-	-	-	-	-	-	-	-	-	-
36	914.4	19.05	420.20	-	-	12.7	282.12	-	-	-	-	-	-	-	-	-	-	-	-

Japanese standard size 日标尺寸

A	B	外径 mm	呼び厚さ											
			スケツェールSS		スケツェールSS		スケツェールSS		スケツェールSS					
			厚さ	単位質量kg/m 種類	厚さ	単位質量kg/m 種類	厚さ	単位質量kg/m 種類	厚さ	単位質量kg/m 種類				
6	1/8"	10.5	1	0.237	0.238	1.2	0.278	0.28	1.5	0.336	0.338	1.7	1.7	0.375
8	1/1"	13.8	1.2	0.377	0.377	1.65	0.499	0.503	2	0.588	0.592	2.2	2.2	0.64
10	3/8"	17.3	1.2	0.481	0.481	1.65	0.643	0.647	2	0.762	0.767	2.3	2.3	0.863
15	1/2"	21.7	1.65	0.824	0.824	2.1	1.03	1.03	2.5	1.2	1.2	2.8	2.8	1.33
20	3/4"	27.2	1.65	1.05	1.05	2.1	1.31	1.32	2.5	1.54	1.55	2.9	2.9	1.77
25	1"	34	1.65	1.33	1.33	2.8	2.18	2.19	3	2.32	2.33	3.4	3.4	2.61
32	1 1/1"	42.7	1.65	1.69	1.69	2.8	2.78	2.8	3	2.97	2.99	3.6	3.6	3.53
40	1 1/2"	48.6	1.65	1.93	1.93	2.8	3.19	3.21	3	3.41	3.43	3.7	3.7	4.16
50	2"	60.5	1.65	2.42	2.42	2.8	4.02	4.05	3.5	4.97	5	3.9	3.9	5.53
65	2 1/2"	76.3	2.1	3.88	3.88	3	5.48	5.51	4	6.35	6.39	5.2	5.2	9.27
80	3"	89.1	2.1	4.55	4.55	3	6.43	6.48	4	8.48	8.53	5.5	5.5	11.5
90	3 1/2"	101.6	2.1	5.20	5.2	3	7.37	7.42	4	9.72	9.79	5.7	5.7	13.7
100	4"	114.3	2.1	5.87	5.87	3	8.32	8.37	5	11	11.1	6	6	16.3
125	5"	139.8	2.8	9.56	9.56	3.4	11.6	11.6	5	16.8	16.9	6.6	6.6	22.0
150	6"	165.2	2.8	11.3	11.3	3.4	13.7	13.8	6.5	20	20.1	7.1	7.1	28.1
200	8"	216.3	2.8	14.9	14.9	4	21.2	21.3	6.5	34	34.2	8.2	8.2	42.8
250	10"	267.4	3.4	22.4	22.4	4h	26.2	26.4	6.5	42.2	42.5	9.3	9.3	60.2
300	12"	318.5	4	31.3	31.3	4.5	35.2	35.4	-	50.5	50.8	10.3	10.3	79.6
350	14"	355.6	-	-	-	-	-	-	-	-	-	11.1	11.1	95.9
400	16"	406.4	-	-	-	-	-	-	-	-	-	12.7	12.7	125
450	18"	457.2	-	-	-	-	-	-	-	-	-	14.3	14.3	159
500	20"	508	-	-	-	-	-	-	-	-	-	15.1	15.1	187
550	22"	558.8	-	-	-	-	-	-	-	-	-	15.9	15.9	216
600	24"	609.6	-	-	-	-	-	-	-	-	-	17.5	17.5	260
650	26"	660.4	-	-	-	-	-	-	-	-	-	18.9	18.9	304

Japanese standard size 日标尺寸

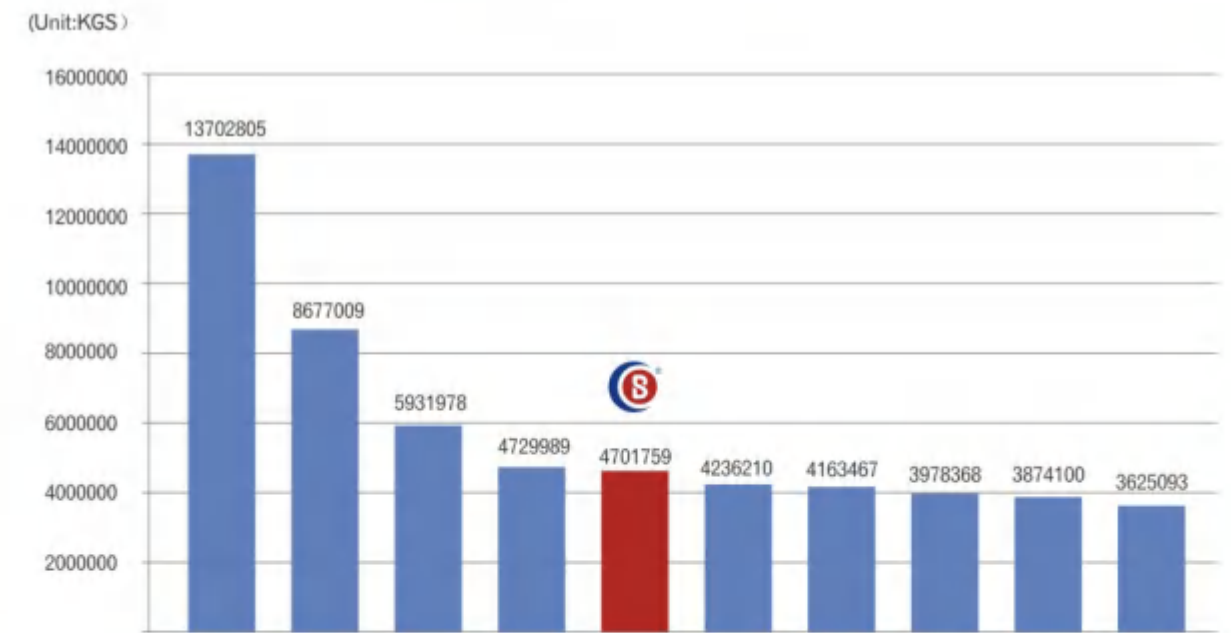
呼び径		外径 mm	呼び厚さ								
A	B		スケツェール5S			スケツェール5S			スケツェール5S		
			厚さ mm	単位質量kg/m 種類		厚さ mm	単位質量kg/m 種類		厚さ mm	単位質量kg/m 種類	
				304 304H 304L 321 321H	309 309S 310 310S 316 316H 316L 316Ti 317 317L 347 347H		304 304H 304L 321 321H	309 309S 310 310S 316 316H 316L 316Ti 317 317L 347 347H		304 304H 304L 321 321H	309 309S 310 310S 316 316H 316L 316Ti 317 317L 347 347H
6	1/8"	10.5	2.4	0.484	0.487	-	-	-	-	-	-
8	1/1"	13.8	3	0.817	0.812	-	-	-	-	-	-
10	3/8"	17.3	3.2	1.12	1.13	-	-	-	-	-	-
15	1/2"	21.7	3.7	1.66	1.67	-	-	-	4.7	1.99	2
20	3/4"	27.2	3.9	2.26	2.28	-	-	-	5.5	2.97	2.99
25	1"	34	4.5	3.31	3.33	-	-	-	6.4	4.4	4.43
32	1 1/1"	42.7	4.9	4.61	4.64	-	-	-	6.4	5.79	5.82
40	1 1/2"	48.6	5.1	5.53	5.56	-	-	-	7.1	7.34	7.39
50	2"	60.5	5.5	7.54	7.58	-	-	-	8.7	11.2	11.3
65	2 1/1"	76.3	-	12.1	12.2	-	-	-	9.5	15.8	15.9
80	3"	89.1	7.6	15.4	15.5	-	-	-	11.1	21.6	21.7
90	3 1/2"	101.6	8.1	18.9	19	-	-	-	12.7	28.1	28.3
100	4"	114.3	8.6	22.6	22.8	11.1	28.5	28.7	13.5	33.9	34.1
125	5"	139.8	9.5	30.8	361	12.7	10.2	10.5	15.9	48.1	49.4
150	6"	165.2	11	42.3	42.5	14.3	53.8	54.1	18.2	66.6	67.1
200	8"	216.3	12.7	64.4	64.8	18.2	89.8	90.4	23	111	111
250	10"	267.4	15.1	94.9	95.5	21.4	131	132	28.6	170	171
300	12"	318.5	17.4	131	131	25.4	185	187	33.3	237	238
350	14"	355.6	19	159	160	27.8	227	228	35.7	284	286
400	16"	406.4	21.4	205	207	30.9	289	291	40.5	369	372
450	18"	457.2	23.8	257	259	34.9	367	369	45.2	464	467
500	20"	508	26.2	314	316	38.1	446	449	50.0	570	574
550	22"	558.8	28.6	378	380	41.3	532	536	54	679	683
600	24"	609.6	31	447	450	46	646	650	59.5	815	821
650	26"	660.4	31	531	534	49.1	748	752	64.2	953	960

2019 year Ranking of exporting quantity for stainless steel Seamless pipe in china 中国不锈钢无缝钢管出口排名

THE BELOW DATA FROM CHINESE CUSTOMS



2019出口排名 Export Ranking 2019



博盛集团2019年出口8400吨。浙江博盛直接出口4700吨，另外出口3700吨，主要通过进出口公司和分销公司，15100吨是国内销售，总量23500吨。

In 2019, Bosheng Group exported 8,400 tons. Zhejiang Bosheng directly exported 4,700 tons. The remaining 3,700 tons were exported through financing and distribution companies. 15,100 tons were sold in China. The total quantity sold out reached 23,500 tons.

Our customer 我们的客户

感恩，一路有您

Thank you for your accompanying all the time

目前，博盛已与众多企业达成战略合作伙伴关系。博盛今天的成就，离不开每一个博盛人的坚持与奋斗，更离不开广大战略合作伙伴多年的相伴与支持。博盛一直怀着一颗感恩的心，在今后的岁月里，与您合作共赢，一起成长。

Currently Bosheng has established strategic cooperation relationships with many enterprises. Today's success of Bosheng cannot be achieved without the perseverance and efforts of all Bosheng personnel and the accompanying and support of our strategic partners over these years. By always cherishing a thankful heart, we will cooperate with you for win-win and mutual growth in the future.



Product application

产品应用

产品多样，广泛应用

Diversified products with wide application

- 石化工业用管
 - 化工机械用管
 - 医药食品行业用管
 - 航空航天工业用管
 - 电力行业用管
 - 船舶工业用管
- Tubes for the petrochemical industry
 - Tubes for the chemical machinery
 - Tubes for the pharmaceutical and food industry
 - Tubes for the aviation and aerospace industry
 - Tubes for the telectricity industry
 - Tubes for the ship industry



Global sales and service 全球销售与服务

品质全球化 服务全球化

Quality globalization service globalization



始终坚持以质量为核心、信誉至上的经营方针来满足国内外客户的要求

We always adhere to the principle of quality as the core and reputation first to meet the requirements of domestic and foreign customers



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ZHEJIANG
BOSHENG STEEL GROUP CO., LTD.

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