



汽车行业用钢

STEEL FOR AUTOMOBIL INDUSTRY

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

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太钢简介

BRIEF ON TISCO

太钢始建于1934年，长期坚持特钢发展方向，曾生产出我国第一炉不锈钢、第一张热轧硅钢片、第一块电磁纯铁，现拥有国际一流水平的以铁水为主原料的冶炼—精炼—连铸—热轧—冷轧全流程不锈钢生产线，建成国家级技术中心、先进不锈钢材料国家重点实验室等科技创新平台，具备年产1200万吨钢（其中450万吨不锈钢）的能力，可生产高品质冷轧卷板、热轧卷板、热轧中厚板、复合钢板、棒材、线材、无缝管、焊管、精密带钢、大型铸件等各类碳钢和不锈钢系列产品，形成了以不锈钢、冷轧硅钢、高强韧系列钢材为主的高效节能长寿型产品集群，实现了不锈钢品种规格的全覆盖，是全球品种规格最全的不锈钢企业。不锈钢材出口量保持国内第一。

太钢坚持以新制胜，重点产品批量应用于石油、化工、造船、集装箱、铁路、汽车、城市轻轨、大型电站、“神舟”系列飞船等重点领域和新兴行业，20多个品种国内市场占有率第一，30多个品种成功替代进口，笔尖钢、高锰高氮不锈钢、AP1000第三代核电用挤压不锈钢C型钢等新产品满足市场急需，为我国关键材料的国产化发挥着重要作用。

TISCO was founded in 1934. It has been developing special steel as its trend, where the first ladle of stainless steel, the first piece of hot-rolled silicon steel and the first bulk of electromagnetic pure iron in China were produced. Today, TISCO has full process stainless steel production lines of international first class, i.e. smelting (with hot metal as raw material)—refining—continuous casting—hot rolling—cold rolling. Moreover, it has built its own S&T and innovation platform such as national level Technology Center, National Key Laboratory of advanced stainless steel materials and etc. TISCO has an annual capacity of 12 million tons (of which 4.5 million tons are stainless steel). It can produce various carbon steel and stainless steel series products, including high quality cold-rolled coil/plate, hot-rolled coil/plate, hot-rolled medium plate, composite steel, rod, wire, seamless tube, welding tube, precise strip, heavy casting and etc. It has several product clusters like stainless steel, silicon steel and high strength high ductility series that feature higher performance, energy efficiency and longer service life, which helps TISCO a stainless steel producer with the fullest range of grades and specifications of products worldwide. Topped the list of stainless steel exporters of China.

TISCO insists on the strategy of “winning by new product”. Some of its key products have been used in petroleum, chemical, shipbuilding, container, railway, automobile, urban light rail, power generation, “Shenzhou” series spacecrafts and other key sectors and emerging industries. Over 20 steel grades take biggest market share in China. More than 30 varieties have replaced the imported counterparts successfully, of which pen tip steel, high-Mn high-N stainless steel and AP1000 third generation extrusion C type stainless steel for nuclear power satisfied the urgent demands of the markets, contributing significantly to the domestication of key materials.

◆ 汽车行业用钢概况

Brief on automobile steel

太钢一直致力于汽车用钢产品的开发，早在上个世纪70年代，太钢就建立了与一汽集团、东风公司等国内特大型汽车生产企业的业务合作关系。进入新世纪，太钢更加重视汽车行业的发展，与一汽集团、东风公司、中国重汽、北汽福田等国内汽车行业的（知名）先进企业建立了良好的战略合作关系。

在热轧产品方面，太钢目前是国内最主要的汽车用热轧钢板生产厂家。已形成大梁钢系列、车轮钢系列、轴管钢系列、桥壳钢系列等汽车用热轧钢板产品，产品规格能满足所有商用车生产厂家的使用要求。针对目前汽车行业轻量化发展趋势，太钢在国内率先开发出高强度汽车用热轧钢板产品。该产品广泛应用于重卡大梁、半挂车大梁及自卸车货厢等领域，产品质量受到了使用厂家的一致好评。

在汽车用不锈钢方面，太钢处于国内领先地位。太钢的汽车用不锈钢主要应用于汽车排气系统、汽车燃油箱和汽车装饰等领域，使用太钢不锈钢生产的汽车排气系统和燃油箱具有耐蚀性好、强度高、周期使用成本低等优点，是未来中国汽车工业良好的环保材料的选择。

TISCO has devoted itself to automobile steel development. In the early of 1970's, TISCO established the business cooperation with the super-sized automobile domestic enterprises such as the First Automobile Group, Dongfeng Group. Entering the new century, TISCO pay much attention to development on the automobile industry so set up the strategic cooperation with the leading auto enterprises in China, for example, the First Automobile Group, Dongfeng Group, Sinotruk and FOTON.

With respect to the hot rolled products, TISCO is the leading company of the automobile hot-rolled plate currently, which covers the series of beam steel, wheel steel, shaft tube steel, and axle housings steel. The specification can meet all requirements for commercial vehicles. Due to the tendency of automobile light weight, TISCO developed the high strength hot-rolled plate which has been widely used to the beam of the heavy load truck and semi-trailer and the carriage of light Self-dumping truck. Product quality has been appreciated by the customers.

With respect to the stainless steel for the automobile industry, TISCO is the leading company too. The automobile steel produced by TISCO mainly use for the field of auto exhaust system, auto oil tank and decorations. The product has the advantages of corrosion resistance, high strength and low operation cost, which is the sound choice of environment material for China automobile industries in the future.

通过近几年对汽车行业不锈钢需求的了解，结合我公司先进的设备，生产出的400系不锈钢卷板以其优良的焊接性、成型性，广泛应用于汽车排气系统行业。

产品开发方面，除常用的SUH409L外，开发了性能更好的441、439M、436L、429等系列产品，广泛应用于汽车排气歧管、消音器、排气净化器外壳等部件。

Through the survey of auto stainless steel needs in recent years, 400 series coils and plate, which produced by TISCO best equipment, have been extensively used for the auto exhaust system with good weldability and formality.

With respect to product development, TISCO attach great importance to the new production research and development. In addition to normal grades such as SUH409L, 304 and 304L, our company developed 441, 439M, 436L and 429 of the 400 series in order to save nickel resources, which are widely used for the exhaust manifold, silencer and cleaner case of auto exhaust system.

◆ 与行业客户的合作关系

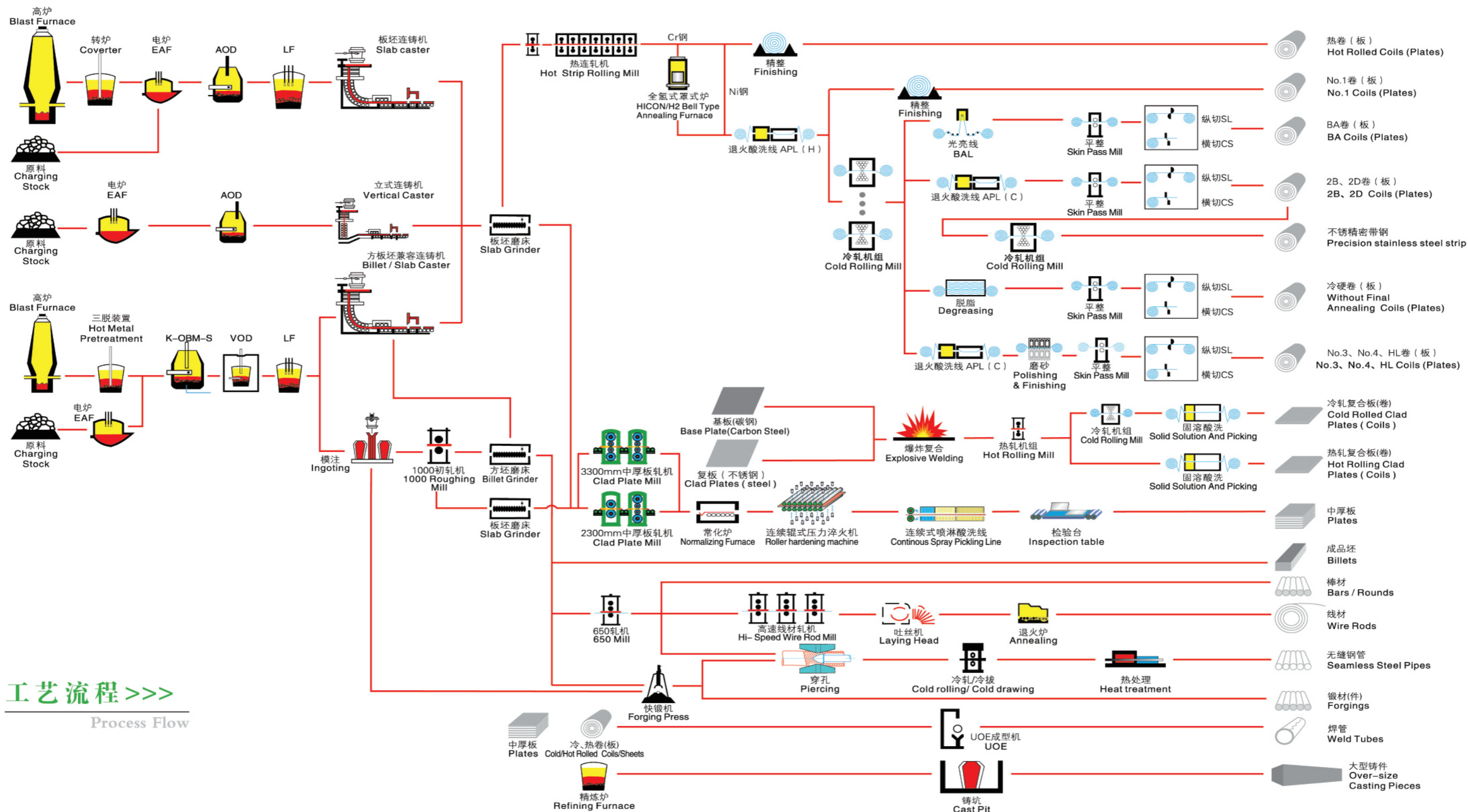
Cooperative relationship with industrial customers

太钢是目前国内最主要的热轧汽车结构钢板生产厂家，产品广泛应用于一汽集团、东风公司、中国重汽、陕西重汽、北汽福田、郑州宇通、宏昌天马、中集车辆等国内主要汽车厂家，市场占有率连续多年位居国内市场前列，太钢已成为国内高强度汽车用钢的引领者、汽车行业轻量化的推动者。

目前，我公司与国内主要从事汽车排气制管和冲压件的直接用户及具有加工配送能力的经销用户建立了长期合作关系，产品主要定位汽车排气系统行业。

TISCO has been the main manufacturer of hot-rolled auto structural plate in China recently. The products widely entered many Chinese automobile manufactures, e.g. the First Automobile Group, Dongfeng Group, Sinotruk, Shaanxi Heavy Truck, FOTON, Zhenzhou Yutong, Hongchang Tianma, In-vehicle. The market share has been in front rank in China for many years. TISCO become a tidal current of high strength steel and a trigger of light automobile in China.

Nowadays, Tisco has established the long-term cooperative relationship with the end users for auto exhaust piping making and pressing processes, and the dealers with the ability of distribution. The products mainly locate to automotive exhaust system.



工艺流程 >>>
Process Flow



常规产品 >>>

Conventional products

◆ 碳钢

Carbon steel

类别 Type	牌号 Grade	产品规格 (mm) Specifications	执行标准 Standard	用途 Application
汽车大梁用钢 Automotive frame steel	T420L	2.0-6.0X980-2000	Q/TB3805-2010	用于制造汽车纵梁、横梁、底盘部件等结构件 Parts of automobile side frame ,cross beam and chassis.
	T510L	2.0-8.0X980-2000		
	T510L	8.0-16X870-2000	Q/TB3019-2007	
	T610L	1.5-10.0X1000-2100	Q/TX3287-2016	
	T700L	1.5-3.0X1000-1800	Q/ 太新 166-2015	
	T700L	3.0-10.0X1000-2100	Q/ 太新 061-2010	
	T750L	3.0-8.0X1000-1800	Q/ 太新 049-2009	
汽车大梁用钢 Automotive frame steel	T800L	2.0-8.0X1000-1200	Q/ 太新 158-2016	
	T610L	10.0-12.5X1000-2000	Q/TX3634-2017	用于专用车行业制造“工”字梁等汽车结构件 Used for automotive I beam structural parts in special automobile manufacturing industry.
T700L	10.0-14.0X1000-1800	Q/ 太新 048-2015		
汽车大梁用钢 Automotive frame steel	QSTE340TM	2.3-12.0X1000-2100	Q/ 太新 062-2009	用于制造汽车纵梁、横梁、底盘部件等结构件 Parts of automobile side frame ,cross beam and chassis.
	QSTE380TM			
	QSTE420TM			
	QSTE460TM			
	QSTE500TM			
	QSTE550TM	3.0-12.0X1000-2100	Q/ 太新 087-2012	
汽车车轮用钢 Automobile wheel steel	T330CL	2.0-12.0X870-2130	Q/TX3193-2006	用于制造汽车轮辐及轮辋 Parts of felloe and spoke for the wheel.
	T380CL	2.5-8.0X1000-2000	Q/ 太新 120-2014	
	T400CL	1.5-16.0X870-2130	Q/TX3616-2016	
	T420CL	5.0-16.0X1000-2130	Q/TX3285-2007	
	T500CL	3.0-16.0X1000-2130	Q/ 太新 024-2015	
	T590CL	3.0-14.0X950-2100	Q/ 太新 001-2014	
汽车车厢用钢 Automotive carriage steel	T600	1.5-6.0X1000-1600	Q/ 太新 098-2013	用于制造汽车底板或边梁 Used in the manufacture of automotive floor or side beam structure.
	T650			
	T700	6.0-16X1350-1800	Q/TX3257-2007	
	TH800	3.0-6.0X1350-1550 6.0-16.0X1350-1800		
汽车轴管用钢 Automotive Shaft tube steel	440QZ	2.5-6.0X980-1800	Q/TB3803-2007	用于制造汽车传动轴管 Used for automobile drive shaft tube.
	480QZ	3.0-8.0X870-2000	Q/TB3020 - 2007	
	T500QZ	2.5-8.0X1000-1800	Q/ 太新 118-2012	
	T550QZ			
	T700QZ	3.0-6.0X1000-1800	Q/ 太新 019-2010	
	T750QZ			
汽车桥壳用钢 Automobile axle housings steel	TQK510	3.0-20.0X1000-2130	Q/ 太新 078-2008	用于制造汽车桥壳 Used in the manufacture of rear axle house
	TQK590	10.0-16.0X1000-2100	Q/ 太新 094-2009	

常规产品 >>>

Conventional products

根据以上对应关系，某厂家采用高强度板取代普通Q235钢板生产自卸车货厢，构件重量减轻的情况如下：

According to the above corresponding relationship, some company replace normal Q235 steel plate with ultra-high strength steel plate to manufacture bucket of self-dumping truck, then the reducing weight of structural components is as follows:

采用Q235 (屈服235MPa) Using Q235 steel plate (yield 235 MPa)		采用T610L (屈服550MPa) Using T610L steel plate (yield 550 MPa)		采用TH800 (屈服700MPa) Using TH800 steel plate (yield 700 MPa)	
板厚mm Thickness	板厚mm Thickness	减重百分数 Reducing by percentage	板厚mm Thickness	减重百分数 Reducing by percentage	
12	9.6	20%	8.5	29%	
8	6.4	20%	5.7	29%	

采用太钢特高强度钢板生产自卸车效益情况：

The benefits on using TISCO'S ultra-high strength steel plate to manufacture self-dumping truck:

重量 Weight	Q235车厢 Q235 Compartment	T610L车厢 T610L Compartment	Th800车厢 TH800 Carriage
	6.5t	5.2t	4.6t
增加货运能力每年增加效益 Improvement of the trasporting capacity Benefit increasing annually	0	45500元	66500元
燃料节省每年增加效益 Fuel saving Benefit increasing annually	0	6435元	9405元
总效益 Total Efficiency	0	52000元	76000元

注：以上按照每年行驶150000公里，柴油价格5.5元/升测算的结果。

Note: the above result is according to 150000 kilometers running per year, and diesel oil price at CNY 5.5 / liter.

产品成分、性能 >>>

Composition and Property

◆ 化学成分 (典型值)

Chemical composition (Typical value)

牌号 Grade	C	Si	Mn	P	S	Ti	Nb	V	Mo	Alt	备注 Remark	
T420L	≤ 0.12	≤ 0.30	≤ 1.20	≤ 0.030	≤ 0.015	-	≤ 0.04			-		
T510L			≤ 1.60			-	≤ 0.06					
T610L		≤ 0.50	≤ 1.70	≤ 0.020	≤ 0.22	≤ 0.09	≤ 0.10			≥ 0.020		
T610L			≤ 1.70					≤ 0.025				Nb+V+Ti ≤ 0.22
T700L		≤ 2.00	≤ 0.020									
T750L		≤ 0.60	≤ 2.00	≤ 0.025	≤ 0.010							可适当加入 Nb、V、Ti、Mo 等元素 Can be appropriately to add Nb, V, Ti, Mo and other elements.
T800L		≤ 0.30	≤ 2.10	≤ 0.020		≤ 0.20	≤ 0.10	≤ 0.10	≤ 0.35			
QSTE340TM		≤ 0.50	≤ 1.30								≥ 0.015	
QSTE380TM			≤ 1.40									可适当加入 V 元素, 但 Nb+V+Ti ≤ 0.22% Can be appropriately to add V, but Nb+V+Ti ≤ 0.22%.
QSTE420TM			≤ 1.50	≤ 0.030	≤ 0.025	≤ 0.22	≤ 0.09					
QSTE460TM	≤ 1.60											
QSTE500TM	≤ 1.70											
QSTE550TM	≤ 1.80		≤ 0.025	≤ 0.015				≤ 0.20				Nb+V+Ti ≤ 0.22
T330CL	≤ 0.08	≤ 0.10	≤ 0.50	≤ 0.030	≤ 0.015							
T380CL	≤ 0.12	≤ 0.25		≤ 0.030	≤ 0.020		≤ 0.04					
T400CL		≤ 0.25	≤ 1.20	≤ 0.025	≤ 0.015					≥ 0.020		
T420CL		≤ 0.30		≤ 0.030	≤ 0.020		≤ 0.03					
T500CL		≤ 0.16		≤ 0.030	≤ 0.025		≤ 0.06					
T590CL	≤ 0.12	≤ 0.50	≤ 1.70	≤ 0.025	≤ 0.015	≤ 0.05	≤ 0.09	≤ 0.10				
T600	≤ 0.16		≤ 0.020	≤ 0.010							可适当加入 Nb、V、Ti、Mo 等元素 Can be appropriately to add Nb, V, Ti, Mo and other elements.	
T650	≤ 0.12	≤ 1.90								≥ 0.015		
T700		≤ 2.00	≤ 0.020	≤ 0.010							Nb+V+Ti ≤ 0.22	
TH800		≤ 0.40	≤ 2.10			≤ 0.15	≤ 0.09	≤ 0.20	≤ 0.50			
440QZ	≤ 0.16	≤ 0.50	≤ 1.30		≤ 0.025		≤ 0.04					
480QZ		≤ 0.20	≤ 1.50	≤ 0.030	≤ 0.015							
T500QZ		≤ 1.60		≤ 0.020		≤ 0.06						
T550QZ		≤ 0.50	≤ 1.70		≤ 0.020	≤ 0.22	≤ 0.09	≤ 0.10			≥ 0.015	Nb+V+Ti ≤ 0.22
T700QZ		≤ 0.10	≤ 0.15	≤ 2.10	≤ 0.025	≤ 0.010	≤ 0.15	≤ 0.09	≤ 0.20	≤ 0.50		
T750QZ	≤ 0.12	≤ 0.50	≤ 1.60	≤ 0.030	≤ 0.025		≤ 0.06					
TQK510		≤ 1.70		≤ 0.020	≤ 0.22	≤ 0.09	≤ 0.10		≥ 0.015			
TQK590		≤ 1.70		≤ 0.020	≤ 0.22	≤ 0.09	≤ 0.10		≥ 0.015			

◆ 机械性能 (典型值)

Mechanical property (Typical value)

牌号 Grade	厚度规格 (mm) Thickness	屈服强度 Re, MPa	抗拉强度 Rm, Mpa tensile strength	拉伸试验方向 Tensile test direction	延伸率 A, % Elongation	冲击功 AKV, J Impact energy	180° , 冷弯 180° cold bending
T420L	2.0-6.0	Rel ≥ 305	420-540	横向 horizontal	≥ 25	-	d=0.5a
T510L	2.0-8.0	Rel ≥ 355	510-610		≥ 24	-	
	8.0-16		480-610		≥ 21	-	
T610L	1.5-10.0	Rel ≥ 500	550-700	纵向 Vertical	≥ 18	-	d=1a
	10.0-12.5		550-700		-		
T700L	1.5-3.0	ReH ≥ 600	700-850		≥ 16	-	d=2a
	3.0-10.0		700-850	-20℃, 纵向, ≥ 40	d=3a		
	10.0-14.0	ReH ≥ 570	670-850				
T750L	3.0-8.0	ReH ≥ 700	750-950	纵向 Vertical	≥ 15	-20℃, 纵向, ≥ 40	d=1.5a
T800L	2.0-8.0	Rp0.2 ≥ 700	800-960	横向 horizontal	≥ 14	-20℃, 纵向, ≥ 40	d=2a
QSTE340TM	2.3-12.0	Rel ≥ 340	420-540		≥ 25	-	d=0.5a
QSTE380TM		Rel ≥ 380	450-590		≥ 23	-	
QSTE420TM		Rel ≥ 420	480-620		≥ 21	-	
QSTE460TM		Rel ≥ 460	520-670		≥ 19	-	
QSTE500TM		Rel ≥ 500	550-700	≥ 17	-		
QSTE550TM	3.0-12.0	Rel ≥ 550	600-760	纵向 Vertical	≥ 15	-	d=1.5a
T330CL	2.0-12.0	Rel ≥ 205	330-470	横向 horizontal	≥ 26	-	d =1a
T380CL	2.5-8.0	Rel ≥ 235	380-500		≥ 28	-	
T400CL	1.5-6.0	Rel ≥ 255	400-510		≥ 26	-	d=2a
	6.0-10.0	Rel ≥ 235	390-500		≥ 24	-	
	10.0-16.0	Rel ≥ 220	380-480		≥ 26	常温, 横向, ≥ 41	d=1a
T420CL	5.0-10.0	Rel ≥ 290	420-520		≥ 24	-	d=1.5a
	10.0-16.0		410-510				
T500CL	3.0-5.0	Rel ≥ 380	500-650		≥ 23	-	d=1a
	5.0-10.0		490-640		≥ 22	-	d=1a
	10.0-16.0		470-620		≥ 20	-	d=2a
T590CL	3.0-6.0	Rel ≥ 480	590-740	≥ 17	-	d=1.5a	
	6.0-14.0	Rel ≥ 590	590-740	≥ 18	-		
T600	1.5-6.0	ReH ≥ 470	570-750	≥ 16	-	d=1.5a	
T650		ReH ≥ 550	650-850	≥ 17	-20℃, 纵向, ≥ 47		d=2a
T700	6.0-10.0	Rel ≥ 625	≥ 700	≥ 15	-	d=2a	
	>10.0-16.0	Rel ≥ 590		≥ 12	-20℃, 纵向, ≥ 41		d=2a
TH800	3.0-8.0	Rel ≥ 700	750-950	≥ 15	-	d=1a	
	>8.0-16.0	Rel ≥ 680		≥ 21	-		
440QZ	2.5-6.0	Rel ≥ 320	440-570	纵向 Vertical	≥ 25	-	d=1.5a
480QZ	3.0-8.0	Rel ≥ 355	480-580		≥ 21	-	
T500QZ	2.5-8.0	ReH ≥ 440	500-600		≥ 15	-	
T550QZ		ReH ≥ 480	550-650		≥ 14	常温, 纵向, ≥ 40	
T700QZ	3.0-6.0	ReH ≥ 650	700-900		≥ 24	-	
T750QZ	3.0-6.0	ReH ≥ 700	750-950	≥ 20	-	d=1a	
TQK510	≥ 3.0-8.0	Rel ≥ 355	510-610	横向 horizontal	≥ 18	-	d=1a
	> 8.0-16.0	Rel ≥ 345	480-610		≥ 16	-5℃, 横向, ≥ 47	
	> 16.0-20.0	Rel ≥ 345	460-580				
TQK590	10.0-13.0	Rel ≥ 470	590-715				
	> 13.0-16.0	Rel ≥ 440	550-700				

◆ 汽车排气系统不锈钢

Stainless steel for automobile exhaust systems

牌号 Grade	交货类型 Delivery type	规格 Specifications	卷重 Weight	执行标准 Standard	用途 Application
409L	冷卷	0.3-3.0	6-10	Q/TX3562-2014 EN10088-2 ASTM A240M-15 JIS G 4312 Q/TB3070-2007	汽车排气系统 钢管的制造 Manufacture of automobile ex- haust system steel pipe.
	热卷	3.0-6.0			
	开平板	7.0-14.0			
429	冷卷	0.3-3.0		Q/ 太新 144-2013、JIS G 4305	汽车排气系统 歧管的制造 Manufacture of automobile ex- haust system Manifold pipe.
	热卷	3.0-6.0			
	开平板	7.0-14.0			
436L	冷卷	0.3-3.0		GB/T3280-2015, JIS G 4305	汽车排气系统 冷凝管的制造 Manufacture of automobile ex- haust system condensate tube pipe.
	热卷	3.0-6.0			
	开平板	7.0-14.0			
439M	冷卷	0.3-3.0		Q/ 太新 039-2015, EN 10088	汽车排气系统 冷凝管的制造 Manufacture of automobile ex- haust system condensate tube pipe.
	热卷	3.0-6.0			
	开平板	7.0-14.0			
441	冷卷	0.3-3.0	Q/ 太新 027-2012, EN 10088	汽车排气系统 歧管的制造 Manufacture of automobile ex- haust system Manifold pipe.	
	热卷	3.0-6.0			
	开平板	7.0-14.0			

◆ 化学成分及物理特性

Chemical composition and physical properties

◆ 化学成分

Chemical composition

单位Unit: %

牌号 Grade	C	Si	Mn	Cr	Mo	N	Nb、Ti
409L	≤ 0.01	≤ 1.00	≤ 1	10.50-11.75	--	≤ 0.01	Ti 单稳定 Single stable: 10(C+N)~0.75 双稳定 Double stable: Ti: 0.12 ~ 0.20; Nb: 0.12 ~ 0.20
429				14.0~16	--		Ti: 0.10 ~ 0.20; Nb: 0.35 ~ 0.50
436L				17.0~19	0.90~1.5	≤ 0.012	Ti: 0.15 ~ 0.20; Nb: 0.10 ~ 0.20
439M				17.0~19	--		Ti 单稳定 Single stable: 0.15+4(C+N)~0.8 双稳定 Double stable: Ti: 0.15 ~ 0.30; Nb: 0.15 ~ 0.30
441				17.5~18.5	--		Ti: 0.10 ~ 0.30; Nb: 0.30+3C~1.0

◆ 物理特性

Physical performance

牌号 Grade	密度 g/cm ³ Steel grade	热膨胀系数 0-600°C (10-6/°C) Thermal expansion coefficient	导热系数 (100°C, w/m°C) Thermal Conductivity
409L	7.73	12.3	32
429	7.72	12.2	27.5
436L	7.73	11.6	24
439M		11.4	25
441		11.6	28

◆ 力学性能

Mechanical properties

◆ 室温力学性能

Mechanical properties in room temperature

单位Unit: Mpa

牌号 Grade	屈服强度 Yield strength	抗拉强度 Tensile strength	延伸率 Elongation	硬度 Hardness	弯曲试验 Bending test
	Rp0.2	Rm	A50	HV	180° d=a
409L	190~260	360~450	≥ 35%	≤ 150	d=a, 180°
429	250~330	420~520	≥ 32%	≤ 170	d=2a, 180°
436L	245~320	420~520			
439M	240~320	420~500			
441	250~330	420~520			

◆ 高温力学性能

Mechanical properties in high temperature

单位Unit: Mpa

牌号 Grade	600°		700°		800°		900°	
	Rp0.2	Rm	Rp0.2	Rm	Rp0.2	Rm	Rp0.2	Rm
409L	119	188	90	115				
S429	140	265	125	155	52	55	31	32
436L	140	247	115	149	48	56	24	28
439M	151	237	94	149	41	47	23	25
441	144	277	125	160	52	56	32	33

◆ 成形性及耐蚀性

Formability and corrosion resistance

◆ 成型性

Formability

牌号 Grade	极限深冲比 Maximum deep drawing ratio	厚度 (mm) thickness
409L	2.25	1.5
436L	2.13	
439M	2.27	

◆ 耐冷凝液腐蚀性能

Corrosion resistance of condensate

典型冷凝液腐蚀 20 周期 (g/m ²) Typical values of condensate corrosion 20 cycle			
牌号 Grade	SUS436L	439M	SUH409L
腐蚀失重 Corrosion weight loss	7.38	22.23	40.31

◆ 可供钢号及对应标准

Can provide grade and corresponding standards

牌号 Grade	太钢企标 TISCO Enterprise Standard	美标 American standard	日标 Japanese standards	欧标 European standard	国标 Chinese standard
	Q/ 太新 039 Q/ 太新 027 Q/ 太新 144 Q/TB3070	ASTM A240M_2015	JIS G 4305、JIS G4312	EN10088-2	GB/T 3280
409L	SUH409L	S40930 S40920 S40910	SUH409L	1.4512	022Cr11Ti 022Cr11NbTi
439M	439M	S43932		1.4510	--
429	TTS429M1 TTS429	--	SUS429	--	--
436L	--	--	SUS436L	--	019Cr18MoTi
441	441	S44100		1.4509	--

◆ 满足客户个性化需求

To meet the individual needs of customers

针对客户特殊的宽度、厚度、性能及包装等要求，签订个性化的技术协议，或将相应的技术要求标注到合同中，为客户定制化生产。

To the customer special width, thickness, performance and packaging requirements, signed a personalized agreement. Or the corresponding technical requirements be marked to the contract, customized production for the customer.



产品介绍 >>>

Product Introduction

厂家 Companies	C	N	S	TI	C+N ppm
进口A Imported A	0.005	0.0060	0.001	0.20	110
进口B Imported B	0.008	0.0070	0.001	0.20	150
进口C Imported C	0.014	0.0090	0.002	0.17	230
太钢平均水平 TISCO average level	0.009	0.0085	0.002	0.20	170

(以409L为例)

从表格中的数据可以看出，太钢生产的409L在化学成分控制水平上，达到了国外同行业水平。

(Such as 409L)

Based on data listed in the table, chemical composition control of 409L produced by TISCO has catch up with the same level of the industry in the world.

厂家 Companies	氧化物评级 Oxide rating	硫化物评级 Sulfide rating	晶粒度评级 Grain size rating
进口A Imported A	0.5	0.5	7.5
进口B Imported B			7.5
进口C Imported C			7.0
太钢 TISCO			7.0~7.5

钢质纯净度与国外进口材料相当。

The purity of steel by TISCO is similar to that of imported one.

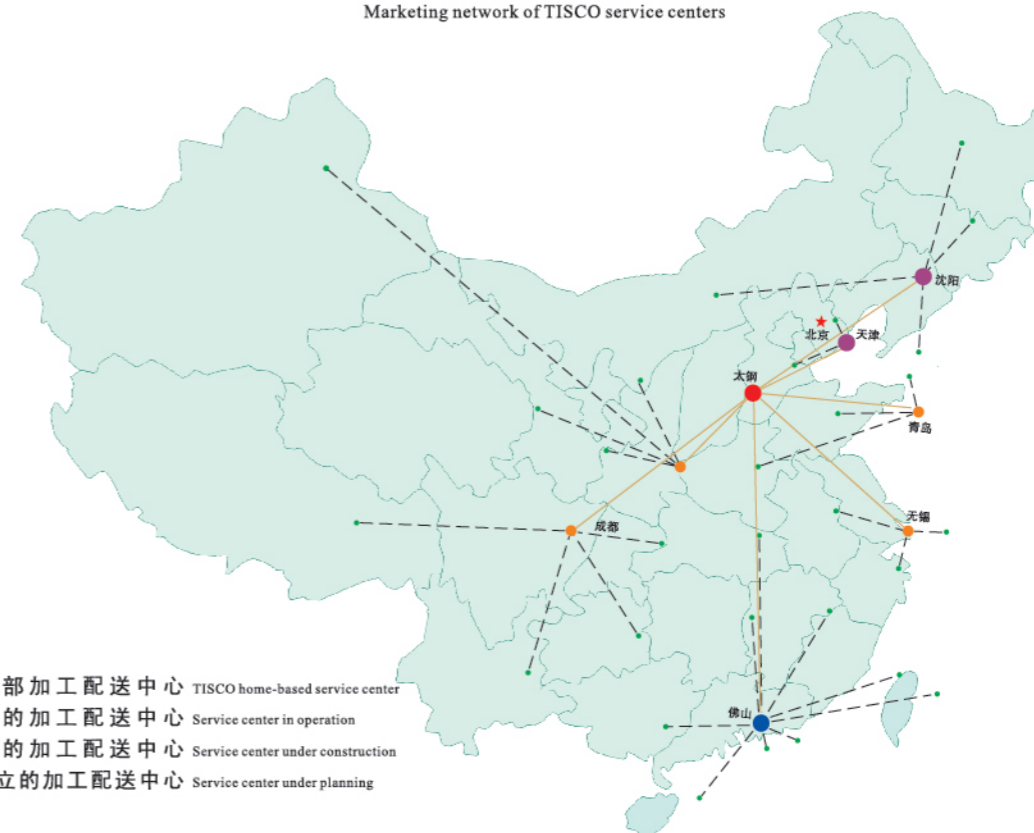
服务承诺 >>>

Service Commitments

- 为客户提供个性化成份、性能、包装、卷重、质保书的设计。
- 为客户在选材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
- ◆ ResPDnse to customer's claim with in 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



主要业务部门联系方式 >>>

Contacting Manners

主要业务部门 Main business department	业务功能 Functions	联系电话 Telephone	E-mail
太钢营销部 Marketing & sales department of TISCO	合同管理、订货、异议、 投诉受理及出口贸易 Contract and order management Complaint and claim handling Exports business	0351-2138582 0351-2138456 400-653-1998 800-806-1998	lijian@tisco.com.cn
技术中心 Technology Center	专家服务系统 Expert Service System	0351-3019442	shifc@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
太钢进出口(香港)有限公司 TISCO STAINLESS STEEL (H.K.) LTD.	香港 Hongkong	电话 (Tel) +0852-28681819	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
山西区销售公司 TISCO sales company in Shanxi	太原 Taiyuan 定襄 Dingxiang	电话 (Tel) 0350-2138215 2138213 传真 (Fax) 0350-2138217 电话 (Tel) 0350-6034511 传真 (Fax) 0350-6086527
太钢华北区销售公司 TISCO sales company in North China	天津 Tianjin 北京 Beijing	电话 (Tel) 022-2421223 传真 (Fax) 022-24308103 电话 (Tel) 010-64441368 传真 (Fax) 010-64441369
太钢东北区销售公司 TISCO sales company in Northeast of China	沈阳 Shenyang 沈阳 Shenyang 哈尔滨 Haerbin	电话 (Tel) 024-29874080 传真 (Fax) 024-24231216 电话 (Tel) 024-29874080 传真 (Fax) 024-24231216 电话 (Tel) 0451-55185321 传真 (Fax) 0451-55185321
太钢华东区销售公司 TISCO sales company in East China	无锡 Wuxi 上海 Shanghai 杭州 Hangzhou	电话 (Tel) 0510-82407713 传真 (Fax) 0510-82441187 电话 (Tel) 021-61808397 传真 (Fax) 021-61808397 电话 (Tel) 0571-86636829 传真 (Fax) 0571-85061958
太钢山东区销售公司 TISCO sales company in Shandong	青岛 Qingdao 济南 Jinan	电话 (Tel) 0532-67730206 传真 (Fax) 0532-67730205 电话 (Tel) 0531-58677311 传真 (Fax) 0531-58677313
太钢华中区销售公司 TISCO sales company in Central China	武汉 Wuhan 长沙 Changsha	电话 (Tel) 027-85615300 传真 (Fax) 027-85615311 电话 (Tel) 0731-58677311 传真 (Fax) 0731-85598305
太钢华南区销售公司 TISCO sales company in South China	佛山 Foshan 揭阳 Jieyang	电话 (Tel) 0757-83315711 传真 (Fax) 0757-83315718 电话 (Tel) 0663-8766018 传真 (Fax) 0663-8766048
太钢西南区销售公司 TISCO sales company in Southwest of China	重庆 Chongqing 成都 Chengdu	电话 (Tel) 023-68154181 传真 (Fax) 023-68400789 电话 (Tel) 028-87604342 传真 (Fax) 028-87612940
太钢西北区销售公司 TISCO sales company in Northwest of China	西安 Xi'an 郑州 Zhengzhou	电话 (Tel) 029-86231507 传真 (Fax) 029-86459431 电话 (Tel) 0371-56976971 传真 (Fax) 0371-56976973