



天津市奥凯石油机械有限公司

# Tian Jin Aokai oil Tools CO., LTD.

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# 公司简介

天津市奧凯石油机械有限公司成立于2001年10月,坐落于渤海之滨的大港油田联盟工 业园区, 距天津港40公里, 毗邻205、104国道及海防公路, 交通便利、通讯发达、地域 辽阔,有着良好的发展空间。

目前,公司过滤系列主打产品主要有不锈钢、碳钢镀锌、塑料喷涂等各种材质类绕焊 筛管、筛板、割缝筛管、水帽和气帽及桥式筛管、激光割缝筛管和钻孔防砂管。其他主打 产品主要包括过滤产品配件,各种材质及规格类API油管和石油套管及其配件,和各类钻 井工具。

公司生产的绕丝筛管、筛板、水帽均采用V型大开口形式,具有不易堵塞的特点,材 质可根据用户需要选用304、Mo2Ti、碳钢(表面可做镀锌、塑料喷涂处理)。主要用于 油、气、水井的防砂及各种水处理、过滤、造纸、化工等设备中。产品已销往大港、大 庆、胜利、冀东、辽河、华北、新疆、中原等油田和北京、武汉、沈阳、西安等城市以及 美国,孟加拉,苏丹、阿尔及利亚,塞内加尔,菲律宾,越南,蒙古及中东市场等。

公司现拥有面积过10000平方米的厂房,专业完备的筛管生产设备,采用国际先进水 平的生产工艺和检测手段,达到年产70000米的生产能力。产品规格齐全(φ1.5"~φ 50"),确保品质,供货及时。全面秉承质量第一,重视企业管理和质量控制,于2003年6 通过ISO9001:2000国际质量体系认证,具备可靠的质量管理体系。

真诚期待与您的合作,我公司将竭诚为您提供最优质的产品和最满意的服务。

# **Company Profile**

Tianjin Aokai Oil Tools Co., Ltd. Founded in October 2001, Located in Lianmeng Industry District Dagang Oil Field. It's 40km apart from Tianjin Xingang Port, adjacent to 204, 205 and Haifang Road. Being with convenient traffic, developed communication, vast territory and a good space for development.

We are professional and famous manufacturer and exporter of sand control products and accessories for water,oil, gas,and environmental industries. The products mainly including continuous slot screen, pipe base screen, perforated tube, slotted pipe, sieve plate, water strainer, gas strainer, casing pipe, oil tube, collar, centralizer with any specifications and materials, and drill tools, etc. that concerned with well drilling project.

Since the company established, we insist on good quality, passed the ISO9001:2000 quality assurance system certification in June 2003, making the business range extend continually. At present we have been marketing our products inland to Daqing, Dagang, Shengli, Liaohe, North China, Jianghan and Jidong oilfields and the cities of Wuhan, Xi'an, Shenyang and Beijing, etc. And exporting to many international market places, such as USA, Sudan and Bangladesh Algeria, Senegalese, Philippine, Viet Nam, Mongolia, Middle East market , etc.

Our company owns the advanced equipments and strict inspection processes and in a position to provide the high-quality services for all of our customers. We sincerely welcome friends in domestic and overseas hold talks and cooperate with us!





Slot-control,torsion, load, tensile and collapse test are part of our program to ensure the high quality of our products and to maintain vour confidence.





Iso 9001:2000 standard is applied to all sales and manufacturing products.



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# Well Screens are designed to optimize your well

Maximum flow capacity Minimum pressure drop Lowest possible cost Maximum life for your well

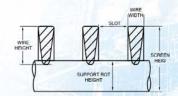


Aokai well screen are manufactured by a v or wedge shaped wire around an internal array of longitudinal support rods. Each intersecting point of these wire is fusion welded. The v or wedge shaped profile wire wraps around the support rods over the full length of the screen creating a continuous slot opening, hence the screen allows water(oil) to enter your well freely in ample quantities while at the same time keeps the majority of sand and gravel out of the well.



# Aokai well screen advantage

- Continuous slot Opening significantly increases the available open area, providing greater access to the water-bearing zone.
- Non clogging 'V'shaped profile wire, avoids clogging, is self-cleaning and ensures an uninterrupted flow. Sand grains make only-two-point contact and do not wedge in the screen's inwardly enlarging slot.
- Large open area This allows more water to enter at much lesser frictional head loss and the efficiency of well is improved appreciably.



### Specification

PROFILE WIRE	•	•	V	•	▼	T	V	V	V
REFERENCE	47	63	69	93	118	121	130	158	191
WIDTH(mm)	1.2	1.5	1.8	2.3	2.9	3	3.3	4	5
HEIGHT(mm)	2.2	2.5	4.5	3.5	4.7	6	6.3	7	9.2
SUPPORT ROD	•	V		<b>V</b>	7	V		•	
WIDTH(mm)	2.30	2.3	0 3	3.00	3.70	3.30		φ2.8—φ	5
HEIGHT(mm)	2.70	3.6	0 4	1.70	5.60	6.30		1/2	-



Slot size (mm): 0.10,0.15,0.2,0.25,0.30-3,also achieved upon customer request. Open area up to 60%.

Material: Low Carbon ,Low Carbon Galvanized steel (LCG), steel treated with plastic spraying, Stainless Steel ( 304,etc. )

Lengths up to 6 meters.

Diameter range from 25mm to 1300mm.

End Connection: Plain beveled ends for butt welding or threaded.

NOTE: Other wires and rods available upon request.

# Continuous slot screen

Continuous slot screens are recommended in the following situations

.Formations comprising small or fine particles.

.Water wells where gravel packs are to be installed.

.Thin aquifers.

.Small-diameter wells.

.Wells that need to developed.

全焊式绕丝筛管在世界范围内被广泛应用于油、气、水井防砂工业中,其在水井工业中的地位尤其突出,是各种水资 源过滤筛管中应用最为广泛的一种。

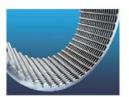
Aokai辦管采用世界先进的全绕焊生产工艺,应用特制梯形丝绕组在呈圆周式排列的一组支撑丝上焊制而成。全程式 焊接,保证了产品严格的连续整体性,从而使其形成理想的缝隙尺寸,并具备了最大量承受高压力的性能。

各生产环节均由专业生产人员使用先进精良的专业设备进行生产。产品规格及原材料可根据客户需要特别订制,所有 产品均严格参照sy5182-2008标准进行生产检验,保证产品质量,从而保证广大客户的利益,以最经济的投入获得最高的

注:1. 该产品可根据客户实际需要订制不同规格及原材料(主要有不锈钢和碳钢两种),保证合理投资,节约生产成本。

- 2. 筛管连接亦可根据不同需要制作。
- 3. 非不锈钢产品可通过镀锌或塑料喷涂处理形成保护层。外表美观洁净。
- 4. 可根据客户需要制作包装。
- 5 该产品同时被广泛应用于油气工业,化工、造纸、水处理等行业。





#### Standard screen



For shallow and medium-depth

Nominal Diameter 公称直径	ID 内径	OD 外径	Wt 重量	Collapse Strength 抗压力
inches	mm	mm	Kg/m	bar
2-3/8	45	60.3	4	90
2-7/8	58	73	4	90
4-1/2	100	114.3	5	14
5-1/2	124	139.7	7	8
6-5/8	150	168.3	9	20
8-5/8	197	219.1	15	15
9-5/8	222	244.5	17	9
10-3/4	247	273.1	20	10
12-3/4	298	323.9	24	10
13-3/8	316	339.7	30	9
16	378	406.4	34	9
20	476	508.0	53	9

适用于, 没井或一般井用筛管

#### Reinforce screen



For medium-depth and deep wells: greater collapse strength due to screens being made from Vee-wires of higher cross-screen.

Nominal Diameter 公称直径	ID 内径	OD 外径	Wt 重量	Collapse Strength 抗压力	
inches	mm	mm	Kg/m	bar	
4-1/2	100	114.3	8	60	
5-1/2	124	139.7	10	50	
6-5/8	150	168.3	12	50	
8-5/8	197	219.1	20	60	
9-5/8	222	244.5	25	60	
10-3/4	247	273.1	30	45	
12-3/4	298	323.9	37	40	

适用于:中等深度水井或者深水井:更大 的强度,更大的过滤面积。





#### Pre-packed screen

#### 双层预充填筛管

Pre-packed screen is the combination of screen with different diameter, fill the quartz sand into the space between the double layers in the screen, to make the sand solid and close down, attain the result of defend the sand with sand, Work time less and more efficient.

双层预充填筛管是将直径不同的单层绕丝筛管组合到起, 在双层筛管所 形成的环型空间中预先填石英砂后夯实封闭,保证充填石英砂的密实、紧固。 达到"以砂防砂"的效果,可减少施工作业时间,见效快效果明显。



#### Sieve plate (Flat screen)

#### 筛板

The sieve plate (flat screen) can be fabricated with very small wires and rods for critical fine-screening operations ,or with much larger wires and rods for heavy-duty operations. Application: Coal separation, mining and guarrying .sugar, fertilizer and chemical industries.

筛板易渗漏、耐磨、耐腐蚀。断面为梯形,缝隙上窄下宽,筛缝均匀,焊接质量稳 定,开孔率高,使用寿命长,有很高的强度,刚度和承载能力,可以做成各种形状的刚性 筛分过滤装置。

广泛应用于矿山、煤炭、石油、化肥、粮食、食盐、环保等行业。 筛分液体,粉末 等材料。石油, 化工, 冶金, 矿山, 医药净化, 钻井液体净化等。











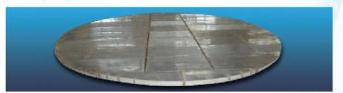


不锈钢筛板

Support Grids System

The support grids system is available in an assortment of framing options and designs-as a one-piece construction or multiple sections for on-site assembly and ease of retrofitting through existing manways. They are used in hydrotreaters , desulfurizer ,molecular sieves ,gas sweeteners, ion exchangers and their absorption systems.

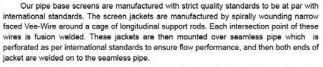
格栅系统具有多种框架选项和设计可供选择,其 结构可为一件式组件或分为多个部分(便于通过人安 裝)。这些自承结构对倒塌或膨胀有超强的抵抗性,甚 至在筛板必须承受极高负载的操作中也能轻松应对。 筛缝大小可设计用于直接截留介质。



#### Pipe base screen

#### 筛管(带中心管,基管)

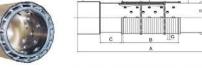




由基管、全焊式绕丝筛管和支撑环组成。基管采用符合API标准的套管或油管钻孔而成。全焊式 绕丝筛管通过支撑环与基管焊接为一体







NOTE: The length of base pipe and the diameter and the slot of screen can be changed as per customer's requirement.

Description: 此描述图片为 带中心管筛管 A-Overall Joint Length(AOL)总长:

W- Weld ring/safety ring挡环。



		BASE PIPE 9	中心管				SLIP ON SC	REEN JACK	ET 第9	24
Nominal Diameter 公称直径	Pipe OD 外径	Weight 重量 Ib/It	Hole size 孔径	Holes per foot	Total Area of holes	Screen OD (in)	Open a	rea of screer SLOT		凡面积
(in)	(mm)	W.T [mm]	in	孔密	in 7/t	外径	0.008*	0.012"	0.015*	0.020
2-3/8	60	4.6 [4.83]	3/8	96	10.60	2.86	12.68	17.96	21.56	26.95
2-7/8	73	6.4 [5.51]	3/8	108	11.93	3.38	14.99	21.23	25.48	31.85
3-1/2	88.9	9.2 [6,45]	1/2	108	21.21	4.06	18.00	25.50	30.61	38.26
4	101.6	9.5 [5.74]	1/2	120	23.56	4.55	20.18	28.58	34.30	42.88
4-1/2	114.3	11.6 [6.35]	1/2	144	28.27	5.08	15.63	22.53	27.35	34.82
5	127	13 [6.43]	1/2	156	30.63	5.62	17.29	24.92	30.26	38.52
5-1/2	139.7	15.5 [6.99]	1/2	168	32.99	6.08	18.71	26.96	32.74	41.67
6-5/8	168.3	24 [8.94]	1/2	180	35.34	7.12	21.91	31.57	38.34	48.80
7	177.8	23 [8.05]	5/8	136	42.16	7.58	23.32	33.61	40.82	51.95
7-5/8	194	26.4 [8.33]	5/8	148	45.88	8.20	25.23	36.36	44.16	56.20
8-5/8	219	32 [8.94]	5/8	168	51.08	9.24	28.43	40.98	49.76	63.33
9-5/8	244.5	36 [8.94]	5/8	188	58.28	10.18	31.32	45.15	54.82	69.77
10-3/4	273	45.5 [10.16]	5/8	209	64.79	11.36	34.95	50.38	61.18	77,86
13-3/8	339.7	54.5 [9.65]	5/8	260	80.60	14.04	37.80	54.93	66.87	85.17

F-Centralizer扶正器:

G Gauge Aperture or slot 筛缝;

P-Pin-box/Coupling接箍;



#### Precise Punched slotted Screen

Precise punched slotted Screen is a new product which is composed of central tube, precise punched slotted Screen jacket and stainless steel ring. It has characteristics such as exquisite controlled hole, high percentage of open area, strong integral strength, resistance to deformation, excellent resistance to corrosion and high reliability etc.

高密冲缝筛管是由中心管、高密冲缝套、不锈钢配环组成, 具有精密可控的 孔隙, 过流面积大,整体强度高和抗变形能力强, 优良的抗腐蚀性, 高可靠性等

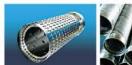


# Sphere of application of product

产品适用范围

Screen can be used for casing completion and liner completion of vertical wells, inclined wells and horizontal wells etc. And it can be used for various oil wells, gas wells and water wells. It can be used as sand control colonnade individually and it can be used in gravel packing.

筛管可用于直井、斜井、水平井等套管完井和裸眼完井的各类油、气、水井,可单独作为防砂管柱使用,也可配合充 填使用。







# Features & Options

性能特点

	Screen 筛 管		API Pipe 基	5 管
ID (mm) 内径 (mm)	OD (mm) 外径 (mm)	SLOT (mm) 过滤精度 (mm)	Normal size (inch ) 公称直径	OD (mm 外径 (mm)
63	73		2-3/8"	60.3
74	85	0.10-3	2-7/8"	73
92	102		3-1/2"	88.9
103	127		4"	101.6
116	130		4-1/2"	114.3
129	142		5"	127
142	154		5-1/2"	139.7
172	184	0.15-3	6-5/8"	168.3
183	195		7"	177.8
220	232		8-5/8"	219.1
246	260		9-5/8"	244.48
276	290	0.25-3	10-3/4"	273.05
342	355	077865	13-3/8"	339.70
Length of s	creen 筛管长度 5 m * 1	The second second	5.8	
Length of s	creen 筛臂长度 4.5 m * 2	2	Length of pipe	9.3~9.6
Length of s	creen 筛管长度 5 m * 2		基管长度	11~12

注:基管长度和尺寸,除管的过滤面积可根据用户的要求确定。

#### Slotted Liner

The slotted liner is mainly used to the water and oil reservation layer without much sand. Its function is to prevent the rock bits dropping into the well bore. The working principle is allowing the certain size sand coming through the surface with crude oil but keeping the bigger size sand being stopped outside to form sand bridge, and thereby achieving the anti-sand purpose. This type of product is commonly used to sand rock and carbonate reservoir, and especially useable for horizontal wells.



Sorts: API casing;

Length: ≤15m (each);

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Outside Diameter: 50 ~ 200mm ;

Slot Width: (0.10 ~ 4)mm ± 0.03mm;

Slot Number: as per customer's requirement:

Slot Shapes: straight in line pattern, staggered pattern, spiral pattern;

Slot space: as per customer's requirement;

Slotted casings with apertures of 0.20 ~ 6mm are widey used to sands prevention of oil and wells.



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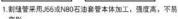
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2.割缝边缘垂直度好,切边光滑、无毛刺,割缝均匀。

3. 过流面积大, 27/8°筛管300条割缝/1.5m, 过流面积72每立 方厘米,比同规格油管过流面积大2.4倍。利于液体流动。

4.在斜井及水平井中使用其优越性更加明显。

5.整体进行防腐处理,在筛管的各表面形成致密的防护 层,提高了筛管的抗腐蚀性及耐磨性,可有效延长其井 下工作的寿命。

6.适用于出砂粒径大于0.3mm的出砂井防砂。

7.操作简单,使用方便,内通径大,易于进行管串配置。

# Slotted Liner Technical Specification

11 11

1.1		-	MILE
Tele	术	775	赤印
230	11	30.	30.X

	API Std. Casing API 标准套管						ID	ID Length	Slot Length	Slot No.	Slot Width	Slot Tolerance	Valid Filter Area	Max. Strength
Spec 规格 mm	Thickness 壁厚 mm	Per Weight 毎米重量 kg/m	内径 mm	长度 m	缝长 mm	冲缝密度 No./m	缝宽 mm	缝宽精度	每米有效 过滤面积 cm/m	KN 最大抗拉 载荷				
60.32	5	6.84	50.3			200			48	512.54				
73.02	5.5	9.15	62			240			57.6	688.55				
88.9	6.5	13.22	75.9	3		280			67.2	995.1				
101.6	6.5	15.22	88.6			300			72	1151.2				
114,3	7	18.47	100.3		1 (	320	i i		76.8	1400.4				
127	7.52	22.13	112		80	340	0.3	±50	81.6	1673.8				
139.7	7.72	25.11	124.3		1000	360			86.4	1900.2				
130.1	9.17	29.48	121.4			360			86.4	2232.4				
168.3	8.94	35.09	150.4	10		400			96	2672.95				
177.8	8.05	33.68	161.7			440			105.6	2559.2				
111.0	9.19	38.19	159.4			440			105.6	2940.7				

### Perforated Pipes

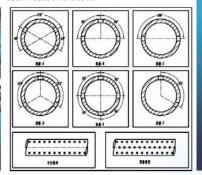
The perforated pipe is manufactured with steel or stainless steel. We can drill standard or customized hole size in any number and any pattern. Every joint perforated by us is deburred internal and external .Every hole is visually inspected and cleaned of burr material.

- 1.钻孔管采用J55或N80石油套管本体加工,强度高,不易变形。
- 2.钻孔均匀光滑、无毛刺。
- 3.整体进行防腐处理, 在筛管的各表面形成致密的防护层, 提高了筛管的抗 腐蚀性及耐磨性,可有效延长其井下工作的寿命。
- 4.操作简单,使用方便,内通径大,易于进行管串配置。
- 5、钻孔类型可由客户随意选择。



孔径、孔密、分布方式







Pipe Size 套管尺寸	Holes per Feet 每英尺孔数	Size of Hole 孔 径	Perforated Area per Feet 每英尺开孔面积
3/4"	78	3/16"	2.15
1"	54	5/16"	4.14
1-1/4"	66	5/16"	5.06
1-1/2"	78	5/16"	5.98
2-1/16"	78	5/16"	5.98
2-3/8*	90	3/8"	9.94
2-7/8"	102	3/8"	11.26
3-1/2"	126	3/8"	13.91
4"	138	3/8"	15.24
4-1/2"	150	3/8"	16.56
5"	162	3/8"	17.88
5-1/2"	174	3/8"	19.21
6-5/8"	186	3/8"	20.53
7"	222	3/8"	24.51
9-5/8"	294	3/8"	32.46

#### Water strainer and gas strainer (nozzle screens)



Water strainers are manufactured in accordance to customer flow requirements in almost any alloy. They can be designed for filtration or treatment systems to permit more effective use of the treatment media. Because of their non-clogging design strainer are effective in a wide range of water treatment and other industrial applications. Common applications include under drain media retention elements or flow distributors in demineralizers and water softeners in pressure and gravity sand filters. Strainers can also be used as collectors at the bottom of the vessels by installing a number of strainers uniformly across a tray plate. The combination of high open area and a non-plugging slot design makes this nozzle/collector application popular.

我公司生产的环保节能不锈钢梯形绕丝水帽系列,替代水处理设备传统塑料水帽,改进了塑料水帽强度差、耐压、耐 温、抗老化性能差等缺点、抗老化、耐压性能好、使用寿命长、几乎不会损坏、安全可靠、综合成本低、是水处理设备行 业中的新一代产品,有助于用户解决原塑料水槽所产生的后顾之忧。

材料有: 304或316L等。



#### Hub and Header Laterals

讲排水装置

Hub Laterals can be designed for disc head vessels enabling the system to collect completely to the bottom of the vessel. Header Laterals design are also available for flat bottom vessel distributor or collector applications. Systems can be designed to accommodate side, center, top or bottom inlet piping. Integral backwash systems can be designed for any hub and header lateral for fast effective and efficient cleaning. Connections of the laterals can be flanged or threaded. All systems are designed for effective liquid or solid retention in a wide range of applications including exchangers, clay and sand filtration applications, carbon towers and power plants with water systems.

铁钢V型绕丝中排装置,可替代不锈钢管上开孔再包涂纶网套老式支管,通流面积大、布水均匀、机械强度高、耐温 性、耐压性、抗老化、抗腐蚀性都行到极大提高。不锈钢缝丝间隙可以根据树脂的大小来设计。



# API 5CT Tubing & Casing

油查管

- 1) Sizes (尺寸): OD 2-3/8"~4-1/2", 4-1/2"~20"。
- 2) Grade钢级: H40, J55, N80, L80, C90, T95, P110。
- 3) Length长度: R1, R2, R3, R5.8m以内。
- 4) Standard执行标准: API SPEC 5CT。
- Application应用范围: Tubing is used to extracting petroleum and natural gas from a well油、气、水井的 软权。
- 6) Packing包装: bundle or bulk捆装或散装。





Size OD		外径	ID	内径	GRADE	WALL THICKNESS 壁厚		
尺寸	in	mm	in	mm	钢级	in	mm	
4-1/2"	4.500	114.30	4.000	101.60	J55K55N80	0.250	6.35	
4.500	114.30	3.920	99.57	J55K55N80	0.290	7.37		
			4.408	111.96	J55K55N80	0.296	7.52	
5"	5.000	127.00	4.276	108.61	N80P110	0.362	9 29	
			4.126	104.80	N80P110	0.437	11.10	
	1/2" 5.500	139.70	4.892	124.26	J55K55N80	0.304	7.72	
5-1/2"			4.778	121.36	N80	0.361	9.17	
			4.670	118.62	N80	0.415	10.54	
			6.366	161.70	J55K55N80	0.317	8.05	
7"	7.000	177.80	6.276	159.41	J55K55N80	0.362	9.19	
			6.184	157.07	N80	0.408	10.36	
			8.755	222.38	N80	0.435	11.05	
9-5/8"	9.625	244.48	8.681	222.50	N80	0.472	11,99	
SHARW	247744.004547		10.050	255.27	H40 J55K55N80	0.350	8.89	
10-3/4" 10.750	273.05	9.850	250.19	J55K55N80	0.450	11.43		
			12.615	320.42	J55K55	0.380	9.65tr	
13-3/8"	13.375	339.72	12.415	315.34	J55K55N80	0.480	12.19	



# Coupling& Pup joint & Reducer

接籍&短节及变径接头

公司专业生产各种油、套管接籍,严格按照美国石油学会API标准生产。主要产品有2-3/8"、2-7/8"、3-1/2"、4-1/2" EU、NU油管接籍;5-1/2"、7"、9-5/8"套管接籍、各种规格油套管短节、变径接头。















#### Centralizers

扶正器

Centralizers are used to center the screen within the borehole. They should be of sufficient strength and surface area to provide support, yet not impede the installation of gravel. These are conflicting requirements, and some compromise is required. A simple guide, which has proven effective, is manufactured from  $5/16 \times 2$  inch steel, 30 inches long, bent to provide the proper centering distance. This distance or bend is usually the theoretical borehole radius minus one inch. The guides are attached to the screen by welding. Three or four guides are placed equidistantly around the screen at 40 foot intervals.

扶正器属固井工具、它制造简单、结构美观、牢固耐用、扶正力大、是一种能保证钻井固井质量的扶正器。











# **Bottom Plugs**

A bull nose or plug is always attached to the bottom of casing and screen strings installed in gravel envelope wells. Semi-elliptical tank ends, readily available and inexpensive, provide a convenient fulfillment of this requirement.







# Stainless Steel Pipe and Carbon Steel Casing

Our factory provides stainless steel pipe and carbon steel casing with the materials 304, 316,316L, Q235,etc. and nearly all kinds of specifications. The quality of our products had achieved American ASTM standard and Chinese Standard, Stainless steel pipe are made from more than 20 steel grades of various resistances and are intended to be used in a wide range of the environments with corrosion and temperatures conditions of petroleum, chemical industry, medicine, machinery, automobile, nuclear power and aviation.







供应各种材质及规格碳钢钢管及不锈钢钢管。





