PETROL STEEL

集团简介

PETROL STEEL CO.,LTD (SSAW Pipe Plant) locates at No. 30, Cangzhou Economic Develpment Zone, Hebei, China and it has 25 years of development history. The group was founded in 1993. Our company covers an area of 350 thousand square meters, with total assets of 680 million yuan, and now there are 680 employees. At the same time, it produces 400,000 tons of spiral steel pipes every year, and its output value is 1.8 billion Yuan.

With 13 production lines of spiral steel pipe, our company is capable of manufacturing 219-3,500mm double face submerged arc welding spiral steel pipes in 6-26mm wall thickness. Out products are in conformity with SY/T5037-2012 standard, GB/T9711-2017 standard, and API 5L standard. Made of steel plates in Q235AB or 16Mn or X42-X80 steel grades, our pipes are widely used in long distance transmission of natural gas, oil, chemicals, water, electric power, thermal power, and ocean drvedging etc.

Our company adheres to the standpoint of high quality, and comprehensively promotes quality management. In 2000, our company obtained IS09001:2000 quality management system certification, and we also got ISO 14001:2004 environmental management system certification and OHSAS18001: 2007 occupational health and safety management system certification respectively in 2004 and 2007.

Our products are strictly controlled in the whole process from contract signing, raw materials procurement, production, inspection and after-sales service, and they are also periodically inspected by various professional inspection departments, such as Cangzhou Technical Supervision and Inspection Department, Hebei Provincial Quality Supervision and Inspection Department and so on. Therefore, the properties of products completely accord with the requirements of the standards, and we guarantee to provide customers with satisfactory products and services.

Over the years, the company always put the customer first with the established specifications for before-sale, in-sale and after-sale services, and meet various requirements of customers in a comprehensive way, which ensures that its products and services are well received by customers, and that long standing cooperative and mutually-beneficial relationships with customers are established.

For many years, our company has been awarded "Top 10 Outstanding Enterprises" by governments at provincial and municipal levels, "National 100 Enterprises for Honoring Contract and Maintaining Commercial Integrity" and "National Demonstration Unit for Quality Service" by ten national authorities including the State Economic and Trade Commission and the State Administration for Industry and Commerce, and "AAA Credit Rating Enterprise" by the Agricultural Bank of China, Hebei Branch, while its PETROLSTEEL(PESCO) brand products have been granted "Brand-name Products of Hebei Province" and " Top 10 Chinese Brands of Steel Pipe".



品质源于专业 成就铸就市场

Quality stemed from professionalism, market gained by achievements

时刻对品牌负责，永远让客户满意

Always responsible to our brand,
forever to the satisfaction of customers.



Besides the ssaw pipes, PETROL STEEL CO., LTD is equipped with several internationally advanced production lines and special equipment of steel pipe anticorrosion, making it capable of undertaking a variety of steel pipe anticorrosion engineering such as single and double fusion bonded epoxy (FBE) powder coating, double polyethylene (2PE) and 3PE coating, double polypropylene (2PP) coating, 3PP outer coating, and inner and outer plastic coatings. In addition, the company can also coat steel pipes with anticorrosion paints including GZ-2 polymer coating, acrylic coating, IPN8710 non-toxic coating on steel pipe wall, heat-resistant organic silicon coating, epoxy coal tar coating, epoxy resin coating, and cement mortar lining. The executive standards of the company include DIN30670, DIN30671, AWWA C210, CECS10-89, Q/CNPC38-2016, SY/T0414, SY/ T0315, SY/ T0447, SY/T0413, CJ/T114and CJ/T120.

Our company can undertake a variety of steel pipe insulation with materials including black and yellow polyurethane, rock wool, calcium silicate, and magnesium silicate. Steel pipes treated by our company for anticorrosion and thermal insulation can be widely used in marine facilities, petroleum and natural gas engineering, hydropower station, electric power plant, heating and water transfer projects, etc.

Our company puts customers first and regards quality as life. Our company owns the senior engineers teams with rich experience in production, and established pre-sales, selling and after-sales service specifications, and realized the quality control of the whole process from sandblasting, corrosion prevention and finished product inspection.

Meanwhile, our company successfully passed IS01400:2004 environmental management system certification, OH SAS 18001: 2007 occupational health and safety management system certification and IS09001:2008 quality system certification, and won many honorary titles such as "honest and trustworthy advanced units" and so on.





诚信 铸就品牌　服务 编织未来

GOOD FAITH FORGES BRAND; SERVICE MAKES THE FUTURE



品质源于专业　成就铸就市场

Quality stemed from professionalism, market gained by achievements

生产设备

竞合赢得市场　融合创造力量

PRODUCTION EQUIPMENT







生产设备 PRODUCTION EQUIPMENT

诚信铸就品牌　服务编织未来

竞合赢得 **市场** 融合创造 **力量**

CO-OPETITION GAINS MARKET; MERGING CREATES STRENGTH.





品质源于专业　成就铸就市场

Quality stemed from professionalism, market gained by achievements



生产设备 PRODUCTION EQUIPMENT

诚信铸就品牌　服务编织未来



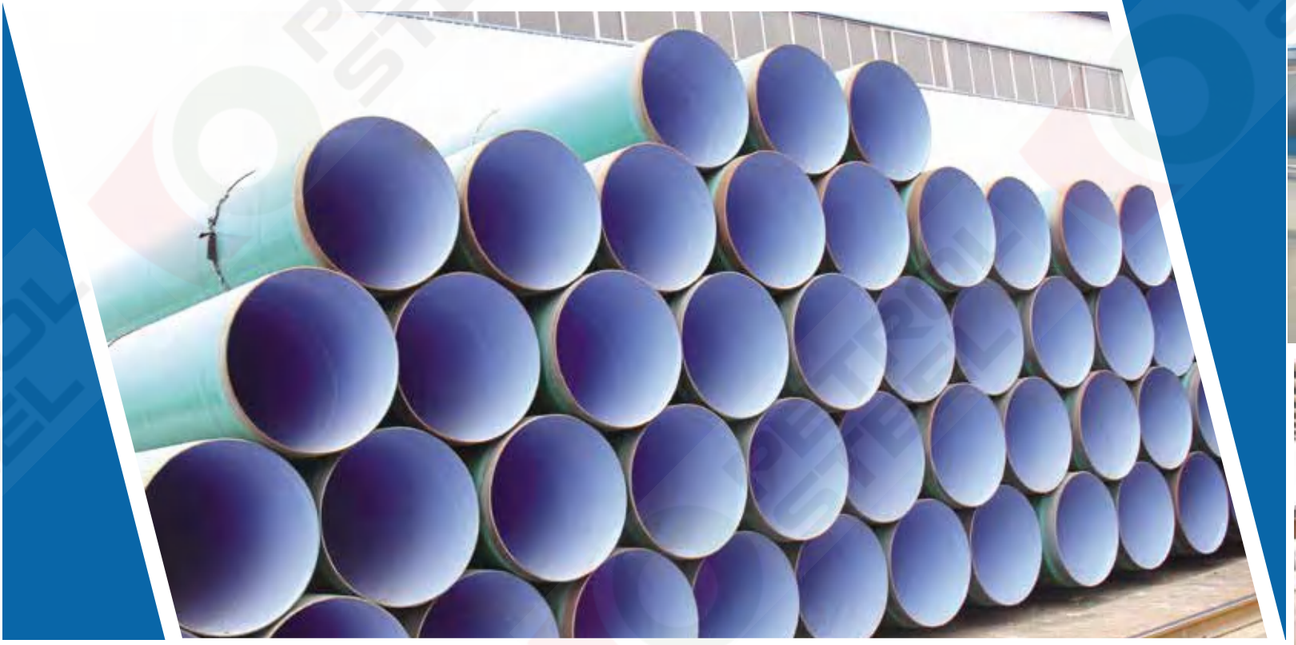
Our company is equipped with Lincoln welding machine. Automatic tracking system of infrared internal and external welding, automatic plain-end chamfering machine, X-ray flaw detector, industrial television, ultrasonic tester, hydrostatic tester, universal material testing machine, spectrum analyzer, etc. which are operated by professional operators under an advanced management mode.

品质源于专业　成就铸就市场

Quality stemed from professionalism, market gained by achievements















防腐保温

ANTICORROSION
&THERMAL
INSULATION





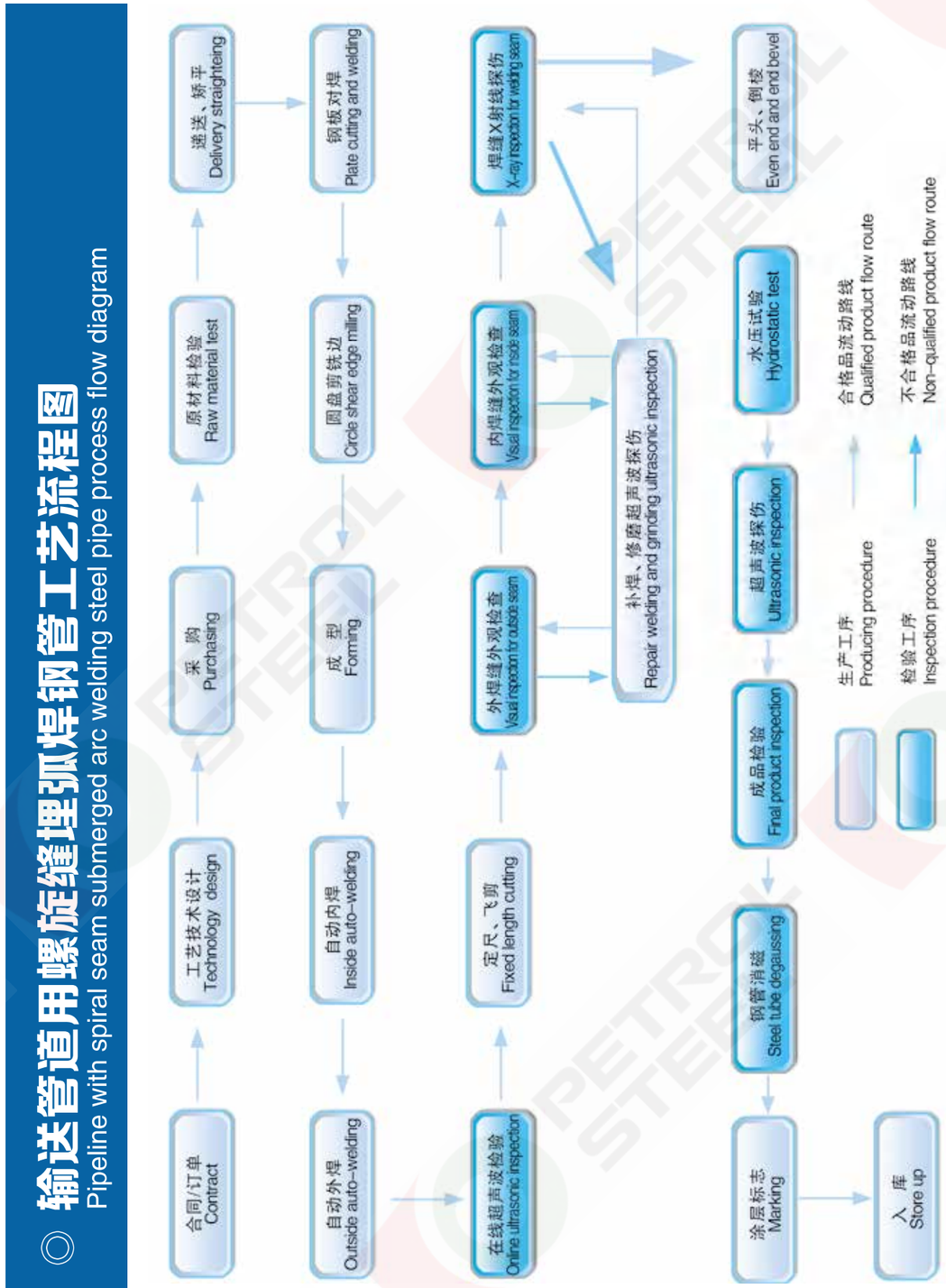




精良的设备 优秀的团队
优质的产品 周到的服务

The excellent equipment, excellent team of high quality products and thoughtful service

品质源于专业 成就铸就市场
Quality stemed from professionalism, market gained by achievements



品质源于专业 成就铸就市场
Quality stemed from professionalism, market gained by achievements

The quality ensurance measure of produce technological process

1.The technology and technological ensurance
The production and inspection technological process of our company is arranged according to API 5L and GB /T9711, and we have carried technological amelioration according to producing standard of higher-grade gas transmitting pipeline. We have the ability of produce high quality transmitting pipeline from the respect of manufacture and inspection equipment. Before every batch produce, we always carry out strictly technological test and judgment, and according to the result to determine the best technological parameters of pipe produce, ensure to produce high quality product. Then we distribute the technological process which draws up by the company to every post of produce and inspection to guide production and inspection. In the process of steel pipe produce, we strictly examine and supervise the executive state of technology discipline, take correction and prevention measure to make sure some problems can be find. We check this according to quality system of our company to ensure strictly carry out technological discipline and ensure the quality of our product.

2.The inspection ensurance
Our company establishes professional inspection organization which takes charge of the quality inspection of all process from raw material into the company to the final product store up. The steel pipe produced by our company has taken 100% inspection of inside seam, 100% X-ray inspection (there aren't blind area in pipe end) , 100% hydrostatic test (the hydrostatic test use seal and minimum blind area) 100% visual inspection (include inside and outside weld seam and raw material.) The laboratory of our company equipped with advanced inspection equipment such as imported Brook direct reading spectrum instrument and digital tensile testing machine, which can take precise chemical analysis and mechanical property to product, and online-ultrasonic test equipment and X-ray inspection equipment can take 100% non-destructive test to the product. Auto hydrostatic record instrument can ensure to test the pressure and stay pressure according to specified pressure and time of every pipe. Each inspection process has a responding engineer to supply guide and technological consultation. All the inspecting personnel has taken professional training. The technician of non -destructive test all has the profession certificate. From the personnel to equipment, we can guarantee carry out strictly quality inspection to product so as to ensure the quality of product comply with the standard.

3. The quality assurance system
Our company carries out the quality management in all company, and establishes quality system according to GB/T19001-2016 and API Q1 standard of American Petroleum Institute. In our company, everybody from general manager, responsibility of every department to every workers are all in the system. In the quality manual of company, good inspection , management responsibility, quality system, purchasing, control of process, and testing which total of confirmed by rules. We ensure every quality active comply with standard program, every work spot according to work standard. Take the policy of combine prevention as main and inspection as supplitive in quality management. Not only take prevent measure seriously so as to prevent problem happening but also react in time and correct in case something happened. The company arranges the personnel training on plan.For the person of different quality actives, according to the teaching background, training and assessment of them giving certificate as issued qualification. Our company has passed through GB/ T19001-2016 quality system certification, and ensure conducted effectively, ensure product quality comply with standard. In the process of inspection, strictly record, carry out the tracing policy, made all the inspection record has good tracing function in all the production process.




X 射线检测
X-Ray Testing

每一个流程 每一件产品 每一道工序 每一次服务


称重机
Weighing Machine


冲击试验机
Impact Tester


布鲁克直读光谱仪
Brook Direct Reading Spectrometer

检测设备

时刻对品牌负责 永远让客户满意

TESTING EQUIPMENT

In order to make sure the quality of our product and ensure deliver acceptable product to our customer, our company make heavy investment to buy a series of test equipment, such as X-ray industrial TV, offline ultrasonic flaw detector, hydrostatic testing machine, Metallographic testing machine, tensile testing machine, drop-testing machine and welding autom atic tracking system. Our company set up test center, physical and chemical test center etc.

品质源于专业 成就铸就市场
Quality stemed from professionalism, market gained by achievements





KEEP IMPROVING

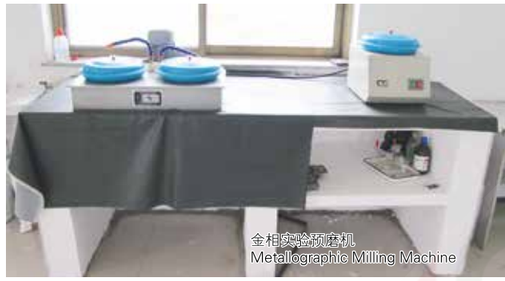




品质源于专业 成就铸就市场

Quality stemed from professionalism, market gained by achievements

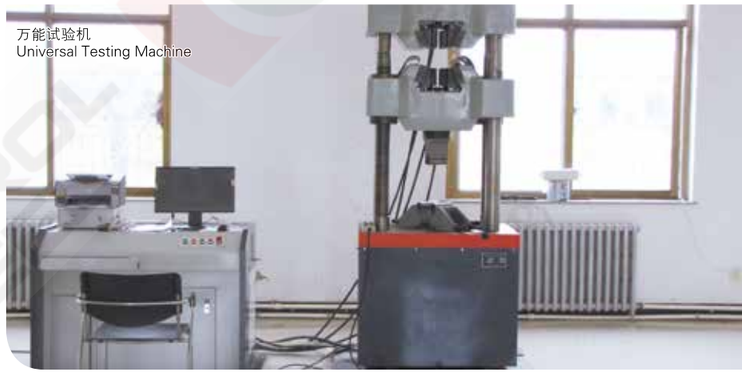






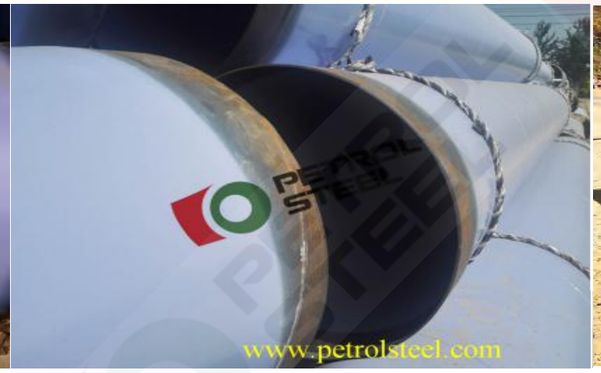
精益求精













产品展示 PRODUCTS SHOW

竞合赢得市场　融合创造力量

质量 优良的产品
源源不断地发往世界各地

Hihg-quality products are delivered to places around the world in a steady stream



超长 X70 钢级订制钢管
Super Long X70 Steel Grade Customized Steel Pipe

品质源于专业　成就铸就市场
Quality stemed from professionalism, market gained by achievements









品质源于专业 成就铸就市场

Quality stemed from professionalism, market gained by achievements

产品储运

时刻对品牌负责　永远让客户满意

LOGISTICS

为给客户装车及时到位，公司专门成立了储运公司，配备了六台大型龙门吊和六部汽吊，组建了由 150 辆大型货车组成的车队，装车迅速、及时，并保证 24 小时装车发货，风雨无阻，令顾客非常满意。

In order to loading on time, the company has set up the storage and transportation company, and equipped with six sets of large gantry crane and six steams crane, the petrol formation of the 150 large truck fleet, loading quickly and timely, ensure the 24 hours of loading and shipping, in all weathers, make the customers are very satisfied.











品质源于专业　成就铸就市场

Quality stemed from professionalism, market gained by achievements





◆ 螺旋焊缝埋弧焊钢管机组主要生产设备和性能
◆ Main Production Equipment and Performances of SSAW Pipe Unit

序号 No.	设备名称 Name of Equipment	技术性能 Technical Performance	备 注 Remark
1	拆卷机 Uncoiler	A、可拆带钢宽度 510mm–1000mm B、可拆带钢厚度 5–26mm C、可拆带卷最大重量 32T D、拆卷速度 15m/min E、刮刀变摆角角度 116° F、钢卷内外径 Φ630–Φ2000mm A、Uncoiling strips in 510–1000mm width; B、Uncoiling strips in 5–26mm thickness; C、Maximum weight of coil: 32T; D、Uncoiling speed: 15m/min; E、Swing angle of scraper: 116° ; F、Inner and outer diameters of coil: Φ630–Φ2000mm.	
2	矫平机 Leveler	A、钢带宽度 510mm–2000mm B、钢带厚度 5–26mm C、钢带强度极限 L555 A、Width of strip: 510–2000mm; B、Thickness of strip: 5–26mm; C、Strength limit of strip: L555.	
3	对头林肯焊机 Lincoln Butt Welder	A、型号 AC–150 B、焊速 0.7–1.2m/min: 焊接电流：200A–1500A；电压 20–42V A、Model AC–150; B、Welding speed: 0.7–1.2m/min; Welding current: 200–1500A; Welding voltage: 20–42V.	采用埋弧自动焊 With the use of automatic submerged–arc welding
4	圆盘剪 Disk Shear	A、剪切钢带宽度 650mm–2000mm B、剪切钢带厚度 5–26mm C、剪刃直径 Φ550，剪刃厚度 50mm A、Width of strip: 650–2000mm; B、Thickness of strip: 5–26mm; C、Blade diameter: Φ550, blade thickness: 50mm.	剪刃材质：6GW2Si Blade material: 6GW2Si
5	成型机 Forming Machine	A、卷管直径 Φ219–Φ3500mm B、钢带厚度 5–26mm C、内外辊成型角 39° –78° D、成型方式：内承式成型和外抱式成型 E、使用最大钢级 X80 A. Reeling diameter: Φ219–Φ3500mm; B. Thickness of strip: 5–26mm; C. Forming angle of inner roller and outer roller: 39° –78° ; D. Molding mode: internal supported molding and external embraced molding; E. Maximum steel grade: X80.	内承式成型方式是由西安重型机械研究所引进吸收德国成型技术 Internal supported formation way was an achievement of Xian Heavy Machinery Research Institute based on a Germany formation technique.
6	林肯焊机 Lincoln Welder	A、焊速 0.5–2.0m/min B、电压 20–60V C、电流 200–1500A A. Welding speed: 0.5–2.0m/min; B. Voltage: 20–60V; C. Current: 200–1500A.	使用埋弧自动焊接，焊接质量稳定，可靠性高 With the use of automatic submerged–arc welding which enables a consistent quality and high reliability
7	等离子自动切管机 Plasma Automatic Piping–cutting Machine	A、切管直径 Φ219–Φ3500mm B、切管定尺长度 8m–18m C、切管厚度 5–26mm A. Pipe Diameter: Φ219–Φ3500mm; B. Pipe Cut–length: 8–18m; C. Pipe Thickness: 5–26mm.	
8	管端平头倒棱机 Plain–end Chamfering Machine	A、平头钢管长度 8m–18m B、平头倒棱管直径 Φ219–Φ2850mm C、倒棱钢管壁厚 5–26mm D、花盘直径 Φ3100mm E、花盘转速 13–64r/min F、机头进给方式：快速机械传动 慢速液压进给 A. Length of plain–end steel pipe: 8–18m; B. Diameter of plain–end chamfering steel pipe: Φ219–Φ2850mm; C. Wall thickness of chamfering steel pipe: 5–25mm; D. Disk Diameter: Φ3100mm; E. Disk rotational speed: 13–64r/min; F. Head feeding mode: Fast mechanical drive, and Slow hydraulic feed.	
9	静水压试验机 Hydrostatic Tester	A、试验压力 2800T B、试验钢管长度 8m–12m C、试验钢管直径 Φ219–Φ2850mm D、试验最大压强 20.7Mpa E、稳压时间 5–20 秒 F、能够按 API SPEC 5L 标准检验钢管 A. Test pressure: 2800T; B. Length of test steel pipe: 8–12m; C. Diameter of test steel pipe: Φ219–Φ2850mm; D. Maximum test pressure: 20.7Mpa; E. Stand–up pressure time: 5–20s; F. Capable of testing steel pipe in accordance with API SPEC 5L specifications.	

发明专利证书
Certificate of Invention Patent



A、超探显像设备
A、Image Equipment for Ultrasonic Flaw Detection

序号 No.	设备名称 Name of Equipment	规格型号 Model	数 量 Quantity	生产厂家 Manufacturer	检定时期 Calibration Period	检测内容 Testing Content	测试精度 Test Precision	设备性能及主要参数 Performance and Parameters of Equipment
1	X 光工业电视显像系统 X-ray Industrial TV Image System	XYD-1520/4 XYD-1620 IIS-XYD-225	1 台 2 台 3 台	丹东制造 Made in Dandong	对试样标样或相关标准透度计校验不少于两次 No less than two calibrations are made on standard sample or relevant standard penetrometer.	气孔、夹渣、裂纹、未熔合 Porosity, slag inclusion, crack and incomplete fusion	<4%	管电压 150KV，管电流大焦点 1.5-12mA，小焦点 1.5-4mA； 最大穿透能力：钢板 28mm； 分辨力：中心 25 线对 1cm 边缘 25 线对 1cm； 等级：7 级图像几何失真 <12%，检测速度 4m/min Tube voltage: 150KV; tube current: 1.5-12mA for large focus, 1.5-4mA for small focus; maximum penetrability: strip in 28mm thickness; resolution: 25 lines for 1cm at center, 25 lines for 1cm on edge; grade: 7 image geometric distortion: <12%; and detection speed: 4m/min.
2	便携式 X 光机 Mobile X-ray Unit	XXQ-2505	4 台	沈阳制造 Made in Shenyang	对试样标样或相关标准透度计校验不少于两次 No less than two calibrations are made on standard sample or relevant standard penetrometer.	气孔、夹渣、裂纹、未熔合 Porosity, slag inclusion, crack and incomplete fusion	<2%	管电压 250KV，管电流 5mA 焦点尺寸 $2.5\times2.5mm^2$ 最大穿透能力：钢板 40mm Tube voltage: 250KV; tube current: 5mA; focus size: $2.5\times2.5mm^2$; and maximum penetrability: strip in 40mm thickness.

序号 No.	设备名称 Name of Equipment	规格型号 Model	数 量 Quantity	生产厂家 Manufacturer	检定时期 Calibration Period	检测内容 Testing Content	测试精度 Test Precision	设备性能及主要参数 Performance and Parameters of Equipment
3	超声波连续探伤系统 Continuous Ultrasonic Flaw Detecting System	TB-CTCB	2 台	北京天波电子技术研究所 Beijing Tianbo Electronic Technology Institute	一年 One year	用于标准验证，主要用于检查焊缝中纵向和横向缺陷及管体母材分层 Verification of standards; and detection of the weld defects in length and breadth and the lamination in base material of pipe	按 API-5L 标准 Φ1.6 通孔或 Φ3.2 通孔或规定的反射波高确定 Φ1.6 via or Φ3.2 via or echo height as required in API-5L specifications	探测级率 1.25-10 平均线性 <2%，垂直线性 8% 噪 <10% 探伤方法：脉冲反射式直接探伤法 Detection grade: 1.25-10; average linear: <2%; vertical linear: 8%; noise: <10%; and detecting method: pulse echo technique.
4	水压后超声波探伤系统 Ultrasonic Flaw Detecting System after Hydrostatic Test	CTS-8003 CTS-8008	3 台 1 台	汕头超声波仪器厂 Shantou Ultrasonic Instrument Factory	一年 One year	用于标准验证，主要用于检查焊缝中纵向和横向缺陷及管体母材分层 Verification of standards; and detection of the weld defects in length and breadth and the lamination in base material of pipe	按 API-5L 标准 Φ1.6 通孔或 Φ3.2 通孔或规定的反射波高确定 Φ1.6 via or Φ3.2 via or echo height as required in API-5L specifications	探测级率 1.25-10 平均线性 <2%，垂直线性 8% 噪 <10% 探伤方法：脉冲反射式直接探伤法 Detection grade: 1.25-10; average linear: <2%; vertical linear: 8%; noise: <10%; and detecting method: pulse echo technique.
5	磁粉探伤机 Magnetic Particle Flaw Detector	CTX-A	1 台	上海宇光无损检测设备有限公司 Shanghai Yuguang Non-destructive Testing Equipment Manufacturing Co., Ltd.	一年 One year	主要用于焊缝检验中检验裂纹、未渗透、气孔、小孔母体裂纹、母体分层行动等缺陷 Crack, non-permeation, porosity and small hole with crack in welds; and crack and lamination on base material.	按 GB/3721-83 标准规定 In accordance with GB/3721-83 specifications	A、磁极间距 0-220 B、探头速度 6m/min C、探头温度 <60℃ D、充磁时间 >6s A. Pole pitch: 0-220; B. Probe velocity: 6m/min; C. Probe temperature: <60℃ ; D. Magnetizing time: >6s.

B、主要理论检验设备仪器
B、Main Theoretical Testing Equipment and Instruments

序号 No.	检验设备名称 Name of Tester	规格型号 Model	数 量 Quantity	生产厂家 Manufacturer	检定时期 Calibration Period	检测内容 Testing Content	测试精度 Test Precision	设备性能及主要参数 Performance and Parameters of Equipment
1	牛头刨床 Shaping Machine	B650	1 台	重庆机床厂 Chongqing Machine Tool Plant	750 左 750 Left	加工试样 Sample machining	一级 Primary	650 × 500mm
2	卧式万能升降钝床 Horizonal Universal Milling Machine	K63W	1 台	北京市第一机床厂 Beijing First Machine Tool Plant	500 左 500 Left	加工试样 Sample machining	一级 Primary	250 × 1000mm
3	液压万能材料试验机 Hydraulic Universal Material Testing Machine		1 台	吴中材料试验机厂 Wuzhong Material Testing Machine Plant	二年 Two years	拉力、弯曲、压力、扩径、缩径 Tension, bending, pressure, expanding diameter, and reducing diameter		
4	高温 22 管定碳炉 High-temperature 22-pipe Carbon Furnace	Sk-2-2,5-13TS	1 台	上海实验电炉厂 Shanghai Experimental Electric Furnace				额定功率 2.5KW，额定温度 1300℃，额定电压范围 30-210V Rated power: 2.5KW; rated temperature: 1300℃ ; and range of rated voltage: 30-210V.
5	高温箱式电阻炉 High-temperature Box Electric Resistance Furnace	5K-6-14	1 台	上海实验电炉厂 Shanghai Experimental Electric Furnace				额定功率 6KW 额定电压范围 30-210V 炉膛尺寸 250 × 150 × 100mm Rated power: 6KW; range of rated voltage: 30-210V; and size of furnace hearth: 250 × 150 × 100mm.
6	分析天平 Analytical Balance	TG32813	2 台	上海天平仪器厂 Shanghai Balance Instrument Factory				最大载荷 200g，分度值 0.4mg Maximum load: 200g; and graduated value: 0.4mg.
7	电热干燥箱 Electrically Heated Drying Cabinet	RCP-3	1 台	西安医疗器械制造厂 Xian Medical Device Manufacturer		控温及灵敏度 ±1℃ Temperature control and sensitivity: ±1℃		额定功率 2220W，电压 220V 电流 10A，内室安装 55 × 50 × 50cm Rated power: 2220W; voltage: 220V; current: 10A; and indoor location: 55 × 50 × 50cm.
8	分光光度计 Spectrophotometer	721	1 台	上海第三分析仪器厂 Shanghai Third Analytical Instrument Factory		在可见光谱区域内进行比色分析 Colorimetric analysis in the region of visible spectrum		波长范围 300-800mm 波长精度 360-800 ± 3mm 600-700 ± 5mm 600-800 ± 8mm 仪器重现性误差不大于 0.5% Wavelength range: 300-800mm; wavelength accuracy: 360-800 ± 3mm, 600-700 ± 5mm, 600-800 ± 8mm; and reproducibility error: no more than 0.5%.

C、工艺检测设备
C、Process Detection Equipment

序号 No.	检验设备名称 Name of Tester	规格型号 Model	数 量 Quantity	生产厂家 Manufacturer	检定时期 Calibration Period	检测内容 Testing Content	测试精度 Test Precision	设备性能及主要参数 Performance and Parameters of Equipment
1	电子超声波测厚仪 Electronic Ultrasonic Thickness Sensor		4 台	北京双环公司 Beijing Shuanghuan Corporation	一年 One year	测试卷板和钢管厚度 Testing the thickness of rolling plate and steel pipe	0.1mm	可测厚度 0-100mm Thickness range: 0-100mm
2	计算机 Computer		2 台	联想集团 Lenovo		用于质量管理 Quality management		内存 DDR2G，硬盘 320G Memory: DDR2G; hard disk: 320G.
3	电子钩秤 Electronic Hook Scale	03C-20t	2 台	常州托利电子器械有限责任公司 Changzhou Tuoli Electronic Instrument Co., Ltd.	半年 Half year	用于原材料称重 Weighing of raw materials		无线传输距离最大 200m，稳定时间小于 3s Maximum distance of wireless transmission: 200m; and stability time: less than 3s.

一、螺旋埋弧焊钢管公称外径、公称壁厚和单位长度重量（GB/T9711-2017、API Spec 5L）

Table 1 Nominal Outer Diameter, Nominal Wall Thickness and Nominal Length of SSAW Steel Pipe (GB/T9711-2017and API Spec 5L)

公称外径 Nominal Outer Diameter		公称壁厚（mm） Nominal Wall Thickness (mm)													
mm	In	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	18.0	20.0	22.0
		单位长度重量（kg/m） Weight Per Unit Length （kg/m）													
219.1	8-5/8	31.53	36.61	41.65											
273.1	10-3/4	39.52	45.94	52.30											
323.9	12-3/4	47.04	54.71	62.32	69.89	77.41									
（325）		47.20	54.90	62.54	70.14	77.68									
355.6	14	51.73	60.18	68.58	76.93	85.23									
（377.0）		54.89	63.87	72.80	81.67	90.50									
406.4	16	59.25	68.95	78.60	88.20	97.76	107.26	116.72							
（426.0）		62.14	72.33	82.46	92.55	102.59	112.58	122.51							
457	18	66.73	77.68	88.58	99.44	110.24	120.99	131.69							
（478.0）		69.84	81.30	92.72	104.09	115.41	126.69	137.90							
508.0	20	74.28	86.49	98.65	110.75	122.81	134.82	146.79	158.69	170.56					
（529.0）		77.38	90.11	102.78	115.40	127.99	140.52	152.99	165.43	177.80					
559.0	22	81.82	95.29	108.70	122.07	135.38	148.65	161.88	175.04	188.17					
610.0	24	89.37	104.10	118.77	133.39	147.97	162.48	176.97	191.40	205.78					
（630.0）		92.33	107.54	122.71	137.83	152.90	167.92	182.89	197.81	212.68					
660.0	26	96.77	112.73	128.63	144.48	160.30	176.05	191.77	207.43	223.04					
711.0	28	104.32	121.53	138.70	155.81	172.88	189.89	206.86	223.78	240.65	257.47	274.24			
（720.0）		105.65	123.09	140.47	157.81	175.10	192.34	209.52	226.66	243.75	260.80	277.79			
762.0	30	111.86	130.34	148.76	167.13	185.45	203.73	211.95	240.13	258.26	276.33	294.36			
813.0	32	119.41	139.14	158.82	178.45	198.03	217.56	237.05	256.48	275.86	295.20	314.48			
（820.0）		120.45	140.35	160.20	180.00	199.76	219.46	239.12	258.72	278.28	297.79	317.25			
864.0	34		147.94	168.88	189.77	210.61	231.40	252.14	272.83	293.47	314.06	334.61			
914.0	36			178.75	200.87	222.94	244.96	266.94	288.86	310.73	332.56	354.34			
（920.0）				179.93	202.20	224.42	246.59	286.70	290.78	312.79	334.78	356.68			
965.0	38			188.81	212.19	235.52	258.80	282.03	305.21	328.34	351.43	374.46			
1016.0	40			198.87	223.51	248.09	272.63	297.12	321.56	345.95	370.29	394.58	443.02		
（1020.0）				199.66	224.39	249.08	273.72	298.31	322.84	347.33	371.77	396.16	444.77		
1067.0	42			208.93	234.83	260.67	286.47	312.21	337.91	363.56	389.16	414.71	465.66		
118.0	44			218.99	246.15	273.25	300.30	327.31	354.26	381.17	408.02	343.83	488.30		
1168.0	46			228.86	257.24	285.58	313.87	342.10	370.29	398.43	426.52	454.56	510.49		
1219.0	48			238.92	268.56	298.16	327.70	357.20	386.64	416.04	445.39	474.68	553.13		
（1220.0）				239.12	268.78	198.40	327.97	357.49	386.96	146.38	445.76	475.08	533.58		
1321.0	52				291.20	323.31	327.97	387.38	449.34	451.26	483.12	514.93	578.41		
（1420.0）						347.72	355.37	416.66	451.08	485.41	519.74	553.96	622.32	690.52	
1422.0	56					348.22	382.23	417.27	451.72	486.13	520.48	554.97	623.25	691.51	759.58
1524.0	60					373.38	410.44	447.46	484.43	521.34	558.21	595.03	688.52	741.82	814.91
（1620.0）						397.03	436.48	457.84	515.20	554.46	593.73	623.87	711.11	789.12	867.00
1626.0	64					398.53	438.11	477.64	517.13	556.56	595.95	635.28	713.80	792.13	870.26
1727.0	68					423.44	465.51	507.53	549.51	591.43	633.31	675.13	758.64	841.94	925.05
（1820.0）						446.37	492.74	535.06	579.32	623.50	667.71	711.79	799.92	887.81	975.51
1829.0	72						493.18			626.65	671.04	714.20	803.92	890.77	980.39
1930.0	76									661.52	708.40	755.23	848.75	942.07	1035.19
（2020.0）										692.60	741.69	790.75	888.70	986.41	1084.02
2032.0	80									696.74	746.13	795.48	894.03	992.38	1090.53
（2220.0）										761.65	815.68	869.66	977.50	1085.80	1192.53
（2420.0）												948.58	1066.26	1183.75	1301.04
（2540.0）	100											995.93	1119.53	1242.94	1366.15
（2845.0）	112											1116.28	1254.93	1393.37	1531.63

注：
1、经供需双方协议，可供应介于本表所列公称外径和公称壁厚之间尺寸的钢管。
2、本表中加括号的公称外径钢管为保留直径。

Note:
1. Also available are steel pipes in nominal outer diameter and nominal wall thickness between their adjacent sizes listed in the table, but a contract shall be signed.
2. The nominal outer diameters in brackets in the table are reserved diameters.

品质源于专业 成就铸就市场
Quality stemed from professionalism, market gained by achievements

二、钢管主要理化性能（GB/T3091-2015、GB/T9711-2017、API Spec 5L）

Table 2 Main Physical and Chemical Properties of Steel Pipes (GB/T3091-2015, GB/T9711-2017 and API Spec 5L)

标准 Standard	钢级 Steel Grade	化学成分（%）Chemical Constituents (%)						拉伸性能 Tensile Property						夏比（V型缺口）冲击实验 Charpy （V notch） Impact Test
		c	Mn	p	s	Si	其他 Other	屈服强度（Mpa） Yield Strength （Mpa）		抗拉强度（Mpa） Tensile Strength （Mpa）		拉伸率（%） （L_0=5.65$\sqrt{S_0}$）min Stretch Rate （%）		
		max	max	max	max	max		min	max	min	max	D ≤ 168.33mm	D > 168.3mm	
GB/T3091-2015	Q215A	≤ 0.15	0.25 < 1.20	0.045	0.050	0.35	Nb\V\Ti 加入见 GB/T1591-94 Adding Nb\V\Ti in accordance with GB/T1591-94	215		335		15	> 31	
	Q215B	≤ 0.15	0.25-0.55	0.045	0.045	0.035		215		335		15	> 31	
	Q235A	≤ 0.22	0.30 < 0.65	0.045	0.050	0.035		235		375		15	>26	
	Q235B	≤ 0.20	0.30 ≤ 1.80	0.045	0.045	0.035		235		375		15	>26	
	Q295A	0.16	0.80-1.50	0.045	0.045	0.55		295		390		13	>23	
	Q295B	0.16	0.80-1.50	0.045	0.040	0.55		295		390		13	>23	
	Q345A	0.20	1.00-1.60	0.045	0.045	0.55		345		510		13	>21	
	Q345B	0.20	1.00-1.60	0.045	0.040	0.55		345		510		13	>21	
GB/T9711-2017（PSL1）	L175	0.21	0.60	0.030	0.030		可添加 Nb\V\Ti 三元素中的一种或任一组合 Optional adding one of Nb\V\Ti elements or any combination of them	175		310		27		可选择冲击功与剪切面积一个或两个韧性指标，L555 见标准。 One or two of the toughness index of impact energy and shearing area may be chosen. For L555, see the standard.
	L210	0.22	0.90	0.030	0.030			210		335		25		
	L245	0.26	1.20	0.030	0.030			245		415		21		
	L290	0.26	1.30	0.030	0.030			290		415		21		
	L320	0.26	1.40	0.030	0.030			320		435		20		
	L360	0.26	1.40	0.030	0.030			360		460		19		
	L390	0.26	1.40	0.030	0.030			390		390		18		
	L415	0.26	1.40	0.030	0.030			415		520		17		
	L450	0.26	1.45	0.030	0.030			450		535		17		
	L485	0.26	1.65	0.030	0.030			485		570		16		
API 5L（PSL 1）	A25	0.21	0.60	0.030	0.030		B 级 Nb+V ≤ 0.03%，≥ B 级钢可添加 Nb、V 或其组合，且 Nb+V+Ti ≤ 0.15% For grade B steel, Nb+V ≤ 0.03%; for steel ≥ grade B, optional adding Nb or V or their combination, and Nb+V+Ti ≤ 0.15%	172		310		（L_0=50.8mm）按下式计算： $e=1944 \cdot A^{0.2}/U^{0.9}$ A：试样面积（mm^2） 规定抗拉强度最小值（Mpa） U: 规定抗拉强度最小值（Mpa） （L_0=50.8mm）to be calculated according to the following formula: $e=1944 \cdot A^{0.2}/U^{0.9}$ A: Area of sample in mm^2 U: Minimal specified tensile strength in Mpa		不要求或可选择冲击功率与剪切面积一个或两个韧性判据。 None or any or both of the impact energy and the shearing area is required as toughness criterion.
	A	0.22	0.90	0.030	0.030			207		331				
	B	0.26	1.20	0.030	0.030			241		414				
	X42	0.26	1.30	0.030	0.030			290		414				
	X46	0.26	1.40	0.030	0.030			317		434				
	X52	0.26	1.40	0.030	0.030			359		455				
	X56	0.26	1.40	0.030	0.030			386		490				
	X60	0.26	1.40	0.030	0.030			414		517				
	X65	0.26	1.45	0.030	0.030			448		531				
	X70	0.26	1.65	0.030	0.030			483		565				

三、钢管执行标准一览表

Table 3 A Schedule of Executive Standards of Steel Pipes

标准化代号 Standardization Code	API	ASTM	BS	DIN	GB/T	JIS	ISO	YB	SY/T	SNV
标准序号 Serial Number of Standard	5CT	A53	1387	1626	3091	3442	599	4028	5037	OS-F101
	5L	A120		102019	9711 PSL1	3444	3181.1		5040	
		A135			9711 PSL2	3452	3183.2			
		A252			14291	3454				
		A500			13793	3466				
		A589								

标准 Standard	钢级 Steel grade	化学成分（%）Chemical composition									拉伸性能 Tensile properties							夏比冲击试验和落锤撕裂试验 Charpy Impact Test and Drop Weight Tear Test
		C	Si	Mn	P	S	V	Nb	Ti	其它 Other	CEV4)（%）	屈服强度 Rt0.5 Mpa Yield strength		拉伸强度 Rm Mpa Tensile Strength		Rt0.5/Rm	伸长率 A%（L_0=5.65 √ S_0）Elongation A%	
		max	max	max	max	max	max	max	max		max	min	max	min	max	max	min	
GB/T9711–2017（PSL2）	L245MB	0.22	0.45	1.20	0.025	0.15	0.05	0.05	0.04	1)	0.40	245	450	415	760	0.93	22	夏比冲击试验：按原标准要求管体和焊缝测量冲击吸收功，详见原标准。Charpy impact test: Impact absorbing energy of pipe body and weld seam shall be tested as required in the original standard. For details, see the original standard. 落锤撕裂试验：可选择剪切面积 Drop weight tear test: Optional shearing area
	L290MB	0.22	0.45	1.30	0.025	0.015	0.05	0.05	0.04	1)	0.40	290	495	415			21	
	L320MB	0.22	0.45	1.30	0.025	0.015	0.05	0.05	0.04	1)	0.41	320	500	430			21	
	L360MB	0.22	0.45	1.40	0.025	0.015				1)	0.41	360	530	460			20	
	L390MB	0.22	0.45	1.40	0.025	0.15				1)	0.41	390	545	490			20	
	L415MB	0.12	0.45	1.60	0.025	0.015				1)2)3	0.42	415	565	520			18	
	L450MB	0.12	0.45	1.60	0.025	0.015				1)2)3	0.43	450	600	535			18	
	L485MB	0.12	0.45	1.7	0.025	0.015				1)2)3	0.43	485	635	570			18	
	L555MB	0.12	0.45	1.85	0.025	0.015				1)2)3	协议 Negotiation	555	705	625	825	0.95	18	

注：Note:

1）0.015 ≤ Altot < 0.060；N ≤ 0.012；Al—N ≥ 2—1；Cu ≤ 0.25；Ni ≤ 0.30；Cr ≤ 0.30；Mo ≤ 0.10

2）V+Nb+Ti ≤ 0.015%

3）经协议，对这些钢级，可以 Mo ≤ 0.35%。 For all steel grades, Mo may ≤ 0.35%, under a contract.

4）$CEV=C+\frac{Mn}{6}+\frac{Cr+Mo+V}{5}+\frac{Cu+Ni}{5}$ 。

标准 Standard	钢级 Steel grade	化学成分（%）Chemical composition								拉伸性能 Tensile properties						夏比冲击试验和落锤撕裂试验 charpy Impact Test and Drop Weight Tear Test
		C	Mn	P	S	Ti	其它 Other	CEV4)（%）		屈服强度 Rt0.5 Mpa Yield strength		拉伸强度 Rm Mpa Tensile strength		伸长率 A% L_0=5.65 √ S_0 Elongation		
		max	max	max	max	max		max	max	min	max	min	max			
API Spec 5L（PSL2）	B	0.22	1.20	0.025	0.015	0.04	所有钢级：可选择添加 Nb、V 或其组合，且 Nb+V+Ti ≤ 0.15%，其中 B 级 Nb+V ≤ 0.06%。 For all steel grades: Optional adding Nb or V or any combination of them, but Nb+V+Ti ≤ 0.15%, and Nb+V ≤ 0.06% for grade B	0.25	0.43	241	448	414	758	按下式计算：$e=1944\cdot A^{0.2}/U^{0.9}$ A: 试样横截面积（mm^2） U: 规定抗拉强度最小值（Mpa） To be calculated according to the following formula: $e=1944\cdot A^{0.2}/U^{0.9}$ A: Cross-sectional area of sample in mm^2 U: Minimal specified tensile strength in Mpa	有应做项和选做项，详见原标准。 There are required tests and optional tests. For details, see the original standard.
	X42	0.22	1.30	0.025	0.015	0.04		0.25	0.43	290	496	414	758			
	X46	0.22	1.40	0.025	0.015	0.04		0.25	0.43	317	524	434	758			
	X52	0.22	1.40	0.025	0.015	0.04		0.25	0.43	359	531	455	758			
	X56	0.22	1.40	0.025	0.015	0.04		0.25	0.43	386	544	490	758			
	X60	0.22	1.40	0.025	0.015	0.04		0.25	0.43	414	565	517	758			
	X65	0.22	1.45	0.025	0.015	0.06		0.25	0.43	448	600	531	758			
	X70	0.22	1.65	0.025	0.015	0.06		0.25	0.43	483	621	565	758			
	X80	0.22	1.65	0.025	0.015	0.06		0.25	0.43	552	690	621	827			

1）$CE（Pcm）=C+\frac{Si}{30}+\frac{Mn+Cu+Cr}{20}+\frac{Ni}{60}+\frac{No}{15}+\frac{V}{10}+58$

2）$CE（LLW）=C+\frac{Mn}{6}+\frac{Cr+Mo+V}{5}+\frac{Ni+Cu}{15}$

品质源于专业 成就铸就市场

Quality stemed from professionalism, market gained by achievements

四、钢管尺寸和标准试验压力（GB/T9711–2017、API Spec 5L）

Table 4 Sizes and Standard Test Pressures of Steel Pipes (GB/T9711–2017and API Spec 5L)

规定外径 D Specified Outer Diameter（D）		规定壁厚(mm) Specified Wall Thickness in mm	最低试验压力（Mpa） Minimum test pressure（Mpa） 钢级 Steel Grade									
in	mm		L210 (A)	L245 (B)	L290 (X42)	L320 (X46)	L360 (X52)	L390 (X56)	L415 (X60)	L450 (X65)	L485 (X70)	L555 (X80)
8–5/8	219.1	5.0 7.0 10.0	5.8 8.1 11.5	6.7 9.4 13.4	9.9 13.9 19.9	11.0 15.3 20.7	12.3 17.3 20.7	13.4 18.7 20.7	14.2 19.9 20.7	15.4 20.7 20.7	16.6 20.7 20.7	19.0 20.7 20.7
9–5/8	244.5	5.0 7.0 10.0	5.2 7.2 10.3	6.0 8.4 12.0	10.1 14.1 20.2	11.1 15.6 20.7	12.5 17.5 20.7	13.6 19.0 20.7	14.4 20.2 20.7	15.6 20.7 20.7	16.9 20.7 20.7	19.3 20.7 20.7
10–3/4	273.1	5.0 7.0 10.0	4.6 6.5 9.2	5.4 7.5 10.8	9.0 12.6 18.1	10.1 13.9 19.9	11.2 15.7 20.7	12.1 17.0 20.7	12.9 18.1 20.7	14.0 19.6 20.7	15.1 20.7 20.7	17.3 20.7 20.7
12–3/4	323.9	5.0 7.0 10.0	3.9 5.5 7.8	4.5 6.5 9.1	7.6 10.7 15.2	8.4 11.8 16.8	9.4 13.2 18.9	10.2 14.3 20.5	10.9 15.2 20.7	11.8 16.5 20.7	12.7 17.8 20.7	14.6 20.4 20.7
	(325.0)	5.0 7.0 10.0	3.9 5.4 7.8	4.5 6.3 9.0	7.6 10.6 15.2	8.4 11.7 16.7	9.4 13.2 18.8	10.2 14.3 20.4	10.9 15.2 20.7	11.8 16.5 20.7	12.7 17.8 20.7	14.5 20.3 20.7
13–3/8	339.7	5.0 8.0 12.0	3.7 5.9 8.9	4.3 6.9 10.4	7.3 11.6 17.4	8.0 12.8 19.2	9.0 14.4 20.7	9.8 15.6 20.7	10.4 16.6 20.7	11.3 18.0 20.7	12.1 19.4 20.7	13.9 20.7 20.7
14	355.6	6.0 8.0 12.0	4.3 5.7 8.5	5.0 6.6 9.9	8.3 11.1 16.6	9.2 12.2 18.4	10.3 13.8 20.7	11.2 14.9 20.7	11.9 15.9 20.7	12.9 17.2 20.7	13.9 18.6 20.7	15.9 20.7 20.7
	(377.0)	6.0 8.0 12.0	4.0 5.3 8.0	4.7 6.2 9.4	7.8 10.5 15.7	8.6 11.5 17.3	9.7 13.0 19.5	10.6 14.1 20.7	11.2 15.0 20.7	12.2 16.2 20.7	13.1 17.5 20.7	15.0 20.0 20.7
16	406.4	6.0 8.0 12.0	3.7 5.0 7.4	4.3 5.8 8.7	7.3 9.7 14.6	8.0 10.7 16.1	9.0 12.0 18.1	9.8 13.1 19.6	10.4 13.9 20.7	11.3 15.1 20.7	12.2 16.2 20.7	13.9 18.6 20.7
	(426.0)	6.0 8.0 12.0	3.5 4.7 7.1	4.1 5.5 8.3	6.9 9.3 13.9	7.7 10.2 15.3	8.6 11.5 17.2	9.3 12.5 18.7	9.9 13.2 19.9	10.8 14.4 20.7	11.6 15.5 20.7	13.3 17.7 20.7
18	457.0	6.0 8.0 12.0	3.3 4.4 6.6	3.9 5.1 7.7	6.5 8.6 12.9	7.1 9.5 14.3	8.0 10.7 16.1	8.7 11.6 17.4	9.3 12.4 18.5	10.0 13.4 20.1	10.8 14.4 20.7	12.4 16.5 20.7
20	508.0	6.0 8.0 12.0 16.0	3.0 4.0 6.0 7.9	3.5 4.6 6.9 9.3	6.2 8.2 12.3 16.4	6.8 9.1 13.6 18.1	7.7 10.2 15.3 20.4	8.3 11.1 16.6 20.7	8.8 11.8 17.6 20.7	9.6 12.8 19.1 20.7	10.3 13.7 20.6 20.7	11.8 15.7 20.7 20.7
	(529.0)	6.0 9.0 12.0 14.0 16.0	2.9 4.3 5.7 6.7 7.6	3.3 5.0 6.7 7.8 8.9	5.9 8.9 11.8 13.8 15.8	6.5 9.8 13.1 15.2 17.4	7.3 11.0 14.7 17.1 19.6	8.0 11.9 15.9 18.6 20.7	8.5 12.7 16.9 19.8 20.7	9.2 13.8 18.4 20.7 20.7	9.9 14.9 19.8 20.7 20.7	11.3 17.0 20.7 20.7 20.7
22	559.0	6.0 9.0 12.0 14.0 19.1 22.2	2.7 4.1 5.4 6.3 8.6 10.0	3.2 4.7 6.3 7.4 10.0 11.7	5.6 8.4 11.2 13.1 17.8 20.7	6.2 9.3 12.4 14.4 19.7 20.7	7.0 10.4 13.9 16.2 20.7 20.7	7.5 11.3 15.1 17.6 20.7 20.7	8.0 12.0 16.0 18.7 20.7 20.7	8.7 13.0 17.4 20.3 20.7 20.7	9.4 14.1 18.7 20.7 20.7 20.7	10.7 16.1 20.7 20.7 20.7 20.7
24	610.0	6.0 9.0 12.0 14.0 19.1 25.4	2.5 3.7 5.0 5.8 7.9 10.5	2.9 4.3 5.8 6.8 9.1 12.0	5.1 7.7 10.3 12.0 16.3 20.7	5.7 8.5 11.3 13.2 17.9 20.7	6.4 9.6 12.7 14.9 20.2 20.7	6.9 10.4 13.8 16.1 20.7 20.7	7.3 11.0 14.7 17.1 20.7 20.7	8.0 12.0 15.9 18.6 20.7 20.7	8.6 12.9 17.2 20.0 20.7 20.7	9.8 14.7 19.7 20.7 20.7 20.7
	（630.0）	6.0 9.0 12.0 16.0 19.1 25.4	2.4 3.6 4.8 6.4 7.6 10.2	2.8 4.2 5.6 7.5 8.9 11.9	5.0 7.5 9.9 13.3 15.8 20.7	5.5 8.2 11.0 14.6 17.5 20.7	6.2 9.3 12.3 16.5 19.6 20.7	6.7 10.0 13.4 17.8 20.7 20.7	7.1 10.7 14.2 19.0 20.7 20.7	7.7 11.6 15.4 20.6 20.7 20.7	8.3 12.5 16.6 20.7 20.7 20.7	9.5 14.3 19.0 20.7 20.7 20.7

规定外径 D Specified Outer Diameter（D）		规定壁厚(mm) Specified Wall Thickness in mm	最低试验压力（Mpa） Minimum test pressure （Mpa）									
			钢 级 Steel Grade									
in	mm		L210 (A)	L245 (B)	L290 (X42)	L320 (X46)	L360 (X52)	L390 (X56)	L415 (X60)	L450 (X65)	L485 (X70)	L555 (X80)
26	660.0	6.0 9.0 12.0 14.0 16.0 19.1 25.4	2.3 3.4 4.6 5.4 6.1 7.3 9.7	2.7 4.0 5.4 6.2 7.1 8.5 11.3	4.7 7.1 9.5 11.1 12.6 15.1 20.1	5.2 7.9 10.4 12.2 13.9 16.7 20.7	5.9 8.8 11.8 13.8 15.6 18.8 20.7	6.4 9.6 12.8 14.9 16.9 20.3 20.7	6.8 10.2 13.6 15.8 18.0 20.7 20.7	7.4 11.0 14.7 17.2 19.5 20.7 20.7	7.9 11.9 15.9 18.5 20.7 20.7 20.7	9.1 13.6 18.2 20.7 20.7 20.7 20.7
28	711.0	6.0 9.0 12.0 16.0 19.1 25.4	2.1 3.2 4.3 5.7 6.8 9.0	2.5 3.7 5.0 6.6 7.9 10.5	4.4 6.6 8.8 11.8 14.0 18.6	4.9 7.3 9.7 13.0 15.5 20.6	5.5 8.2 10.9 14.6 17.4 20.7	5.9 8.9 11.8 15.8 18.9 20.7	6.3 9.5 12.6 16.8 20.1 20.7	6.8 10.3 13.7 18.2 20.7 20.7	7.4 11.1 14.7 19.6 20.7 20.7	8.4 12.6 16.9 20.7 20.7 20.7
28	711.0	6.0 9.0 12.0 16.0 19.1 25.4	2.1 3.2 4.3 5.7 6.8 9.0	2.5 3.7 5.0 6.6 7.9 10.5	4.4 6.6 8.8 11.8 14.0 18.6	4.9 7.3 9.7 13.0 15.5 20.6	5.5 8.2 10.9 14.6 17.4 20.7	5.9 8.9 11.8 15.8 18.9 20.7	6.3 9.5 12.6 16.8 20.1 20.7	6.8 10.3 13.7 18.2 20.7 20.7	7.4 11.1 14.7 19.6 20.7 20.7	8.4 12.6 16.9 20.7 20.7 20.7
	（720.0）	6.0 9.0 12.0 16.0 19.1 25.4	2.1 3.2 4.2 5.6 6.7 8.9	2.5 3.7 4.9 6.5 7.8 10.4	4.4 6.5 8.7 11.6 13.8 18.4	4.8 7.2 9.6 12.8 15.3 20.3	5.4 8.1 10.8 14.4 17.2 20.7	5.9 8.8 11.7 15.6 18.6 20.7	6.2 9.3 12.5 16.6 19.8 20.7	6.8 10.1 13.5 18.0 20.7 20.7	7.3 10.9 14.6 19.4 20.7 20.7	8.3 12.5 16.7 20.7 20.7 20.7
28	711.0	6.0 9.0 12.0 16.0 19.1 25.4	2.1 3.2 4.3 5.7 6.8 9.0	2.5 3.7 5.0 6.6 7.9 10.5	4.4 6.6 8.8 11.8 14.0 18.6	4.9 7.3 9.7 13.0 15.5 20.6	5.5 8.2 10.9 14.6 17.4 20.7	5.9 8.9 11.8 15.8 18.9 20.7	6.3 9.5 12.6 16.8 20.1 20.7	6.8 10.3 13.7 18.2 20.7 20.7	7.4 11.1 14.7 19.6 20.7 20.7	8.4 12.6 16.9 20.7 20.7 20.7
	（720.0）	6.0 9.0 12.0 16.0 19.1 25.4	2.1 3.2 4.2 5.6 6.7 8.9	2.5 3.7 4.9 6.5 7.8 10.4	4.4 6.5 8.7 11.6 13.8 18.4	4.8 7.2 9.6 12.8 15.3 20.3	5.4 8.1 10.8 14.4 17.2 20.7	5.9 8.8 11.7 15.6 18.6 20.7	6.2 9.3 12.5 16.6 19.8 20.7	6.8 10.1 13.5 18.0 20.7 20.7	7.3 10.9 14.6 19.4 20.7 20.7	8.3 12.5 16.7 20.7 20.7 20.7
30	762.0	6.0 9.0 12.0 16.0 19.1 25.4 41.3	2.0 3.0 4.0 5.3 6.3 8.4 13.7	2.3 3.5 4.6 6.2 7.4 9.8 15.9	4.1 6.2 8.2 11.0 13.1 17.4 20.7	4.5 6.8 9.1 12.1 14.4 19.2 20.7	5.1 7.7 10.2 13.6 16.2 20.7	5.5 8.3 11.1 14.7 17.6 20.7	5.9 8.8 11.8 15.7 18.7 20.7	6.4 9.6 12.8 17.0 20.3 20.7	6.9 10.3 13.7 18.3 20.7 20.7	7.9 11.8 15.7 20.7 20.7 20.7
32	813.0	6.0 9.0 12.0 16.0 19.1 25.4	1.9 2.8 3.7 5.0 5.9 9.7	2.2 3.3 4.3 5.8 6.9 9.2	3.9 5.8 7.7 10.3 12.3 16.3	4.3 6.4 8.5 11.3 13.5 18.0	4.8 7.2 9.6 12.8 15.2 20.2	5.2 7.8 10.4 13.8 16.5 20.7	5.5 8.3 11.0 14.7 17.5 20.7	6.0 9.0 12.0 15.9 19.0 20.7	6.4 9.7 12.9 17.2 20.5 20.7	7.4 11.1 14.7 19.7 20.7 20.7
	（820.0）	6.0 9.0 12.0 16.0 19.1 25.4	1.8 8.2 3.7 4.9 5.9 7.8	2.2 3.2 4.3 5.7 6.8 9.1	3.8 5.7 7.6 10.2 12.2 16.2	4.2 6.3 8.4 11.2 13.4 17.8	4.7 7.1 9.5 12.6 15.1 20.1	5.1 7.7 10.3 13.7 16.4 20.7	5.5 8.2 10.9 14.6 17.4 20.7	5.9 8.9 11.9 15.8 18.9 20.7	6.4 9.6 12.8 17.0 20.3 20.7	7.3 11.0 14.6 19.5 20.7 20.7
34	864.0	7.0 10.0 13.0 16.0 19.1 25.4	2.1 2.9 3.8 4.7 5.6 7.4	2.4 3.4 4.4 5.5 6.5 8.6	4.2 6.0 7.9 9.7 11.5 15.3	4.7 6.7 8.7 10.7 12.7 16.9	5.3 7.5 9.8 12.0 14.3 19.1	5.7 8.1 10.6 13.0 15.5 20.6	6.1 8.6 11.2 13.8 16.5 20.7	6.6 9.4 12.2 15.0 17.9 20.7	7.1 10.1 13.1 16.2 19.3 20.7	8.1 11.6 15.0 18.5 20.7 20.7

规定外径 D Specified Outer Diameter（D）		规定壁厚(mm) Specified Wall Thickness in mm	最低试验压力（Mpa） Minimum test pressure （Mpa）									
			钢 级 Steel Grade									
in	mm		L210 (A)	L245 (B)	L290 (X42)	L320 (X46)	L360 (X52)	L390 (X56)	L415 (X60)	L450 (X65)	L485 (X70)	L555 (X80)
36	914.0	8.0 12.0 16.0 19.1 25.4	2.2 3.3 4.4 5.3 7.0	2.6 3.9 5.2 6.1 8.2	4.6 6.9 9.1 10.9 14.6	5.0 7.6 10.1 12.0 16.0	5.7 8.5 11.3 13.5 18.0	6.1 9.2 12.3 14.7 19.5	6.5 9.8 13.1 15.6 20.7	7.1 10.6 14.2 16.9 20.7	7.6 11.5 15.3 18.2 20.7	8.7 13.1 17.5 20.7 20.7
	（920.0）	8.0 12.0 16.0 19.1 25.4	2.2 3.3 4.4 5.2 7.0	2.6 3.8 5.1 6.1 8.1	4.5 6.8 9.1 10.8 14.4	5.0 7.5 10.0 12.0 15.9	5.6 8.5 11.3 13.5 17.9	6.1 9.2 12.2 14.6 19.4	6.5 9.7 13.0 15.5 20.6	7.0 10.6 14.1 16.8 20.7	7.6 11.4 15.2 18.1 20.7	8.7 13.0 17.4 20.7 20.7
38	965.0	8.0 12.0 16.0 19.1 25.4	2.1 3.1 4.2 5.0 6.6	2.4 3.7 4.9 5.8 7.7	4.3 6.5 8.7 10.3 13.7	4.8 7.2 9.6 11.4 15.2	5.4 8.1 10.7 12.8 17.1	5.8 8.7 11.6 13.9 18.5	6.2 9.3 12.4 14.8 19.7	6.7 10.1 13.4 16.0 20.7	7.2 10.9 14.5 17.3 20.7	8.3 12.4 16.6 19.8 20.7
40	1016.0	8.0 13.0 18.0 19.1 25.4	2.0 3.2 4.5 4.7 6.3	2.3 3.8 5.2 5.5 7.4	4.1 6.7 9.3 9.8 13.1	4.5 7.4 10.2 10.8 14.4	5.1 8.3 11.5 12.2 16.2	5.5 9.0 12.4 13.2 17.6	5.9 9.6 13.2 14.0 18.7	6.4 10.4 14.4 15.2 20.3	6.9 11.2 15.5 16.4 20.7	7.9 12.8 17.7 18.8 20.7
	（1020.0）	8.0 13.0 18.0 25.4	2.0 3.2 4.5 6.3	2.3 3.8 5.2 7.3	4.1 6.7 9.2 13.0	4.5 7.3 10.2 14.3	5.1 8.3 11.4 16.1	5.5 8.9 12.4 17.5	5.9 9.5 13.2 18.6	6.4 10.3 14.3 20.2	6.8 11.1 15.4 20.7	7.8 12.7 17.6 20.7
42	1067.0	8.0 13.0 18.0 25.4	1.9 3.1 4.3 6.0	2.2 3.6 5.0 7.0	3.9 6.4 8.8 12.4	4.3 7.0 9.7 13.7	4.9 7.9 10.9 15.4	5.3 8.6 11.8 16.7	5.6 9.1 12.6 17.8	6.1 9.9 13.7 19.3	6.5 10.6 14.7 20.7	7.5 12.2 16.9 20.7
44	1118.0	8.0 13.0 18.0 25.4	1.8 2.9 4.1 5.7	2.1 3.4 4.7 6.7	3.7 6.1 8.4 11.9	4.1 6.7 9.3 13.1	4.6 7.5 10.4 14.7	5.0 8.2 11.3 15.9	5.3 8.7 12.0 17.0	5.8 9.4 13.0 18.4	6.2 10.2 14.1 19.8	7.1 11.6 16.1 20.7
46	（1168.0）	8.0 13.0 18.0 25.4	1.7 2.8 3.9 5.5	2.0 3.3 4.5 6.4	3.6 5.8 8.0 11.4	3.9 6.4 8.9 12.5	4.4 7.2 10.0 14.1	4.8 7.8 10.8 15.3	5.1 8.3 11.5 16.2	5.5 9.0 12.5 17.6	6.0 9.7 13.5 19.0	6.8 11.1 15.4 20.7
48	1219.0	8.0 13.0 18.0 25.4	1.7 2.7 3.7 5.3	1.9 3.1 4.3 6.1	3.4 5.6 7.7 10.9	3.8 6.1 8.5 12.0	4.3 6.9 9.6 13.5	4.6 7.5 10.4 14.6	4.9 8.0 11.0 15.6	5.3 8.6 12.0 16.9	5.7 9.3 12.9 18.2	6.6 10.7 14.8 20.7
	（1220.0）	8.0 13.0 18.0 25.4	1.7 2.7 3.7 5.2	1.9 3.1 4.3 6.1	3.4 5.6 7.7 10.9	3.8 6.1 8.5 12.0	4.3 6.9 9.6 13.5	4.6 7.5 10.4 14.6	4.9 8.0 11.0 15.6	5.3 8.6 12.0 16.9	5.7 9.3 12.9 18.2	6.6 10.7 14.8 20.7
52	1321.0	9.0 13.0 18.0 25.4	1.7 2.5 3.4 4.8	2.0 2.9 4.0 5.7	3.6 5.1 7.1 10.0	3.9 5.7 7.8 11.1	4.4 6.4 8.8 12.5	4.8 6.9 9.6 13.5	5.1 7.4 10.2 14.4	5.5 8.0 11.0 15.6	5.9 8.6 11.9 16.8	6.8 9.8 13.6 19.2
	（1420.0）	10.0 15.0 20.0 25.4	1.8 2.7 3.5 4.5	2.1 3.1 4.1 5.3	3.7 5.5 7.4 9.3	4.1 6.1 8.1 10.3	4.6 6.8 9.1 11.6	4.9 7.4 9.9 12.6	5.3 7.9 10.5 13.4	5.7 8.6 11.4 14.5	6.1 9.2 12.3 15.6	7.0 10.6 14.1 17.9
56	1422.0	10.0 16.0 22.0 25.4	1.8 2.8 3.9 4.5	2.1 3.3 4.6 5.3	3.7 5.9 8.1 9.3	4.1 6.5 8.9 10.3	4.6 7.3 10.0 11.6	4.9 7.9 10.9 12.6	5.3 8.4 11.6 13.4	5.7 9.1 12.5 14.5	6.1 9.8 13.5 15.6	7.0 11.2 15.5 17.9
60	1524.0	10.0 16.0 22.0	1.7 2.7 3.6	1.9 3.1 4.3	3.4 5.5 7.5	3.8 6.1 8.3	4.3 6.8 9.4	4.6 7.4 10.1	4.9 7.8 10.8	5.3 8.5 11.7	5.7 9.2 12.6	6.6 10.5 14.4
	（1620.0）	10.0 16.0 22.0	1.6 2.5 3.4	1.8 2.9 4.0	3.2 5.2 7.1	3.6 5.7 7.8	4.0 6.4 8.8	4.3 6.9 9.5	4.6 7.4 10.1	5.0 8.0 11.0	5.4 8.6 11.9	6.2 9.9 13.6

规定外径 D Specified Outer Diameter（D）		规定壁厚(mm) Specified Wall Thickness in mm	最低试验压力（Mpa） Minimum test pressure （Mpa）									
			钢 级 Steel Grade									
in	mm		L210 (A)	L245 (B)	L290 (X42)	L320 (X46)	L360 (X52)	L390 (X56)	L415 (X60)	L450 (X65)	L485 (X70)	L555 (X80)
64	1626.0	10.0 16.0 22.0	1.6 2.5 3.4	1.8 2.9 4.0	3.2 5.1 7.1	3.5 5.7 7.8	4.0 6.4 8.8	4.3 6.9 9.5	4.6 7.4 10.1	5.0 8.0 11.0	5.4 8.6 11.8	6.1 9.8 13.5
68	1727.0	10.0 16.0 22.0	1.5 2.3 3.2	1.7 2.7 3.7	3.0 4.8 6.6	3.3 5.3 7.3	3.8 6.0 8.3	4.1 6.5 8.9	4.3 6.5 9.5	4.7 7.5 10.3	5.1 8.1 11.1	5.8 9.3 12.7
	（1820.0）	10.0 16.0 22.0	1.4 2.2 3.1	1.6 2.6 3.6	2.9 4.6 6.3	3.2 5.1 7.0	3.6 5.7 7.8	3.9 6.2 8.5	4.1 6.6 9.0	4.5 7.1 9.8	4.8 7.7 11.1	5.5 8.8 12.1
72	1829.0	14.0 18.0 22.0	1.9 2.5 3.0	2.3 2.9 3.5	4.0 5.1 6.3	4.4 5.7 6.9	5.0 6.4 7.8	5.4 6.9 8.4	5.7 7.4 9.0	6.2 8.0 9.7	6.7 8.6 10.5	7.6 9.8 12.0
76	1930.0	14.0 18.0 22.0	1.8 2.4 2.9	2.1 2.7 3.4	3.8 4.9 6.0	4.2 5.4 6.6	4.7 6.0 7.4	5.1 6.5 8.0	5.4 7.0 8.5	5.9 7.6 9.2	6.3 8.1 10.0	7.2 9.3 11.4
	（2020.0）	10.0 16.0 22.0	1.3 2.0 2.8	1.5 2.3 3.2	2.6 4.1 5.7	2.9 4.6 6.3	3.2 5.1 7.1	3.5 5.6 7.7	3.7 5.9 8.1	4.0 6.4 8.8	4.3 6.9 9.5	4.9 7.9 10.9
80	2032.0	14.0 18.0 22.0	1.7 2.2 2.7	2.0 2.6 3.2	3.6 4.6 5.7	4.0 5.1 6.2	4.5 5.7 7.0	4.8 6.2 7.6	5.1 6.6 8.1	5.6 7.2 8.8	6.0 7.7 10.0	6.9 8.8 10.8
	（2220.0）	14.0 18.0 22.0	1.6 2.1 2.5	1.9 2.4 2.9	3.3 4.2 5.2	3.6 4.7 5.7	4.1 5.3 6.4	4.4 5.7 7.0	4.7 6.1 7.4	5.1 6.6 8.0	5.5 7.1 8.7	6.3 8.1 9.9
	（2420.0）	16.0 19.0 22.0	1.7 2.0 2.3	1.9 2.3 2.7	3.5 4.1 4.7	3.8 4.5 5.2	4.3 5.1 5.9	4.6 5.5 6.4	4.9 5.9 6.8	5.4 6.4 7.4	5.8 6.9 7.9	6.6 7.8 9.1
100	（2540.0）	16.0 19.0 22.0	1.6 1.9 2.2	1.9 2.2 2.6	3.3 3.9 4.5	3.6 4.3 5.0	4.1 4.8 5.6	4.4 5.3 6.1	4.7 5.6 6.5	5.1 6.1 7.0	5.5 6.5 7.6	6.3 7.5 8.7
112	（2845.0）	16.0 19.0 22.0	1.4 1.7 2.0	1.7 2.0 2.3	2.9 3.5 4.0	3.2 3.8 4.5	3.6 4.3 5.0	3.9 4.7 5.4	4.2 5.0 5.8	4.6 5.4 6.3	4.9 5.8 6.8	5.6 6.7 7.7

Note:

1. Shown in this table are the minimal (standard) test pressures of GB/T9711-2017 and API 5L specifications. The minimal test pressure for steel pipes whose steel grade, diameter and wall thickness are not listed in the table shall be calculated according wing formula; and the limitation of maximum test pressure given in the standards shall be taken into consideration, i.e., for the adoption of GB/T9711-2017 PSL2 and not specified in the purchase order, the percentage of S = 95%, and wnen D < 406.6mm, the maximum pressure = 50Mpa, or = 25Mpa when D>406.6mm. P=2ST/D, where: P = hydrostatic test pressure in Mpa, S = total elongation stress in (unit) , times a coefficient specified in the standard, T = wall thickness of steel pipe in mm, and D = outer diameter of steel pipe in mm.

2. Steel pipe with steel grade L210, L245 and D w 48.3mm has a given test pressure, and test pressure of other steel pipes with different outer diameter and wall thickness computed according to the formula mentioned in Note 1.

3. Steel pipe per GB/T3091-2015 should be put into hydraulic test one by one, and the test pressure should meet the specifications listed in the following table.

公称外径（mm） Nominal Outer Diameter in mm	试验压力（Mpa） Test Pressure in Mpa
D ≤ 168.33	3
168.3 < D ≤ 323.9	5
323.9 < D ≤ 508	3
D > 508	2.5

品质源于专业 成就铸就市场
Quality stemed from professionalism, market gained by achievements

AFTER-SALE SERVICE COMMITMENTS

Dear Partners：

Thank you very much for your cooperation with us. We have the following service specifications for you to better understand our company and to strengthen work relation and communication with us. We welcome your suggestions about our service with which we will improve our work quality and do a better job for each of our partners.

Service Commitment

1.We will arrange our production strictly in accordance with the delivery schedule you may require to ensure that the delivery is made on schedule.
2.We have twenty five years* experience in the production and management of steel pipes. We are fully capable of manufacturing high-quality double face submerged arc welded spiral steel pipes in terms of technical force, production process, detection means, etc.. We will provide you with quality steel pipes by strictly following process planning, and tightening the control over the whole process from raw materials to finished products in accordance with ISO9001 quality management system and API specifications.

Services

Before-sale Service
1.Visit our customers for their opinions and suggestions as planned;
2.Keep abreast of customer's requirements and find our problems;
3.Respond customer's demand on the date it is raised, or give an explanation in case that such demand can not be met;
4.Finish a contract review within two days.

In-sale Service
1.Strictly fulfill sales contracts, and provide our products as required in terms of time, quality and quantity;
2.Strictly carry out technical service agreements to provide technical service and guidance on time;
3.Assure service quality, solve a problem as soon as it is found, or notify the customer and report to the competent person in charge in the event that such problem can not be solved on site;
4.Report to the competent person in charge if any product sold is to be replaced or returned because of product quality.

After-sale Service
1.We render site service on the date on which it is requested for customers in Hebei Province or within three days from the date it is requested for customers in other provinces.
2.The sales department will report a completed project to the competent person in charge within one month from the date it is completed, feed back related information every six months, prepare relevant user investigation report, and get to know user's evaluation on our company.

Service Guarantee

1."Three Frees" for the service of our products
1).Free of charge for on-site technical guidance;
Free of charge for related data;
Free of charge for related technical training.

2."Three in time' telephone service of our products
Timely respond consultation regarding product performance and technology;
Timely instruct, analyze and judge any problem arising from the use of our product by telephone;
Timely promise, by telephone, to render reservation service when necessary.

3."Three supervisions" of user for quality of service
User's supervision of our timely on-site service;
User's supervision of our service rendered as agreed;
User's supervision of our serviceman's timely completion of service and its quality.

4."Three Don't" of our servicemen
Don' t change or delay service schedule without approval;
Don' t request the user to provide food, lodging, traffic, etc.;
Don' t decline such service requests that are beyond the current service but within the service category of our products

5."Three Satisfactions" in reception
To the satisfaction of users who come to PETROL STEEL (PESCO) for business;
To the satisfaction of users who come to PETROL STEEL (PESCO) for consulting or learning purpose;
To the satisfaction of our consumers who have accomplished their business tasks.

(2017-2020 Performance)

A List of Business Achievements

CNPC (China National Petroleum Corporation), China Railway Engineering Corporation, China State Construction, China Aerospace

No.	Engineering Unit	Material	Specification	Quantity (Ton)	Time
1	Dongying Hualian Petroleum Chemical Plant Co., Ltd.	Q235B	426*10, etc.	511.8	2014.12.2
2	Sinochem Xingzhong Oil Staging (Zhoushan) Co., Ltd.	Q235B	406*8, etc.	1066.912	2016.7
3	Panjin Baoheng Oil and Gas Co.. Ltd.	L245	273*6	118.53	2014.5.2
4	Jiyuan Shihua Pipeline Branch Office	L245MB	508*9.1	249	2014.3.28
5	Jiyuan Shihua Pipeline Branch Office	L245M	508*9.1	346.63	2016.6.24
6	Dongying United Petrochemical Co., Ltd.	Q235B	DN200	500	2015.5.24
7	Xi’an Dongyue Petrochemical Pipeline Co., Ltd.	L245	610*10, etc.	181.778	2015.10.9
8	CNOOC Zhongjie Petrochemical Co., Ltd.	Q235B	457*7.1, etc.	100	2014.7
9	Sinama International Engineering Co., Ltd	Q345B	800*16	3499	2016.1
10	Panjin Liao Oil Chenyu Jianan Co., Ltd	L360	323.9*6.5, etc.	4344.658	2014.9.16
11	Qingdao Haiye Oil Wharf Co., Ltd	L245	377*8–820*10	793.647	2015.3.16
12	Dongguan Dongzhou International Petrochemical Storage Co., Ltd.	L245	610*10, etc.	539.428	2014.3.15
13	CNOOC Zhongjie Petrochemical Co., Ltd.	Q235B	406.4*6.4	2651.46	2016.12.7
14	China Railway Engineering Group Wuhan Goods and Materials Co., Ltd.	Q235B	630*10	924.747	2015.5.6
15	China State Construction 7th Engineering Bureau Installation Company Yellow River Tongli Project Department.	Q345B	700–800	233.908	2016.12.9
16	China Railway Engineering Group Wuhan Goods and Materials Co., Ltd.	Q235B	600*8	1000	2014.3.23
17	Shanghai Dizhan Industry and Trade Co., Ltd.	L245	356*9.53	1212	2014.6
18	Urumqi Fudi Youbang Trading Co., Ltd.	Q235B	2500*14 2200*14	2887	2015.2
19	Wuxi Huayou Special Steel Co., Ltd.	Q235B	323.8*5.6	3148	2014.11
20	Dongguan Dongzhou International Petrochemical Storage Co., Ltd.	L245	273*8–610*10	1086.35	2015.6.15
21	China Petroleum Supplies Wuhan Company	Q235B	529*8, etc.	113.408	2014.3.11
22	PETRO CHINA Co., Ltd Qinghai Oilfield Branch	X52	406.4*8.8	581	2016.8.11
23	China Aviation Technology Beijing Co., Ltd.	Q235B	2744*22	8789	2014.1.19
24	China Petroleum Supplies Wuhan Company	Q235B	273–1118	171.57	2016.3.25
25	China Petroleum Supplies Wuhan Company	Q235B	323.9–1016	611.732	2016.12.12
26	China Petroleum Supplies Wuhan Company	Q235B	323.9*6–1321*10	114.614	2015.11.19
27	China Petroleum Supplies Wuhan Company	Q235B	323.9–1118	828.542	2014.1.16
28	Wuyang Iron & Steel Co., Ltd.	Q235B	920*10	3858	2016.7
29	China Petroleum Supplies Zhengzhou Company	Q235B	426*7	4235	2014.9
30	China Petroleum Chemical Co., Ltd.	Q235B	864*11.6	12005.57	2015.12
31	HNNJUNG PILE CO.,LTD	Q235B	711.2*12 558.8*12	283.085	2015.1.30
32	LISON STEEL CO.,LIMITED	Q345B	914.4*15.9	311.556	2017.3
33	SAS VERT BLEU	Q235B	1219.2*6.3	226.134	2015.9.7
34	Silver y.m.–Services$Agencies LTD	Q235B	multiple	384.04	2015.2
35	Bagherzadeh Khorsandi	Q235b Q345B	multiple	5148.13	2014.6
36	Oilfield supply group ITECO Oilfield supply France	Q235B	762*12.7	764.223	2017.1
37	SPAT STEEL INTERNATIONAL (H.K.) LIMITED	Q345B	1219.2*19.05 1117.6*19.05 914.4*19.05, etc.	3407.452	2015.1
38	Steelmark Mideast WLL,Manama,Bahrain.	Q235B	1219.2*14.27	310.177	2015.4.13
39	Korea	Q235B	558.8*12	658.255	2014.5.23
40	ITECO Oilfieldsupplygroup ITECO Oilfie Supply France	Q235B	762*7.52	455.131	2017.9
41	YOUSEF YAHYA ALNAMEE FOR TRADING SERVICES EST	Q345B	711*19	115.757	2015.7.8
42	TRUONG PHAT INVESTMENT TRADING JOINT STOCK COMPANY	Q235B	406.4*7.14	1102.045	2015.3
43	UNISTEEL INTERNATIONAL DMCC	S355JR	1016*20	229.908	2015.5.21
44	Silver y.m.–Services$Agencies LTD	Q235B	558*12	758.255	2016.5
45	AMCO METAL CO.,LTD	Q345B	690*22	339.26	2014.6

品质源于专业 成就铸就市场

Quality stemed from professionalism, market gained by achievements

Chemical engineering

No.	Engineering Unit	Material	Specification	Quantity (Ton)	Time
1	Wenxi Anshen Environmental Protection Chemical Co., Ltd.	Q235A	2120*19, etc.	799.266	2016.5.26
2	Hebei Shenghua Chemical Co., Ltd.	Q235B	630*8 720*8	720	2014.9.1
3	China Chemical Engineering No.13 Construction Co., Ltd.	L245	1016*8.7, etc.	645.09	2014.6.1
4	SINOPEC No.2 Construction Group Co., Ltd.	Q235B	377*10	814.569	2015.9.28
5	Tangshan Bangli Jinyin Chemical Co., Ltd.	Q235B	1620*10, etc.	1500	2016.9.7
6	Hebei Shenghua Chemical Co., Ltd.	Q235B	630*8	351.541	14.9.23
7	Datang Energy Chemical Co., Ltd.	Q235B	2020*16, etc.	3764	2015.7.2
8	Texas Shihua Chemical Co., Ltd.	Q235B	219*6	289.321	2015.7.14
9	Heilongjiang Huaxing Industrial Equipment Installation Co., Ltd.	Q235B	820*10	4824	2014.7
10	Central Hubei Energy Jingxing Mining Group New Crystal Technology Co., Ltd.	Q235B	1020*10	5794	2015.8
11	Texas Shihua Chemical Co., Ltd.	Q235B	219*6	322.314	2015.5.8
12	Inner Mongolia Junzheng Chemical Co., Ltd.	Q235B	1820*20, etc.	416.3	2014.4.8
13	China Tianchen Chemical Engineering Corporation	Q235B	457*6, etc.	1132	2015.12.21
14	Tangshan Bangli Jinyin Chemical Co., Ltd.	Q235B	1020*10, etc.	503.207	2016.8.9
15	Jiutai Energy (Junggar) Co., Ltd.	Q235B	630*9, etc.	820	2014.3.12
16	Silver y.m.–Services$Agencies LTD	Q235B	660.4*12.7	260.858	2014.4
17	Shanghai Wokai International Trade Co. Ltd.	Q235B	351*6	2650	2014.12
18	Shandong Runze Chemical Co., Ltd.	Q235B	813*8.8	1380	2015.1
19	Naiman Qi Hongji Cement Co., LTD.	Q235B	800*16, etc.	2668	2016.1
20	HONGKONG BRISK COMPANY LIMITED	Q235B	1016*6 462*6	174.056	2015.4.12
21	Silver y.m.–Services$Agencies LTD	Q235B	508*6/457*12	120.651	2014.6
22	Yieh Corporation Limited	Q235B	multiple	156.941	2015.3
23	STONE GROUP LTD	X52	813*7.9	122.346	2017.8.25
24	Silver y.m.–Services$Agencies LTD	Q235B	406.4*6.35 508*9.53	305.656	2014.12
25	China Henan Shuili ,Branch Office in the Philippines	SS400	600*12	173.085	2015.7
26	UNITED PUBLIC OILFIELD SERVICE LIMITED	GR.B	multiple	455.027	2014.5.24
27	Sri Lanka	Q235B	609*15	603.158	2015.3.18
28	International Piping Products Pte Ltd.	X52	multiple	322.172	2017.5.21

Water conservancy

No.	Engineering Unit	Material	Specification	Quantity (Ton)	Time
1	Liaocheng Yellow River Engineering Bureau South–to–North Water Diversion Project Qing County section, first section project management department.	Q235B	1020*12, etc.	468	2015.12.10
2	Zibo Qilong Water Conservancy Construction Installation Company	Q235B	2020, etc.	289	2016.11.27
3	Shandong Ytong Installation Co., Ltd, project management department of Guan County Dianzi Reservoir water traced pipeline construction	Q235B	1420*16, etc.	2669	2015.9.5
4	Baotou Tianlong Water Industry Co., Ltd.	Q235B	1220*16	1427	2014.8.25
5	Zoupingtaizi Water Supply Co., Ltd.	Q235B	1620*14	7208.359	2016.2.1
6	Laiwu Urban Development Asset Management and Operation Co., Ltd.	Q235B	1220*12	4289.917	2016.3.25
7	Xueye to Laiwu Water Pipeline Project Pipeline	Q235B	1020*14	689.215	2015.6
8	Binzhou Water Group Co., Ltd.	Q235B	1020*12, etc.	517.28	2014.10.8
9	CGCOC Group Co., Ltd.	Q235B	1219*14.27	16205	2015.9
10	Sinohydro Corporation.	Q345B	1219.2*19.05	25653.281	2014.9
11	Liaocheng Yellow River Engineering Bureau, South–North water diversion project	Q235B	1020*16, etc.	515.058	2016.8.4
12	Project management department of the first section in Qing County section	Q235B	720*10	703.15	2016.7.3

Water conservancy

No.	Engineering Unit	Material	Specification	Quantity (Ton)	Time
13	Qixia Water Conservancy Engineering Construction and Installation Co. Ltd.	Q235B	530*10, etc.	2157.266	2015.4.27
14	China Civil Engineering Group Co. Ltd.	Q345B	820*10, etc.	3760.21	2016.12.16
15	Procurement of steel pipes for Zambia Kraft River water supply project	Q345B	609.6*10	523.324	2015.7
16	Shandong Water Conservancy and Hydropower Construction Engineering Contracting Co., Ltd.	Q235B	920*12, etc.	935.836	2016.5.4
17	Nanchang Water Group Water Supply and Drainage Building Materials Co., Ltd.	Q235B	820*10	2690	2015.8.11
18	Shandong Water Conservancy Engineering Corporation, second bidding project management department of Qing County section of South-to-North Water Diversion Pipeline Project	Q235B	920*16	464	2015.12.11
19	Zhenba County Water Supply Rebuilding and Expanding Project Office	Q235B	457*7, etc.	555	2014.12.1
20	Qingzhou Water Conservancy Construction Corporation	Q235B	1020*12, etc.	598.106	2014.6.18
21	Water supply engineering steel pipe and pipe fittings of east area in Guannan County	Q235B	720*9 等	423.513	2014.6
22	Lianyungang Zhongfu Lianzhong Composite Materials Group Co., Ltd.	Q235B	820*16.6, etc.	728.394	2015.5.15
23	CGCOC Group Co., Ltd.	Q235B	529*7	721.265	2015.4
24	Ethiopia-Djibouti Cross-Border Water Supply Project	Q345B	323.9*8	459.214	2015.8.13
25	Baotou Tianlong Water Industry Co., Ltd.	Q235B	1220*14	1678.844	2014.3.15
26	Jining Water Conservancy Engineering Construction Company	Q235B	1020*12, etc.	1135.336	2015.11.2
27	CGCOC Water Co., Ltd, Nigeria ABOTO Water Plant project	Q235B	325-426	235.552	2015.7.24
28	CGCOC Water Co., Ltd, first period of water supply engineering in nine cities of Cameroon	Q235B	219-720	400	2015.9.9
29	CGCOC Water Co., Ltd, Nigeria OGOJA Water supply project	Q235B	219-529	559	2015.8.12
30	Hangzhou Yuhang Water Co., Ltd.	Q235B	1620*14*18	2848.95	2014.1.16
31	Beijing Xiangkun Water Construction Co., Ltd.	Q345D	720*8	115.177	2014.5.5
32	Jining Water Conservancy Engineering Construction Company	Q235B	630-1420	1727.054	2014.5.23
33	Cangzhou South-to-North Water Diversion Project Construction Committee Office, SP tube manufacturing of extension section of Shijin Main Canal project of Hebei South-to-North Water Diversion Supporting Project	Q235B	multiple	contract value :CNY 20540 thousand	2015.7.12
34	The fourth bidding project department of the fourth unit of south-to-north water diversion project in Baoding City	Q345C	1220*16	395.016	2014.7.11
35	Pipe section of newly built Liu Village irrigating gate in Xianghe County	Q235B	1420*14	246.568	2015.8.7
36	Hebei Iron and Steel Group Mining Co., Ltd	Q235B	426*8	123.702	2014.11.13
37	Qingdao Bring-Yellow River-To-Qingdao Water Co., Ltd	Q235A	1620*14, etc.	1028.207	2015.1.28
38	China Water Conservancy and Hydropower Second Engineering Bureau Co.,Ltd	Q235B	1000*10*12	939	2016.3.19
39	Water conservancy project of Binhe forest park of Daxing(section 5)	Q235B	630*7	587.263	2015.9.8
40	Hubei Enshi Urban emergency water supply pipe network construction engineering headquarters	Q235B	1220*10, etc.	401.747	2014.12.23
41	Cangzhou South-to-North water diversion project construction committee office, SP pipe manufacturing of water pipeline project of Cangzhou south-to-north water diversion supporting project	Q235B	multiple	contract value :CNY 9917 thousand	2014.8.10
42	Hubei Hongsheng Water Conservancy Engineering Co., Ltd.	Q235B	820*14, etc.	117.03	2014.10.11
43	China Gezhouba Group Co., Ltd. Fuyang Branch	Q235B	1820*18*20	415	2015.9.10
44	Beijing Jinhe Water Construction Co., Ltd. No.5 Project department of Jining Renewal Supporting Engineering Construction	Q235B	720*10	252.139	2015.12.23
45	Laiwu Yinda Water Supply Co., Ltd, Laiwu Daye Reservoir-Laiwu Steel Water Supply Pipeline Project	Q235B	820*12	786.082	2016.5.15
47	Handan South-to-North Water Diversion Project Construction Committee Office, water pipeline company of Handan south-to-north water diversion supporting project water plan	Q235B	multiple	contract value :CNY 19800 thousand	2014.6

品质源于专业 成就铸就市场

Quality stemed from professionalism, market gained by achievements

Water conservancy

No.	Engineering Unit	Material	Specification	Quantity (Ton)	Time
48	Vietnam	Q235B	323.9*5	6.364	2016.12.9
49	Algeria	X42	711.2*12	3806	2015.7
50	Steel Plate Solutions(PTY)LTD.	X42	610*12	295.548	2015.10.20
51	S.HAKIMUDDIN&CO	X42	530*8 630*8	511.29	2015.6.3
52	Nature Energy Developers (Pvt)Limited	GR.B	multiple	244.132	2017.9
53	LISON	Q235B	multiple	636.308	2015.2
54	SPAT STEEL INTERNATIONAL (H.K.) LIMITED	Q345B	1828*25.4 1524*25.4	2216.06	2015.11
55	Felix Kunisky Flores	Q235B	323.85*9.52	100.32	2014.12
56	THE FIRST ENGINEERING BUREAU OF HENAN WATER CONSERVANCY(CHINA HENAN SHUILI YIJU)	SKK400	800*19/900*19	951	2015
57	Chile	X52	multiple	915.625	2014.4.10
58	Steel Plate Solutions(PTY)Ltd.	X42	610*12	576.358	2017.12.15
59	Vietnam	Q235B	323.9*7.92	417.54	2015.3.30

Electricity

No.	Engineering Unit	Material	Specification	Quantity (Ton)	Time
1	Shijiazhuang Dongfang Thermoelectric Co., Ltd.	Q235B	720*10, etc.	903.665	2014.5.6
2	Beifang United Power Co., Ltd, Urat Power Plant	Q235B	1220*14	4455.317	2014.7.24
3	Jinan Thermoelectric Co., Ltd.	Q235B	219*7, etc.	261.05	2016.7.7
4	Jinan Thermoelectric Co., Ltd.	Q235B	529*8	122.11	2016.7.8
5	Zibo Mingzhong Engineering Services Co., Ltd.	Q235B	720*10	1260.695	2015.6.24
6	High-temperature water heating project of Huaneng Power Plant	Q235B	530*10	357.89	2015.8.9
7	Huadian Heavy Industries Co., Ltd.	Q235B	920*10	1240.593	2016.4
8	2*600MW expansion project of Anhui Huadian Liuan Power Plant	Q235B	630*8	754.32	2015.7
9	Nanjing Huarun Thermoelectric Co., Ltd.	Q235B	530*10, etc.	340.7	2014.7.12
10	Harbin Junzhu Power Station Equipment Co., Ltd.	Q345B	1420*18, etc.	483.53	2014.8.10
11	Huadian Heavy Industries Co., Ltd.	Q235B	630*10, etc.	12488	2014.5
12	Huaneng Yushe Power Generation Co., Ltd.	Q235B	2020*10, etc.	315	2015.4.6
13	Water Conservancy Construction Department of Dezhou Water Conservancy Bureau in Shandong	Q235B	1020*12	429.566	2016.12.31
14	The eighth engineering office of Shanxi Water Conservancy Construction Engineering Bureau	Q235B	1220*12	3300	2016.7.30
15	Nanjing Dadi Construction Machinery and Electrical Installation Branch	Q235B	2020*20	628.375	2016.6.20
16	Chongqing Tianyuan Hydropower Equipment Co., Ltd.	Q235B	1316*8, etc.	1344	2014.8.17
17	Hebei Xinyi Thermoelectric Equipment Co., Ltd.	Q235B	630*8	1451	2015.8.13
18	Hebei Huafeng Coking & Power Co., Ltd.	Q235B	2020*10, etc.	557.463	2015.9.17
19	Huaneng Yushe Power Generation Co., Ltd.	Q235A	2020*10	17009	2016.3
20	Shanghai Zhongfen New Energy Investment Co., Ltd.	Q235B	219*6, etc.	3001.17	2014.11
21	Tangshan Yiyou Electromechanical Equipment Co., Ltd.	Q235B	820*12, etc.	926.526	2016.1.5
22	Hebei Huafeng Coking & Power Co., Ltd.	Q235B	1420*7, etc.	115.615	2014.2.9
23	Baotou Lihong Jingdian Industry and Trade Co., Ltd.	Q235B	1420*14	1500	2015.4.15
24	Hebei Huafeng Coking & Power Co., Ltd.	Q235B	1820*14, etc.	732.604	2014.4.14
25	Hebei Shuntai Construction Group Co., Ltd, Hebei Construction & Investment Corporation, Shahe Power Plant Project Department.	Q235B	478*8, etc.	1643.559	2015.11.30
26	Dongfang Electric (Sichuan) Supplies Co., Ltd.	Q235B	490*10	386.353	2015.6.19
27	Smithbridge PNG Limited.	Q345B	914*12.7	302.184	2015.7.12
28	Steel Plate Solutions(PTY)Ltd.	X42	610*12	260	2015.8.4
29	UNITED PUBLIC OILFIELD SERVICE LIMITED	L245	multiple	307.578	2014.10
30	Silver y.m.-Services$Agencies LTD	Q235B	660.4*13	218.371	2016.3

Heating power

No.	Engineering Unit	Material	Specification	Quantity (Ton)	Time
1	Hebei Xinyi Thermoelectric Equipment Co., Ltd.	Q235B	1220*14	549.64	2015.8.14
2	Chiping Yangguang Heating Power Co., Ltd.	Q235B	1220*14, etc.	519	2016.8.29
3	Shandong Gaotang Thermal Power Plant	Q235B	1020*8	486.372	2014.5.27
4	Shandong Dingchao Heating Equipment Co., Ltd.	Q235B	630*11, etc.	3092	2014.7.9
5	Shandong Gaotang Thermal Power Plant	Q235B	1020*8	606.97	2014.4.7
6	Qingdao Antai Thermal Power Co., Ltd.	Q235B	630*8	491.844	2014.5.12
7	Shandong Dingchao Heating Equipment Co., Ltd.	Q235B	1220*12	646.92	2015.3.19
8	Jizhong Energy Group, Fengfeng Group Centralized Heating Supply Shantytown Transformation Project Department.	Q235B	1220*14	2290.116	2015.5.26
9	Chiping Yangguang Heating Power Co., Ltd.	Q235B	1420*14, etc.	2090.959	2016.6.25
10	Shandong Shengyuan Heating Power Group Co., Ltd.	Q235B	1020*10, etc.	2998.658	2015.3.2
11	Shandong Dingchao Heating Equipment Co., Ltd.	Q235B	920*10 720*10	4831	2016.6
12	CIC (Tianjin) Thermal Energy Equipment Development Co., Ltd.	Q235B	720*9	473.427	2014.7.26
13	Gansu Architectural Design and Research Institute	Q235B	600*9, etc.	1212.977	2016.9.30
14	CECT Wuqiang Concentrated Heating Supply Project	Q235B	529*10	489.561	2016.6.12
15	Jinan Thermoelectric Co., Ltd.	Q235B	529*8	360.17	2016.2.17
16	Jiyang Haoyang Thermal Power Co., Ltd.	Q235B	529*7, etc.	457.85	2014.10.25
17	Beijing Chuangshi Energy Co., Ltd.	Q235B	630*9	499.507	2014.4.1
18	Pucheng Urban Heating Project DN700\DN450	Q235B	478*8	200.291	2014.6
19	Shandong Yitong Thermal Insulation Technology Co., Ltd.	Q235B	529*10	5966.74	2015.12
20	Hefei Fengda Cement Technology Co., Ltd.	Q345B	400*10, etc.	3817.693	2014.8
21	CIC (Tianjin) Thermal Energy Equipment Development Co., Ltd.	Q235B	1220*14	6380.772	2014.4
22	Shandong Dingchao Heating Equipment Co., Ltd.	Q235B	920*12	1760.6	2015.10.19
23	Shandong Dingchao Heating Equipment Co., Ltd.	Q235B	920*12	1612.27	2015.8.15
24	Shandong Dingchao Heating Equipment Co., Ltd.	Q235B	920*12	1612.27	2015.10.10
25	Hebei Zhonghao Electric Environmental Protection Equipment Manufacturing Co., Ltd.	Q235B	219–820	1782.27	2016.8.30
26	Shandong Gaotang Thermal Power Plant	Q235B	820*8	288.36	2014.6.25
27	Shandong Dingchao Heating Equipment Co., Ltd.	Q235B	219–720	350.38	2015.9.11
28	Shandong Dingchao Heating Equipment Co., Ltd.	Q235B	630–920	224.78	2014.5.21
29	Shandong Dingchao Heating Equipment Co., Ltd.	Q235B	325–720	380.45	2014.8.27
30	Zhuhai Xinyuan Thermal Power Co., Ltd.	Q235B	273–377	144.659	2016.1.10
31	Chiping Yangguang Heating Power Co., Ltd.	Q235B	478–1220	3468.8	2016.9.2
32	Hebei CECT Huanhui Technology Investment Co., Ltd.	Q235B	720–1220	2729.47	2015.8.1
33	ITECO OILFIELD SUPPLY MIDDLE EAST (FZE)LICENCE NR 2396	Q235B	762*7.52	553	2014.3
34	LISON STEEL CO.,LIMITED	Q345B	610 630	171.603	2014.7
35	KSB Pumps Company Limited	Q235B	914*9.5	268.7	2016.8.10
36	ThyssenKrupp Mannex GmbH,Germany	Q235B	1940*20	361.75	2014.9.29
37	Hongkong	Q235B	377*6	1632	2017.12.18

Gas, Natural Gas, Coal

No.	Engineering Unit	Material	Specification	Quantity (Ton)	Time
1	Binzhou Huanhai Pipeline Gas Transmission and Distribution Co., Ltd.	L360M	323.9*7.1	6000	2016.2.22
	Binzhou Gas Project high–pressure, subhigh–pressure pipeline project		355.6*7.1		
	Binzhou Gas Project				
2	Binzhou Huanhai Pipeline Gas Transmission and Distribution Co., Ltd.	L360M	457*8	965.212	2016.3.2
	Binzhou Gas Project high–pressure, subhigh–pressure pipeline project				
	Huanhai Petroleum Yangxin and Zhanhua section				

品质源于专业 成就铸就市场

Quality stemed from professionalism, market gained by achievements

Gas, Natural Gas, Coal

No.	Engineering Unit	Material	Specification	Quantity (Ton)	Time
3	Binzhou Huanhai Pipeline Gas Transmission and Distribution Co., Ltd.	L360M	508*8.8	1540.552	2015.11.27
	Binzhou Gas Project high–pressure, subhigh–pressure pipeline project		323.9*7.1	366.106	
	Huanhai Petroleum Yangxin and Zhanhua section				
4	The seventh construction company of CNPC	Q235	273–2540	1211.157	2015.1.27
	PetroChina Huabei Petrochemical Co. Ltd.				
	Refinery quality upgrade and safety and environmental protection technology reform of branch				
	Engineering new district water supply and drainage and fire control network				
5	Taiyuan Natural Gas Co., Ltd.	Q235B	323.9–508	1768.89	2015.6.19
6	Hunan XiangGan Three Gorges Gas Investment Co., Ltd.	L290N	406*7.1	6590	2014.2.20
			325*5.5	3850	
7	Binzhou Huanhai Pipeline Gas Transmission and Distribution Co., Ltd.	L360M	457*8	1484.955	2015.11.18
	Huanhai Petrochemical Boxing section		406.4*7.1	964.057	
8	Tianjin Wuqing Baichuan Gas Sales Co., Ltd.	Q235B	273.1–323.9	622.02	2014.10.17
9	Tianjin Wuqing Baichuan Gas Sales Co., Ltd.	L360M	508*8*8.8	1133.67	2016.8.31
10	Xianghe Baichuan Gas Sales Co., Ltd.	L360M	323.9*7	29.54	2016.8.13
11	Beijing Zhongran Weiye Gas Co., Ltd.	L245	219.1*6.8	4126	2014.9.12
12	China Shenhua Energy Co., Ltd.	Q235B	3200*25.4	13486.89	2015.2
13	Hebei Shengde Gas Co., Ltd.	L360	406*7.1	500.286	2014.2.22
14	Linyi Zhongyi Gas Co., Ltd.	L290	219*6.4	1342.668	2015.3.19
15	Wudi Gas Supply Co., Ltd.	L290	219.1–323.9	921.402	2015.1.23
16	Fucheng Huimin Natural Gas Co., Ltd.	L245	219–273	855.732	2014.9.8
17	8u Gas Holdings Co., Ltd.	Q235B	820*10	6386	2015.5
18	Jizhong Energy Fengfeng Group Co., Ltd.	Q235B	426*8	7645	2016.7
19	Anyang Beifang Gas Co., Ltd.	L245	219–273	920.16	2014.4.14
20	Panjin Baoheng Oil and Gas Co., Ltd.	L245	273*6	573.211	2016.3.6
21	Linyi Zhongyi Gas Co., Ltd.	L290	323.9*6.4, etc.	1109.606	2015.8.30
22	China Minmetals Corporation	Q235A	660*10, etc.	10860.556	2014.11
23	Hunan Yuanjiang CNPC Gas Co., Ltd.	L245	219*5.5	521.28	2015.6.21
24	Lixian Yihua Natural Gas Co., Ltd.	L360	325*6	330.792	2014.3.14
25	Gaocheng ChinaGas Xiangke Gas Co., Ltd.	Q235B	219*6.3	958	2016.2.1
26	Ningxia Changjiang Bunker(SINOPEC) Natural Gas Co., Ltd.	L360	219*7.1	461.31	2014.7.14
27	Shandong Guangzhi Municipal Gas Engineering Co., Ltd.	L245	323.9*7.1	37.942	2016.7.7
28	Golmud Xinhualian Gas Co., Ltd.	L245	325*7	82.35	2016.9.14
29	Jiaozuo ChinaGas Urban Gas Development Co., Ltd.	Q235B	325*7	208.84	2016.4.12
30	Shaanxi Zhongyuan Green Energy Natural Gas Co., Ltd.	Q235B	273–820	202.092	2015.11.3
31	Anyang Beifang Gas Co., Ltd.	L245	273*7.5	147.322	2014.2.12
32	Shanghai Huaqi Industrial Co., Ltd	Q235B	219–720	3872.18	2014.11.28
	Shanxi efficiency and environmental improvement project, coal seam gas in Liulin county .				
	Procurement of gas transmission pipeline network, compressor, pressure adjusting cabinet of supply and transmission and distribution sub–project				
33	EURL HYDRAULIQUE ZHUN AISSAT MUSTAPHA BP 46/3 REGHAIA ALGIERS/ALGERIA	Q235B	711.2*12	286.2	2014.3
34	DAA ENERGY GROUP SH.P.K	Q345B	508*11 570*8 630*6	212	2016.3.22
35	Silver y.m.–Services$Agencies LTD	Q235B	711.2*12 558.8*12	98.207	2017.8
36	KSB Pumps Company Limited	X42	914.4*9.5	654	2016.2.8
37	DAA ENERGY GROUP SH.P.K	Q345B	724*12 814*7 914*7	526	2016.3.22