



电力(输送)行业用钢

ELECTRIC POWER (TRANSPORT) INDUSTRY STEEL

太钢产品分行业系列册 Products Serial Catalogs Of Tisco For Different Industries

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太原钢铁(集团)有限公司
Taiyuan Iron & Steel(Group) Co., Ltd.

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太钢简介

BRIEF ON TISCO

太原钢铁（集团）有限公司（简称太钢）是中国特大型钢铁联合企业和全球产能最大、工艺技术装备水平最高、品种规格最全的不锈钢企业。经过70年发展，已具备1000万吨以上钢、铁、材的生产能力，其中不锈钢产能达300万吨。



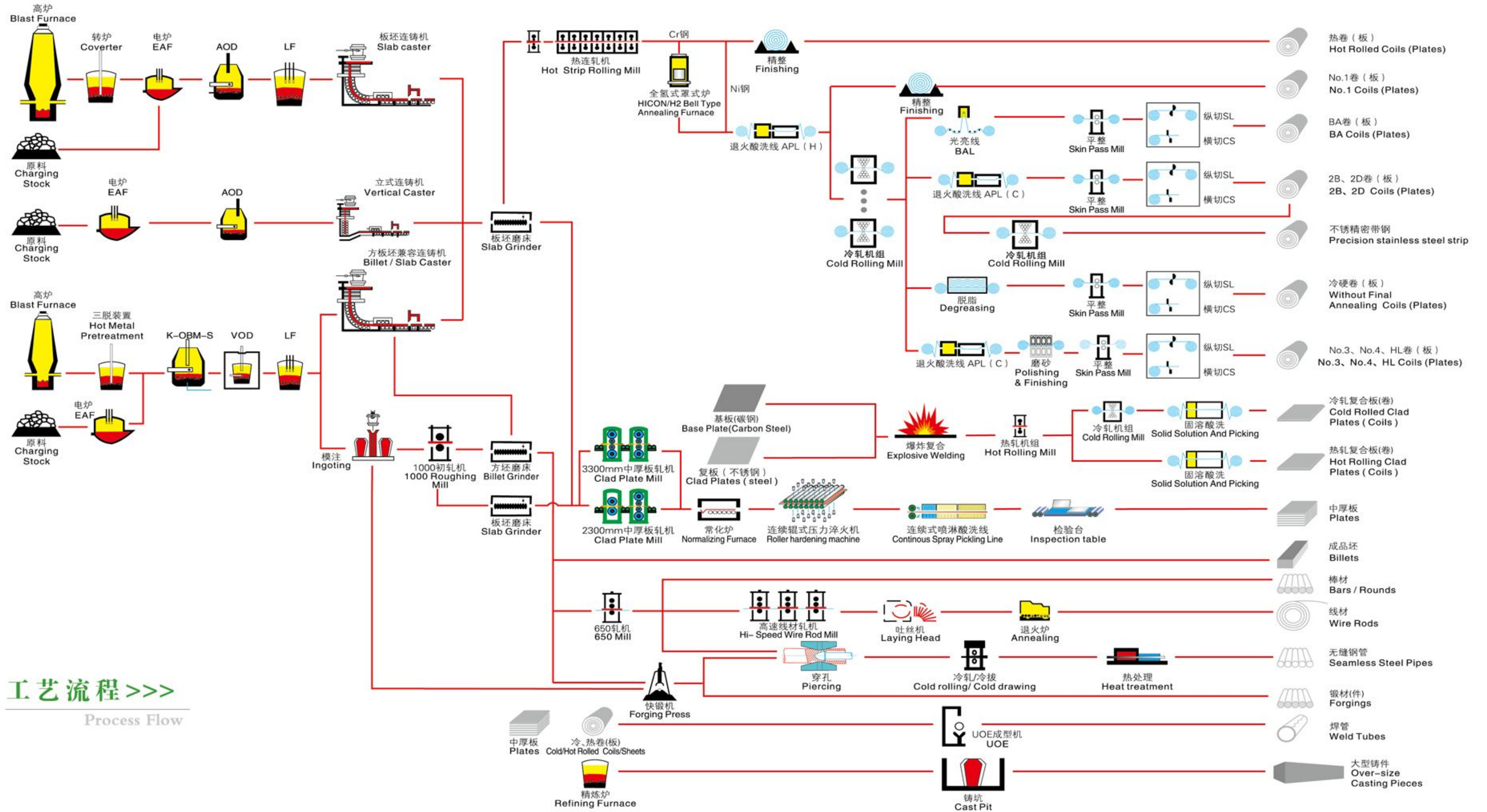
太钢是中国第一炉不锈钢、第一炉硅钢、第一张硅钢片的诞生地。拥有铁矿石等钢铁冶炼原料的采掘与加工、钢铁冶炼、钢铁材料压力加工、冶金设备及备品备件制造等方面先进技术和装备，主要产品有不锈钢、冷轧硅钢片（卷）、热连轧卷板、车轴钢、合金模具钢、军工钢等。产品广泛应用于石油化工、交通运输、建筑装饰、家用电器、医疗食品等行业及神舟系列飞船、嫦娥一号、“东风”系列火箭等高端领域，进入三峡水利、西气东输、奥运场馆等国家重点工程。

太钢的发展目标是，加快建设全球最具竞争力的不锈钢企业，到2010年，以不锈钢为主的品种、质量、成本、研发、节能、环保、效率、服务等各项指标达到国际一流水平，建设具有国际竞争力的大企业集团。

Taiyuan Iron and Steel (Group) Co. Ltd. (TISCO) is a gigantic steel complex in China and a world leading stainless steel producer with largest capacity, full range of products and state of the art facility. With 70 years development, the capacity of pig iron, crude steel and rolled products increased over 10 million ton, including 3 million tons of stainless steel.

TISCO produced the first heat of stainless steel, first heat of silicon steel and first sheet of silicon steel. It is well equipped for mining and beneficiation (such as iron ores), ironmaking, steelmaking, rolling and manufacture of metallurgical equipment and spare parts. Main products include cold rolled stainless and silicon sheet/coil, hot rolled coil, axle steel, die steel and military steel. They are widely used in petrochemical industry, transportation, construction, decoration, home appliance, medical apparatus and food industry, they are also used for high-end application and national key projects as Shenzhou spaceship, Chang'e-1 Moon Detector, Dongfeng rocket series, Three Gorges project, West-East natural gas transmission project and Olympic games facility.

Our goal in development is to expedite building TISCO as the most competitive stainless steel producer in the world, holding the world leading position by 2010 in terms of range, quality, cost, R&D, energy saving, environment protection, efficiency and service, Our target is to create an international enterprises group of strong competitive edges out of Taigang.



◆ 电力行业用钢概况

太钢产品广泛用于水电, 风电, 核电, 以及通信、照明、输电等行业, 与上电、东电、哈电三大动力集团建立战略合作伙伴关系, 共同开发新产品, 在替代进口方面做出了重要贡献。产品已应用于三峡水电, 岭澳二期、阳江等大型核电站, 特高压输电线路等国家重大建设项目, 产品质量及售后服务受到用户的好评。

◆ Brif of electric power steel industry

With the products widely used in hydroelectricity, wind-powered electricity generation, nuclear power, as well as communications, illumination, electricity transmission and other industries, Tisco has established strategic partnership with three grand Power Groups like Shanghai Power, Orient Power and Harbin Power to develop new products together which played an important role in substitution for imported products and have been used in Three Gorges Hydroelectric, Ling' ao Phase II, Ynagjiang and other large-scaled nuclear power stations as well as extreme voltage transmission line and other major state construction projects and received favorable comments due to quality and sale service.



研发能力>>>

Research and Development



2007年在国家认定的438家企业技术中心中, 太钢技术中心排名第4位。

TISCO Technology Center ranks the 4th place out of 438 enterprise-based technology centres accredited nationwide in 2007



扫描电镜
Scanning Electron Microscope



热模拟试验机
Thermal Simulating Tester

国家级实验室
National level laboratory



透射电镜
Transition Electron Microscope



全自动电子拉伸试验机
Automatic electronic tensile tester

认证、荣誉>>>

Certification & Honors



- ◆ 《高质量不锈钢板材技术开发》获国家科技进步二等奖
- ◆ 《AOD炉炉龄、工艺技术开发》等三项成果获山西省科技进步一、二等奖
- ◆ 《太钢含氮不锈钢研制》等九项成果获冶金科学技术进步一、二、三等奖
- ◆ 《双相不锈钢复合板》等六种产品分别获得国家重点新产品奖、山西省优秀新产品奖
- ◆ 不锈钢2B板被科技部认定为国家高新技术产品
- ◆ 《AOD炉用氮气进行氮合金化工艺》《VOD冶炼不锈钢高碳区脱氮方法》等专利80余项
- ◆ 不锈钢中板通过了TUV认证，并获得了冶金实物质量金杯奖
- ◆ 双相不锈钢通过了中国船级社CCS认证
- ◆ “Technical development of high quality stainless steel flat product” won second prize of state technical progresses.
- ◆ “AOD campaign, production technology development” and other two won the first and second prizes of Shanxi technical progresses.
- ◆ “Production technology and new grade development of Nitrogen-containing stainless steel by TISCO” won second prize of state technical progresses.
- ◆ Duplex stainless steel clad plate and so on six products were honored as among statewide new products and Shanxi great new products, respectively.
- ◆ Stainless steel 2B grade was approved by the Ministry of Science & Technology as the state hi-tech products.
- ◆ More than 80 patents such as “Nitrogen alloying process by nitrogen gas in AOD” and “Denitrification process in the phase of high carbon of stainless steel smelting in VOD).
- ◆ Stainless steel plate passed TUV examination and was rewarded Golden Cup of physical quality of metallurgical product.
- ◆ Duplex stainless steel passed CCS, China Classification Society, examination.



常规产品>>>

Conventional Products

钢类 Grade	牌号 Brand No.	规格 Specification	标准 Standard	主要用途 Usage
锻造用初轧坯 Bloom for forging	Q345A-E	150m ³ ~ 550m ³ × L	GB/T1591-2008 Q/TB3067-2007 或双方协议 Or mutual agreement	风电法兰 通讯照明、输电线路 杆塔、铁塔用法兰 Flanges used in wind-powered electricity generation, Flanges used in communication, illumination, and electric transmission line pole tower and steel tower.
	Q420A-E			
	Q460C-E			
碳钢中卷板 Carbon steel medium plate	Q345A-E	卷板 Coiled plate 4 ~ 12 × 1000 ~ 2130 × C	GB/T1591-2008 或双方协议 Or mutual agreement	通讯照明、输电线路 杆塔、铁塔用钢管 Steel pipe used in communication, illumination, and electric transmission line pole tower and steel tower.
	Q420A-E			
	Q460C-E	中板 Medium Plate 6 ~ 80*1600 ~ 3000 × L		
	ASTM A572 GR65	3-19 × 870 ~ 2130 × C		

产品介绍>>>

Proudut Introduction

◆ 特点

初轧坯：产品成分控制窄、残余元素含量低、成分稳定，通过微合金化技术保证晶粒细小，通过对夹杂物进行改性处理控制夹杂物形状和尺寸，气体含量极低，钢质纯净，力学性能优良，组织致密，使用专用轧制，外形平整、尺寸精度高。

碳钢中卷板：依托先进的设备，雄厚的技术实力，能够更加精确的控制成分，降低P、S含量；优良的屈强比、伸长率、低温冲击韧性，在国内处于领先水平；超低的Si含量，保证了产品的镀锌效果，使产品外观质量明显改善；优良的焊接性能，焊缝及热影响区组织性能良好。

◆ Features

Bloom: Narrow controlled components, low remnants content, stable composition, crystalline refinement conformed by micro alloying technology, the shape and size of inclusion controlled by modification, extreme low of gas content, pure steel quality, excellent mechanical property, dense structure, rolled by professional rolls, tempering profile and high dimension precision.

Carbon steel medium plate: More accurate components controlling and lower contents of P and S base on advanced devices and rich technology; excellent yield ratio, percentage elongation and low temperature impact toughness leading state level; super low Si content ensuring the galvanization effect of the product to fulfill a remarkable improvement of apparent quality; good welding property conforming welding joint and structure performance at heat affected zone.

◆ 用途

初轧坯：锻造钢管塔及风电发电机组用法兰、锻件

碳钢中卷板：钢管塔主结构原料、角钢塔辅料及风力发电杆塔原料，通讯、照明用钢杆、钢塔。

◆ Usage

Bloom: Used for flanges and forged pieces in forged steel pipe tower, Wind-powered electricity generation.

Carbon steel medium plate: Used as the main structural material of electrical steel pipe tower, accessory material of angle steel tower and raw material of wind energy electric generation, steel poles and steel towers in communication and illumination.

◆ 化学成分 (%) (典型值)

chemical composition (%) (Typical value)

钢号	C	Si	Mn	P	S	Nb	V	Cr	Ni	Cu	N	Als
Q345B	≤0.20	≤0.50	≤1.70	≤0.035	≤0.035	≤0.07	≤0.15	≤0.30	≤0.50	≤0.30	≤0.012	
420B	≤0.20	≤0.50	≤1.70	≤0.035	≤0.035	≤0.07	≤0.20	≤0.30	≤0.50	≤0.30	≤0.015	
460C	≤0.20	≤0.60	≤1.80	≤0.030	≤0.030	≤0.11	≤0.20	≤0.30	≤0.80	≤0.55	≤0.015	≥0.015

注：可按用户要求的化学成分、组织、性能进行生产

Note: The production as required by consumer according to chemical components, structure and performance.

◆ 力学性能 (中卷板)

Mechanical property (Hot-rolled medium steel plate coil)

牌号 Brand No.	Rel, MPa	Rm, MPa	A, %	180° 弯曲, d=弯心 直径, a=试样厚度 180° bending, d=dia. of bend, a=thickness of sample	纵向V型冲击 试验 (0℃) J Longitudinal type V impact test (0℃) J	纵向V型冲击 试验 (-30℃) J Longitudinal type V impact test (-30℃) J
			Lo=50mm			
ASTM A572 Gr65	≥450	≥550	≥17	d=2a		≥34
Q345B	≥380	≥470-630	≥22	d=2a	≥68(单个) single ≥90(平均) average	

产品应用 >>>

Application



法兰
Flanges



法兰
Flanges



钢管
Steel tubes



风电
Wind-powered electricity generation



通讯塔
communication tower



钢管塔
Steel pipe tower



通讯杆塔
Communication pole and tower



输电杆塔
Transmission pole and tower



1100KV特高压输电铁塔
1100KV Extreme voltage transmission iron tower

研发目标>>>

Research and Development Target

利用我公司强大的科研实力, 开发一批具有国际水平、自主知识产权的高强钢产品, 满足航空航天、石油化工及重点工程等领域的特殊用途结构材料, 如高纯净、高均质超高强度钢。大力发展特高压输电塔架用钢, 大幅提高材料的强度、冲击韧性以及抗腐蚀性能, 实现工程用钢的轻量化、经济化, 使我公司成为电力用钢的领导者, 为国民经济的健康发展作出贡献。

By utilizing our strong scientific research capabilities, we've developed a set of high strength steel products with world level and self-dominated intellectual property rights to meet the special purpose structural material like high purity, high homogeneity, and extreme high strength steel in the fields of aerospace, petrochemical industry and important projects. Meanwhile, we vigorously developed steel for extreme voltage transmission tower and increased significantly the material strength, impact toughness and anti-corrosion property to achieve the lightweight and economization of the engineering steel, which made our company be the leader of steel for electric industry and made a great contribution to sound development of the national economy.

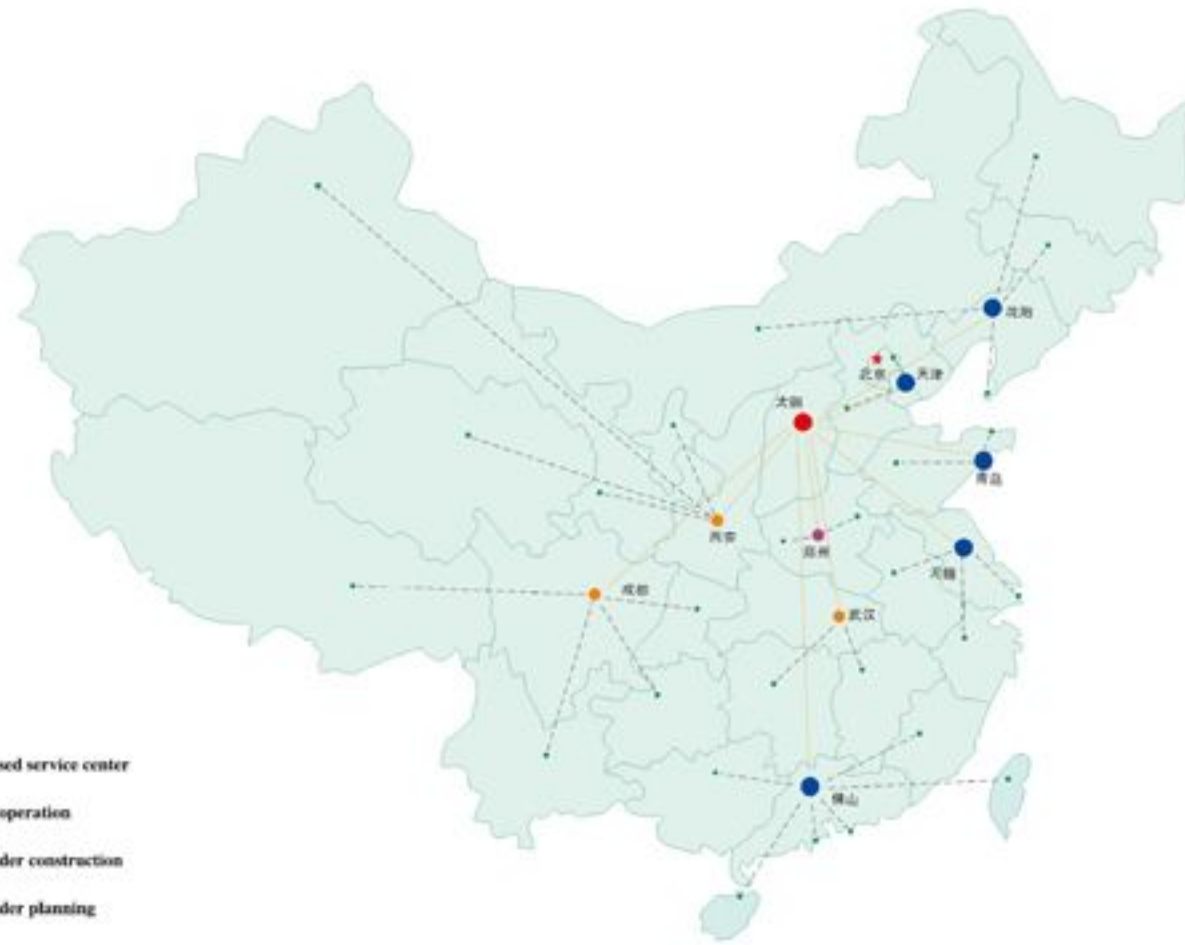
服务承诺>>>

Service Promise

- 为客户提供个性化成份、性能、包装、卷重、质保书的设计
- 为客户在选才和加工工艺方面提供技术支持
- 交货准确及时
- 对客户异议, 在24小时内答复
- ◆ To provide consumers with the personalized designs on composition, propertiesproperty, packing, coil weight and quality certificate
- ◆ Technical support to customers in material selection fabrication
- ◆ Accurate and prompt delivery
- ◆ Response to customer's claim within 24 hours



太钢加工配送营销网络布局图
Marketing network of TISCO service centers



- 太钢本部加工配送中心 TISCO home-based service center
- 已建成的加工配送中心 Service center in operation
- 在建中的加工配送中心 Service center under construction
- 规划建立的加工配送中心 Service center under planning

合作伙伴 >>>

Cooperative Partner

 国家电网公司 STATE GRID CORPORATION OF CHINA	 valmont 维蒙特工业(中国)有限公司	 SUJIA 苏嘉
 武晓(集团)公司 WUXIAO (GROUP) CO.,LTD Website: www.wuxiao.cn	 山西亿源锻造有限公司 SHANXI AUYUAN FORGING CO.,LTD.	 潍坊长安铁塔股份有限公司 WEIFANG CHANG'AN STEEL TOWER STOCK CO.,LTD.
 唐山粤丰机械制造有限公司 Tangshan Yuefeng Mechan. Co., Ltd.	 山西冠力法兰有限公司	

主要业务部门联系方式 >>>

Contacting Manners of the Main Business Sections

股份公司主要业务部门 Main business department of Co.,Ltd.	业务功能 Functions	联系电话 Telephone	E-mail
营销部 Marketing Department	合同管理、订货、异议、 投诉受理及出口贸易 Contract and order management Complaint and claim handing Exports business	0351-3014947	tgxsc@tisco.com.cn
		0351-3011051	xscxsk@tisco.com.cn
		0351-3012277	xsczjbk@tisco.com.cn
		800-806-1998	songjun@tisco.com.cn
		400-653-1998	Tgyhfwk@tisco.com.cn
技术中心 Technology Center	技术咨询服 Technical consultation service	0351-3012213	Tgjszxbxg@tisco.com.cn

国际分公司联系方式 Contacting manners of international trading Co.,Ltd.

太钢国贸(美国)有限公司 Taigang International Trading (USA) Co.,Ltd.	美国 USA	电话(Tel) 001-4124340607	传真(Fax) 001-4124340608
太钢国贸(香港)有限公司 Taigang International Trading (Hongkong) Co.,Ltd.	香港 Hongkong	电话(Tel) +0852-28271686	传真(Fax) +0852-28271300
太钢欧洲有限公司 Taigang Europe Co.,Ltd.	德国 Germany	电话(Tel) +49(0)2154-81690	传真(Fax) +49-2154-816911

国内分公司联系方式 Contacting manners of deomestic trading Co.,Ltd.

	公司名称 Branch Name	地址 Address	通讯方式 Telephone & Fax	
太钢华北区销售公司 TISCO sales company in North China	天津太钢销售有限公司 Tianjin TISCO sales Co.,Ltd	天津 Tianjin	电话(Tel) 022-23408105	传真(Fax) 022-23408103
	北京太钢销售有限公司 Beijing TISCO sales Co.,Ltd	北京 Beijing	电话(Tel) 010-64441368	传真(Fax) 010-64441369
	太原太钢销售有限公司 Taiyuan TISCO sales Co.,Ltd	太原 Taiyuan	电话(Tel) 0351-3096390	传真(Fax) 0351-3090556
	郑州太钢销售有限公司 Zhengzhou TISCO sales Co.,Ltd	郑州 Zhengzhou	电话(Tel) 0370-3096390	传真(Fax) 0370-3090556
太钢东北区销售公司 TISCO sales company in Northeast of China	辽宁太钢销售有限公司 Liaoning TISCO sales Co.,Ltd	沈阳 Shenyang	电话(Tel) 024-24232050	传真(Fax) 024-24231216
	哈尔滨太钢销售有限公司 Haerbin TISCO sales Co.,Ltd	哈尔滨 Haerbin		
太钢华东区销售公司 TISCO sales company in East China	无锡太钢销售有限公司 Wuxi TISCO sales Co.,Ltd	无锡 Wuxi	电话(Tel) 0510-82407713	传真(Fax) 0510-82441187
	上海太钢销售有限公司 Shanghai TISCO sales Co.,Ltd	上海 Shanghai		
	杭州太钢销售有限公司 Hangzhou TISCO sales Co.,Ltd	杭州 Hangzhou		
太钢山东区销售公司 TISCO sales company in Shandong	青岛太钢销售有限公司 Qingdao TISCO sales Co.,Ltd	青岛 Qingdao	电话(Tel) 0532-81101847	传真(Fax) 0532-87734798
	济南太钢销售有限公司 Jinan TISCO sales Co.,Ltd	济南 Jinan		
太钢华中区销售公司 TISCO sales company in Central China	武汉太钢销售有限公司 Wuhan TISCO sales Co.,Ltd	武汉 Wuhan	电话(Tel) 027-85615300	传真(Fax) 027-85615311
	长沙太钢销售有限公司 Changsha TISCO sales Co.,Ltd	长沙 Changsha	电话(Tel) 027-85615300	传真(Fax) 027-85615311
	南昌太钢销售有限公司 Nanchang TISCO sales Co.,Ltd	南昌 Nanchang		
太钢华南区销售公司 TISCO sales company in South China	佛山市太钢不锈钢销售有限公司 Foshan TISCO Stainless Steel Sales Co.,Ltd	佛山 Foshan	电话(Tel) 0757-83315711	传真(Fax) 0757-83315718
	揭阳太钢销售有限公司 Jieyang TISCO sales Co.,Ltd	揭阳 Jieyang		
太钢西南区销售公司 TISCO sales company in Southwest of China	重庆太钢销售有限公司 Chongqing TISCO sales Co.,Ltd	重庆 Chongqing	电话(Tel) 028-87604342	传真(Fax) 028-87604342
	成都太钢销售有限公司 Chengdu TISCO sales Co.,Ltd	成都 Chengdu		
太钢西北区销售公司 TISCO sales company in Northwest of China	西安太钢销售有限公司 Xi'an TISCO sales Co.,Ltd	西安 Xi'an	电话(Tel) 029-86231507	传真(Fax) 029-86231506