



长沙昊博机械设备有限公司

Changsha Haobo Mechanical Equipment Co., Ltd.

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长沙昊博机械设备有限公司成立于2007年，是湖南具有代表性的集工程配套非标设备的研发、生产、销售、服务为一体的专业厂家。

公司配备了现代化的生产设备和设施，引进行业领先的生产和检测设备，秉承专业、专注、高效的经营理念，本着人性化的服务宗旨，致力于不锈钢、铁、铝材质的管件、薄板件、消声器、各种工具箱、电气设备箱、各种平台、柜体、粉末物料的搅拌输送设备等产品的研发制造，产品广泛应用于工程机械、商用车、客车、乘用车、新能源、食品、医疗、化工等领域。

Changsha Haobo Mechanical Equipment Co., Ltd. was established in 2007. It is a landmark professional manufacturer in Hunan that integrates the research and development, production, sales, and service of engineering supporting non-standard equipment.

The company is equipped with modern production equipment and facilities, introducing industry-leading production and testing equipment. Adhering to the professional, focused, and efficient business philosophy, and with a humanized service tenet, it is committed to the research and development of stainless steel, iron, and aluminum pipe fittings, thin plates, mufflers, various toolboxes, electrical equipment boxes, various platforms, cabinets, powder material mixing and conveying equipment, and other products. The products are widely used in engineering machinery, commercial vehicles, buses, passenger cars, new energy, food, medical, chemical and other fields.

公司通过了ISO9001:2015质量体系认证和IATF16949:2016质量管理体系认证，拥有高效团队，凭借雄厚的基数和强大的生产能力，产品覆盖全国各大省市的大型工程机械主机厂和汽车制造公司，以及新能源、食药化塑的行业龙头企业，市场对产品的反映良好。

The company has passed the ISO9001:2015 quality system certification and IATF16949:2016 quality management system certification, with an efficient team. With a strong base and strong production capacity, its products cover large engineering machinery host factories and automobile manufacturing companies in major provinces and cities across the country, as well as leading enterprises in the new energy, food, medicine, chemical and plastic industries. The market has responded well to its products.

企业理念：创新 拼搏 团结 务实

企业宗旨：质量第一 顾客至上 持续改进 精益求精

质量方针：优良的产品 良好的价格 满意的服务

Corporate philosophy: Innovation, Striving, Unity, Pragmatism
Enterprise purpose: Quality first, customer first, continuous improvement, and excellence
Quality policy: Excellent products, good prices, satisfactory services



合作伙伴
Partners



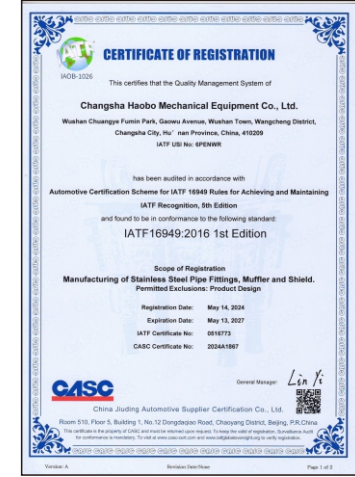
荣誉
Corporate culture



专利
Patent



证书
Certificate





产品介绍 →→

Product introduction

保温钢管

Insulated steel pipe



保温钢管是经过保温工艺加工处理后，在不同工作环境和外介质的作用下保证工作钢管内温度与表面温度符合或达到使用要求的钢制管道。

我司生产的保温管采用优质无机非金属隔热材料，材料绝缘性好、耐热性强、抗腐蚀性好，机械强度高，没有任何气味，环保无毒。与传统的玻璃棉、岩棉制品相比，不含任何黏结剂，遇高温时不会发出任何有毒、刺鼻的气味。

性能参数 performance parameter

热传导系数 Thermal conductivity coefficient	0.03w/cm.k
耐高温 High temperature resistance	700°
阻燃性能 Flame retardant performance	A1

Steel pipes that are processed by insulation technology can ensure that the internal temperature and surface temperature of the working steel pipe meet or reach the usage requirements under the action of different working environments and external media.

The insulation pipes produced by our company adopt high-quality inorganic non-metallic insulation materials. These materials have good insulation properties, strong heat resistance, good corrosion resistance, high mechanical strength, and no odor at all. They are environmentally friendly and non-toxic. Compared with traditional glass wool and rock wool products, they do not contain any binders and will not emit any toxic or pungent odors when exposed to high temperatures.

带补偿器钢管
Steel pipe with compensator



金属波纹管作为敏感元件、减震元件、补偿元件、密封元件、阀门元件及管路连接件，广泛应用于自动控制和测量仪表、真空技术、机械工业、电力工业、交通运输及原子能工业等领域。主要用于需要很小的弯曲半径非同轴轴向传动，或者不规则转弯、伸缩，或者吸收管道的热变形等，或者不便于用固定弯头安装的场合做管道与管道的连接，或者管道与设备的连接使用。其作用可以起到：

- 1. 补偿吸收管道轴向、横向、角向热变形。
- 2. 吸收设备振动，减少设备振动对管道的影响。

性能参数 performance parameter

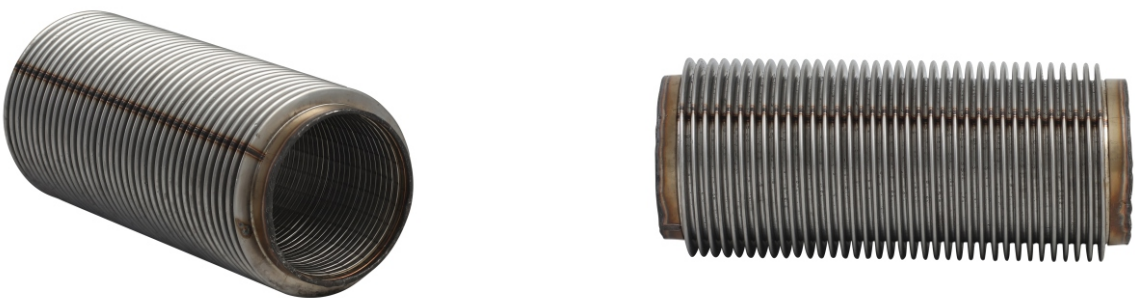
Direction		F M A M 15 605 (HDT ER6)
Axial	Extension Limit (- mm at 500N)	25.9
	Stiffness (N/mm)	7.78
	Friction Rate (N/mm/mm)	106.9
Lateral Stiffness (N/mm)		2.39

As a sensitive element, shock-absorbing element, compensating element, sealing element, valve element and pipeline connector, metal bellows are widely used in fields such as automatic control and measuring instruments, vacuum technology, mechanical industry, power industry, transportation and atomic energy industry.

It is mainly used for non-concentric axial transmission requiring a very small bending radius, or irregular turns, expansions and contractions, or absorbing the thermal deformation of pipelines, or for connecting pipelines to pipelines or pipelines to equipment in occasions where it is inconvenient to install with fixed elbows. Its functions can be:

- 1.Compensate and absorb the axial, transverse and angular thermal deformation of pipelines.
- 2.Absorb equipment vibration and reduce the impact of equipment vibration on pipelines.

波纹管
Corrugated pipe



静态刚度曲线 Static stiffness curve

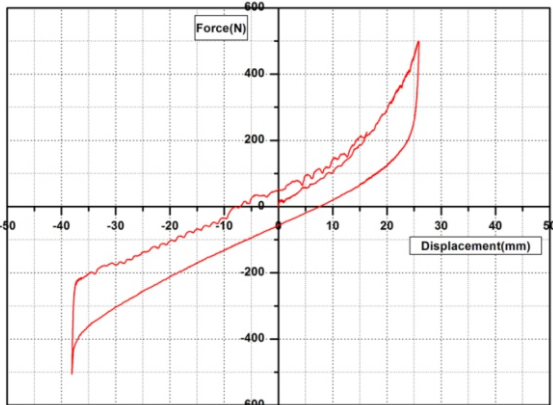


Fig 2. Static stiffness in axial direction.

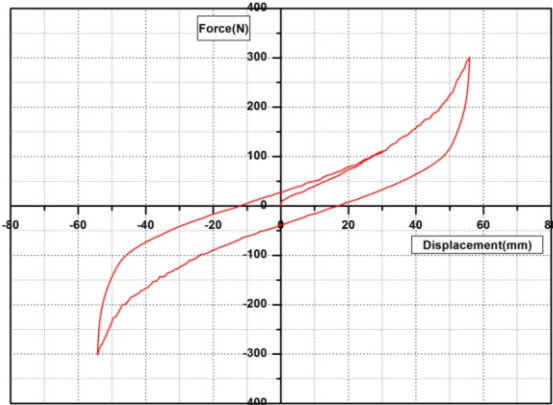


Fig 3. Static stiffness in lateral direction.

动态刚度曲线 Dynamic stiffness curve

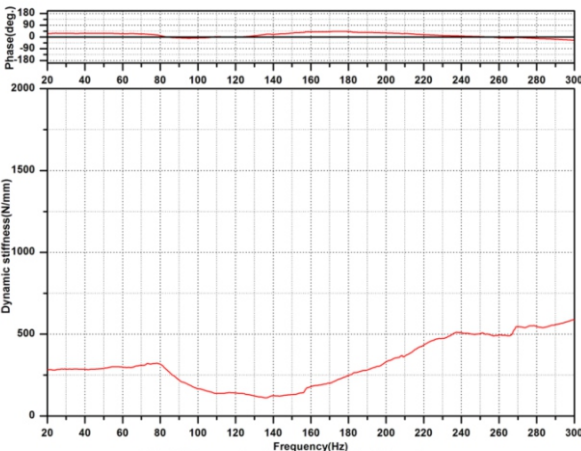


Fig 4. Dynamic stiffness in axial direction.

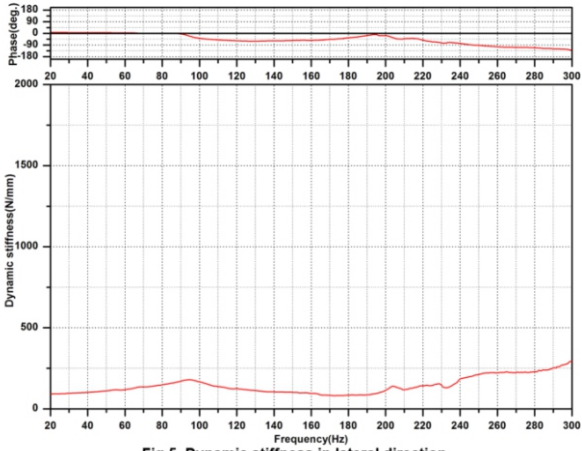
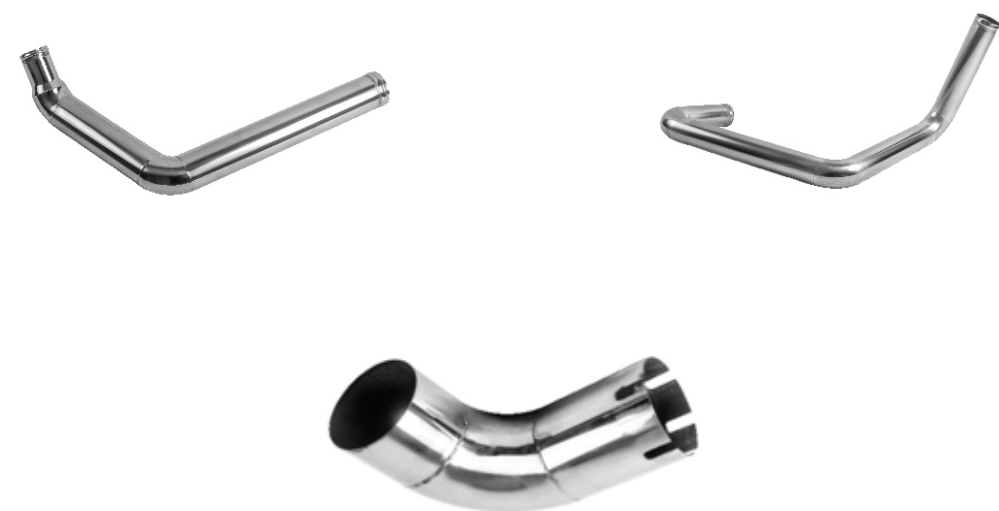


Fig 5. Dynamic stiffness in lateral direction.

焊接钢管
steel pipe



焊接钢管，采用优质201/304，适用于发动机进、排气系统、中冷系统、水冷系统。
分段下料，焊接成型，成型后钝化、抛光。管口采用滚筋、滚花、喷砂工艺，配合卡箍可保证连接处的牢固性及气密性；可实现管段变径，尺寸可根据客户需求定制。

Made of high-quality 201/304 stainless steel, it is suitable for engine intake and exhaust systems, intercooler systems, and water cooling systems.
Cut in sections and welded into shape. After forming, it is passivated and polished. The pipe orifice adopts processes such as rib rolling, knurling, and sandblasting. Combined with clamps, it can ensure the firmness and air tightness of the connection. It can realize the variable diameter of the pipe section, and the size can be customized according to customer needs.

焊管规格及参数 Specification and parameters of welded steel pipes

序号 Serial number	外径 external diameter (mm)	材质 texture of material	直管壁厚 Wall thickness of straight pipe (mm)	弯头中径R Bend diameter R (mm)
1	Ø8	304	1	/
2	Ø10	304	1	/
3		铁管	1.5/2.0	/
4	Ø13	304	1.5	/
5	Ø14	304	1.5	/
6		铁管	1.0/2.0	/
7	Ø14.5	304	1.5	/
8	Ø16	201/304	1.5	30
9		铁管	1.0/2.0	/
10	Ø18	304	1.5	/
11	Ø19	201/304	1.5	28.5
12	Ø20	304	1.5	/
13	Ø22	304	1.5	29
14		铁管	1.5/3.0	/
15	Ø25	201/304	1.5	30
16		铁管	1.5/3.0	/
17	Ø27	304	2.0/3.0	/
18	Ø28	201/304	1.5	/
19	Ø30	304	1.5	48
20		铁管	1.5	/
21	Ø32	304	1.5/2.0/3.0	38
22	Ø35	201	1.5	/
23	Ø38	304	1.5/2.0	44
24	Ø40	201	1.5	/
25	Ø42	304	1.5	/
26	Ø45	304	1.5	53.5
27	Ø48	201	1.5	52
28		304	3.0	52
29	Ø51	304	1.5/2.0	53.5
30		铁管	1.5	/
31	Ø57	201/304	1.5	66.5
32		铁管	1.5	/
33	Ø60	304	1.2/1.5/2.0	65
34	Ø63	304	1.2/1.5/2.0	63.5
35	Ø63.5	铁管	1.5	/
36	Ø70	201/304	1.5	76
37	Ø76	304	1.2/1.5/2.0	79
38		铁管	1.5/3.0	/
39	Ø80	304	1.2/1.5/2.0	71
40	Ø89	304	1.2/1.5/2.0	98.5
41	Ø102	304	1.2/1.5/2.0	108
42	Ø108	304	1.5	106
43	Ø114	201	1.2	118
44		304	1.5/2.0	118
45	Ø120	304	1.5/2.0	121
46	Ø127	201/304	1.5/2.0	125.5
47	Ø133	201/304	1.5	134
48	Ø141	201/304	1.5	136
49	Ø152	304	2.0	184
50	Ø159	304	1.5/2.0	155

弯管
Bend



弯管，采用全自动弯管机弯制而成，使用201 高铜管与304；适用于发动机液缓系统、中冷系统、有气密性要求管路及各类对外观要求较高的产品；

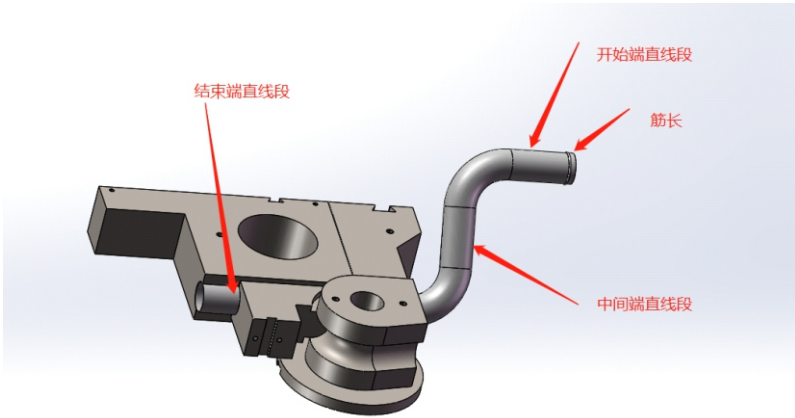
下料后整体弯制而成，管口两端可滚筋、喷砂；管段整体成型，成型外观精美，气密性好（0.5MPa 气压下无泄漏），不可实现变径及复杂弯曲。

It is bent by a fully automatic pipe bending machine and made of 201 high-copper tube and 304 stainless steel. It is suitable for engine hydraulic retarder systems, intercooler systems, pipelines with air tightness requirements, and various products with high appearance requirements.

It is bent as a whole after blanking. The two ends of the pipe orifice can be ribbed and sandblasted. The pipe section is integrally formed with exquisite appearance and good air tightness (no leakage under 0.5 MPa air pressure). Variable diameter and complex bending cannot be achieved.

弯管规格及参数 Bend specifications and parameters

序号 Serial number	模具编号 Mold number	管外径 Outer diameter of the tube (mm)	弯管中径R Bend diameter R (mm)	管厚 Tube thickness (mm)	中间直线段长度 Length of the middle straight line segment (mm)	开始端直线段长度 Starting straight line segment length (mm)	结束端直线段长度 End straight line segment length (mm)
1	HB-MU-WG-001	Ø8	23	1.5	30	中间段+筋长+10mm	60+筋长
2	HB-MU-WG-002	Ø10	25	1.5	30	中间段+筋长+10mm	75+筋长
3	HB-MU-WG-003	Ø13	25	1.5	35	中间段+筋长+10mm	75+筋长
4	HB-MU-WG-016	Ø14	20	1.5	35	中间段+筋长+10mm	60+筋长
5	HB-MU-WG-004	Ø16	30	1.5	40	中间段+筋长+10mm	90+筋长
6	HB-MU-WG-005	Ø19	28.5	1.5	45	中间段+筋长+10mm	85+筋长
7	HB-MU-WG-006	Ø20	30	1.5	45	中间段+筋长+10mm	90+筋长
8	HB-MU-WG-007	Ø25	30	1.5	50	中间段+筋长+10mm	90+筋长
9	HB-MU-WG-015		50	1.5	/		
10	HB-MU-WG-016	Ø28	42	1.5	70	中间段+筋长+10mm	125+筋长
11	HB-MU-WG-08	Ø30	60	1.5	75	中间段+筋长+10mm	180+筋长
12	HB-MU-WG-09	Ø32	75	1.5	75	中间段+筋长+10mm	225+筋长
13	HB-MU-WG-10	Ø51	75	1.5	100	中间段+筋长+10mm	225++筋长
14	HB-MU-WG-11	Ø57	85.5	1.5	100	中间段+筋长+10mm	250+筋长
15	HB-MU-WG-11	Ø58	87	1.5	100	中间段+筋长+10mm	250+筋长
16	HB-MU-WG-12	Ø60	90	1.5	120	中间段+筋长+10mm	270+筋长
17	HB-MU-WG-13	Ø63	95	1.5	120	中间段+筋长+10mm	280+筋长
18	HB-MU-WG-14	Ø70	110	1.5	210	中间段+筋长+10mm	300+筋长
19	HB-MU-WG-14	Ø89	133.5	1.5	220	中间段+筋长+10mm	300+筋长



注：开始端/结束端的长度可以折弯后切除，在滚筋或起筋
Note: The length of the starting/ending end can be bent and cut off before rolling or lifting the reinforcement

消声器
Muffler



消声器主要作用是降低发动机的排气噪声，并使高温废气能安全有效地排出。作为排气管道的一部分，应保证其排气畅通、阻力小及足够强度。

The main function is to reduce the exhaust noise of the engine and enable high-temperature exhaust gas to be discharged safely and effectively. As a part of the exhaust pipe, it should ensure smooth exhaust, low resistance and sufficient strength.

性能参数 performance parameter

性能 材质 texture of material	性能 performance stainless steel	性能 performance carbon steel	备注 remarks
工作温度 (°C) working temperature (°C)	500~700	500~700	
插入损失 (dB) Insertion loss (dB)	≥17	≥17	
排气背压 (KPa) Exhaust back pressure (KPa)	≤6	≤6	按消声器大小 According to the size of the muffler
排气量 (m/h) Exhaust volume (m/h)	≥3600	≥3600	
适用频段 Applicable frequency band	中、低频 Medium and low frequency	中、低频 Medium and low frequency	

罩壳
Cover



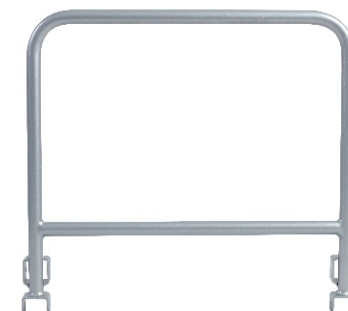
采用优质碳钢、铝合金、不锈钢材质，折弯或卷板成型，整体焊接；表面处理工艺:全自动静电粉末喷涂(即喷塑)、喷漆或拉丝。

防潮防湿不生锈，耐高温耐腐蚀，在工作温度范围内的高强韧性，一般套在高温产品外使用，隔热、防烫；散热性能优异，美观、大方、经久耐用，长期使用不褪色。

It is made of high-quality carbon steel, aluminum alloy and stainless steel, formed by bending or rolling and welded as a whole. Surface treatment processes: fully automatic electrostatic powder spraying (i.e. plastic spraying), painting or wire drawing.

Moisture-proof and rust-proof, high temperature resistance and corrosion resistance, high strength and toughness within the working temperature range. Generally, it is used outside high-temperature products for heat insulation and scald prevention. It has excellent heat dissipation performance, is beautiful, elegant, durable and does not fade after long-term use.

护栏扶手 Guardrail and handrail



采用优质碳钢、铝合金、不锈钢材质，弯管成型，整体焊接；表面处理工艺：全自动静电粉末喷涂（即喷塑）、喷漆、抛光、缠绕胶带等。

防腐防锈、结构简练、美观实用、安全可靠、便于运输，安装方便。

It is made of high-quality carbon steel, aluminum alloy and stainless steel. The elbow is formed and welded as a whole. Surface treatment processes: fully automatic electrostatic powder spraying (i.e. plastic spraying), painting, polishing, taping, etc.

It is anti-corrosion and rust-proof, has a concise structure, is beautiful and practical, safe and reliable, convenient for transportation and easy to install.

箱体 Housing



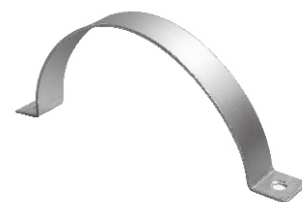
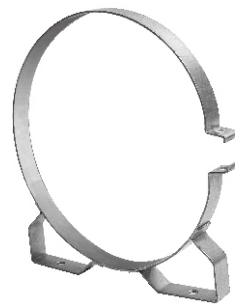
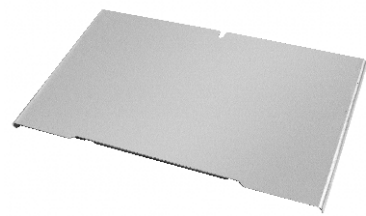
采用优质碳钢、铝合金、不锈钢材质，折弯成型，整体焊合；表面处理工艺:全自动静电粉末喷涂(即喷塑)、喷漆或拉丝。

广泛用于客车、工程机械及室内环境，存放工具、设备物品等，行车中无振动异响，门锁、把手均采用不锈钢材质，经久耐用。外形尺寸可根据客户需求定制，内部结构可为多层活动结构。

It is made of high-quality carbon steel, aluminum alloy and stainless steel. It is formed by bending and welded as a whole. Surface treatment processes: fully automatic electrostatic powder spraying (i.e. plastic spraying), painting or wire drawing.

It is widely used in passenger cars, construction machinery and indoor environments for storing tools, equipment and other items. There is no abnormal vibration or noise during driving. The door locks and handles are all made of stainless steel, which are durable. The external dimensions can be customized according to customer needs, and the internal structure can be a multi-layer movable structure.

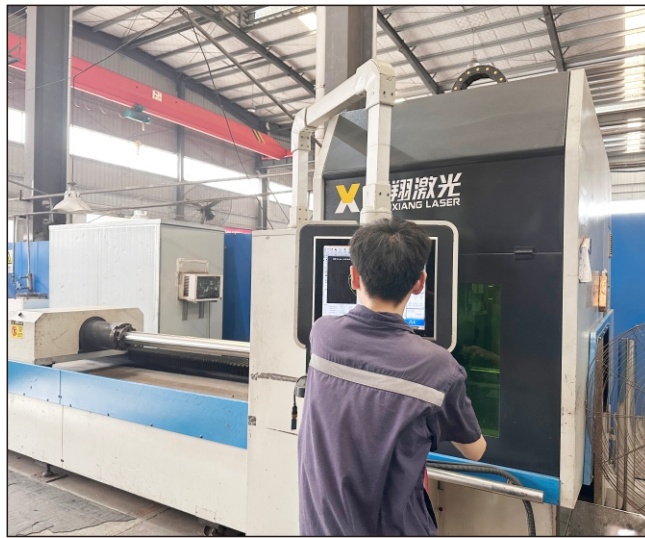
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生产能力介绍 →
About Productivity

不锈钢进排气管主要生产设备和工艺

Main production equipment and processes for pipelines



消声器主要生产设备和工艺

The main production equipment and process of mufflers

