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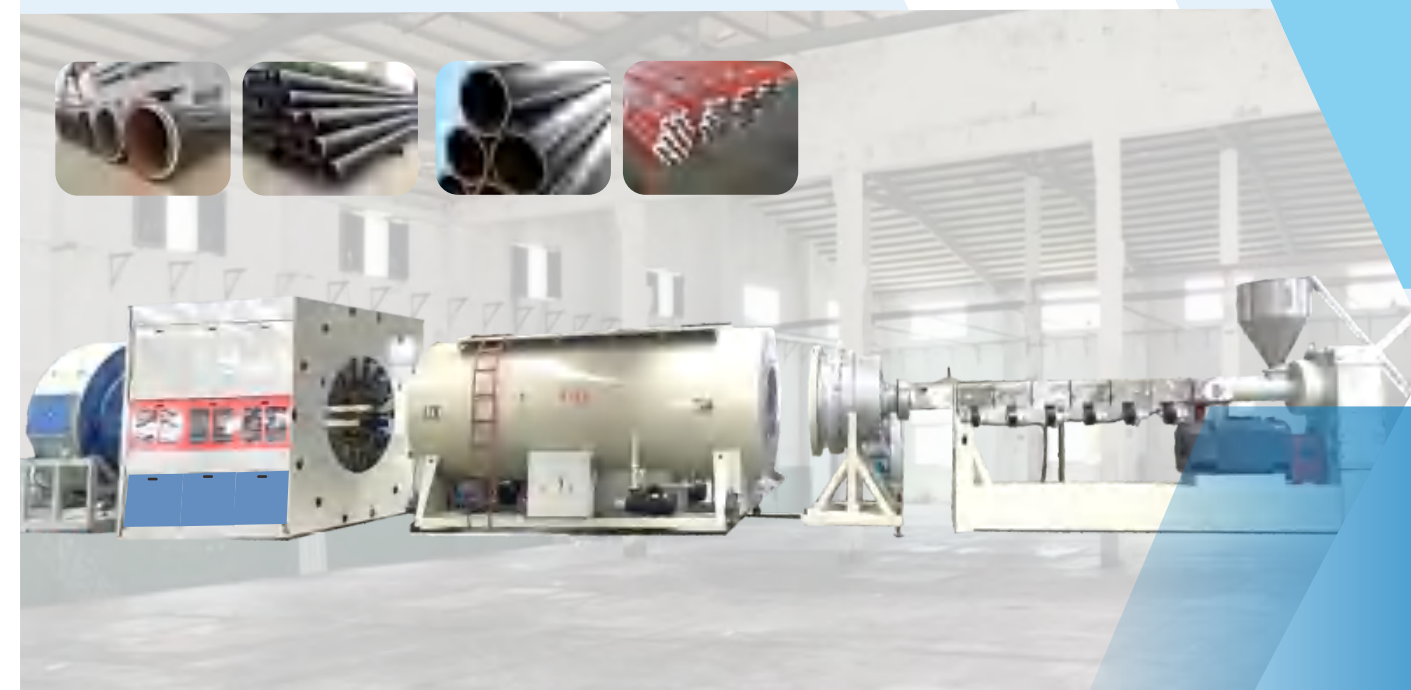
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XIANGYU MACHINE

青岛祥宇塑胶机械有限公司

Qingdao Xiangyu Plastic Machinery Co., Ltd



目录 Contents

01	Company introduction 企业简介	
02	PE vacuum insulation jacket tube extrusion line PE真空保温夹克管挤出生产线	
03	Spraying Winding Insulation Pipe Production Line 聚氨酯喷涂缠绕连续生产线	
04	Steel Pipe Outer Wall 3PE Anti-Corrosion Production Line Series 钢管外壁3PE防腐生产线系列	
05	One-step Method Polyurethane Anti-corrosion Insulation Pipe Production Line Series 一步法聚氨酯防腐保温管生产线系列	
06	HDPE Water Supply, Drainage And Gas Pipeline Extrusion Line HDPE 供排水及燃气管道挤出生产线	
07	Extrusion Machine 挤出机	
08	Traction Machine 牵引机	
09	Pipe Helix Mold 管材螺旋主体模具	
10	Pipe Vacuum Box 真空定径箱	
11	Vacuum Sizing Sleeve 真空定径套	
12	Planet Cutting Saw For Pipe 管材行星切割锯	
13	Crusher Series 破碎机系列	
14	Steel pipe outer wall shot blasting rust removal production line QGW钢管外壁抛丸除锈生产线	
15	Steel pipe inner wall shot blasting cleaning device QGWN钢管内壁抛丸清理装置	
16	FBEN Steel pipe inner wall powder electrostatic spraying device series FBEN钢管内壁粉末静电喷涂装置系列	
17	QGWP Steel pipe inner wall sand blasting cleaning device QGWP钢管内壁喷砂清理装置	
18	Product Display Area 产品展示	

公司简介 Company Introduction

青岛祥宇塑胶机械有限公司专注于研发、生产和销售各类先进的管材设备，产品涵盖：一步法保温管生产线、二步法真空保温夹克管生产线、聚氨酯喷涂缠绕保温管生产线、3PE防腐管道生产线、PE供水/燃气管道生产线等。凭借精湛的工艺和卓越的品质，祥宇的产品畅销国内外，广泛应用于市政工程、石油化工、建筑给排水等多个领域。

二十年的执着与坚守，祥宇塑胶机械不仅积累了丰富的行业经验，更赢得了客户的信赖和赞誉。未来，祥宇将继续秉承“专业、创新、品质、服务”的经营理念，不断开拓进取，为推动管材设备行业的发展贡献力量，携手客户共创更加美好的明天。

Qingdao Xiangyu Plastic Machinery Co., Ltd. focuses on R & D, production and sales of all kinds of advanced pipe equipment. Our products include: one-step insulation pipe production line, two-step vacuum insulation jacket pipe production line, polyurethane spray wound insulation pipe production line, 3PE anti-corrosion pipe production line, PE water supply/gas pipe production line, etc. With exquisite technology and excellent quality, Xiangyu's products sell well at home and abroad, these products are widely used in municipal engineering, petrochemical, building water supply and drainage and other fields.

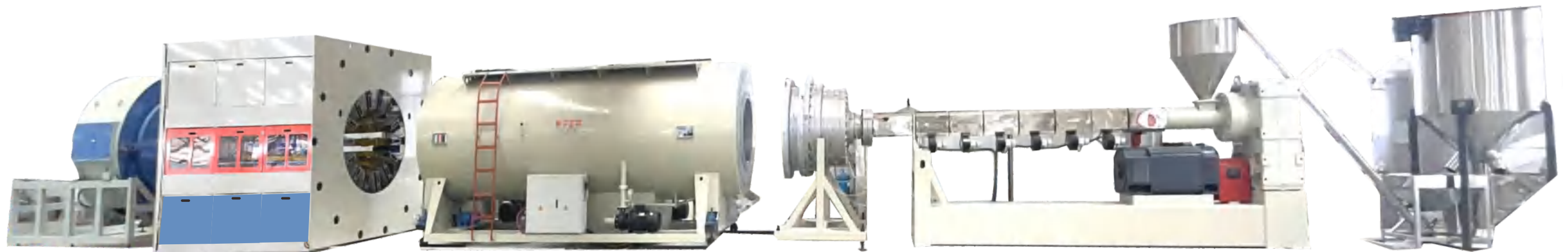
Twenty years of persistence and adherence, Xiangyu plastic machinery has not only accumulated rich industry experience, but also won the trust and praise of customers. In the future, Xiangyu will continue to uphold the "professional, innovative, superior, service" business philosophy, and constantly forge ahead to promote the development of pipe equipment industry, hand in hand with customers to create a better tomorrow.





PE真空保温夹克管挤出生产线

PE vacuum insulation jacket tube extrusion line



PE保温管也叫PE夹克管、外护管、套袖管、预制直埋保温管。此管是由保温管作为外保护层，中间填充聚氨酯硬质泡沫塑料作为保温材料层，内层为钢管。PE保温管具有良好的机械性能和绝缘性能，通常情况下可耐高温120-180℃，适用于各种冷、热水高低温管道的保温工程。

PE真空保温夹克管挤出生产线是由挤出机、模具、真空定径箱、定径套、牵引机、切割锯、卸料架等设备组成，具有自动化程度高、产量高、挤出压力稳定、壁厚管厚度均匀、挤出速度快、使用寿命长等特点。

PE insulation pipe is also called PE jacket pipe, outer protection pipe, sleeve pipe, prefabricated directly buried insulation pipe. It is made of insulation pipe as the outer protective layer, the middle filled polyurethane rigid foam is used as the insulation material layer, and the inner layer is steel pipe. PE insulation pipe has good mechanical properties and insulation properties. Under normal circumstances, it can withstand high temperature of 120-180℃, and is suitable for various cold and hot water, high and low temperature pipeline insulation projects.

PE vacuum extrusion insulation jacket pipe production line is composed of extruder, mold, vacuum sizing box, sizing sleeve, drawing machine, cutting saw, unloading rack and other equipment, it has the characteristics of high degree of automation, high output, stable extrusion pressure, uniform wall thickness and pipe thickness, fast extrusion speed, long service life and so on.



技术参数：Technical Data

型号	管材直径/mm	挤出机型号	实际最大挤出量kg/h
Type	Pipe Diameter	Extruder Type	Capacity
XYSJ420	90-420	SJ-90/30	200
XYSJ550	110-550	SJ-90/33	300
XYSJ760	250-760	SJ-120/30	500
XYSJ960	420-960	SJ-120/33	700
XYSJ1155	500-1155	SJ-150/30	800
XYSJ1380	760-1380	SJ-150/33	1000
XYSJ1680	960-1680	SJ-150/36	1200
XYSJ1860	1054-1860	SJ-180/33	1300
XYSJ2000	1155-2000	SJ-180/33	1500



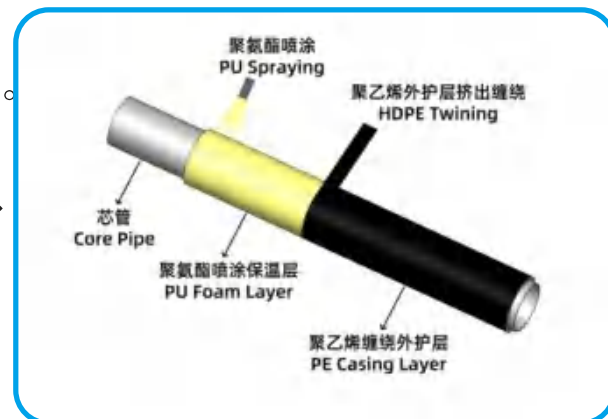
聚氨酯喷涂缠绕连续生产线

Spraying Winding Insulation Pipe Production Line



特点 Characteristics

- 1、整条线可生产各种规格的直管与球墨铸铁管。
- 2、可将线上钢管自动除锈。
- 3、双枪喷涂，密度均匀性更好、导热系数更稳定、吸水率更低。
- 4、保温层和外层厚度可按需定制生产，能够满足不同项目的需要。
- 5、缠绕方式生产提升了外护管的力学性能。
- 6、提高了保温层闭孔率，减少保温层导热系数，热量损失低，节能效果更好。
- 7、由于喷涂成型，聚氨酯泡沫表面粗糙度更高，与外护聚乙烯板材粘结性更强。
- 8、聚乙烯外护层在保证其性能的前提下，厚度更薄，均匀性更好，从而节省成本。
- 9、聚乙烯外护层环向缠绕成型受工艺拉伸影响，其环向伸长率、抗拉强度等力学指标性能有明显提高。



1. The entire line can produce various specifications of straight pipes and ductile iron pipes.
2. The steel pipes on the line can be automatic rust removal.
3. Double gun spraying provides better density uniformity, more stable thermal conductivity and lower water absorption.
4. The insulation layer and outer layer thickness can be custom-produced to meet the needs of different projects.
5. The winding production method improves the mechanical properties of the outer protective pipe.
6. It improves the closed-cell rate of the insulation layer, reduces the thermal conductivity of the insulation layer, and has low heat loss, So it has a better energy-saving effect.
7. Due to spraying molding, the surface roughness of polyurethane foam is higher, and the adhesion with the outer protective polyethylene sheet is stronger.
8. Under the premise of ensuring its performance, the polyethylene outer coating has thinner thickness and better uniformity to saving costs.
9. The circumferential winding process of polyethylene outer sheath makes its circumferential elongation, tensile strength and other mechanical properties significantly improve.



技术参数: Technical Data

型号	管材直径/mm	管的长度/m	配套节能挤出机	实际最大挤出量/kg/h	总装机功率/kW
Type	Pipe Diameter	Pipe Length	Extruder	Capacity	Power
XYPT-1620	402-1620	6-12	XYSJ-90/38+XYSJ-90/38	1300-1600	1000-1200
XYPT-1820	508-1820	6-18	XYSJ-90/38+XYSJ-90/38	1500-2000	1100-1300



钢管外壁3PE防腐生产线系列

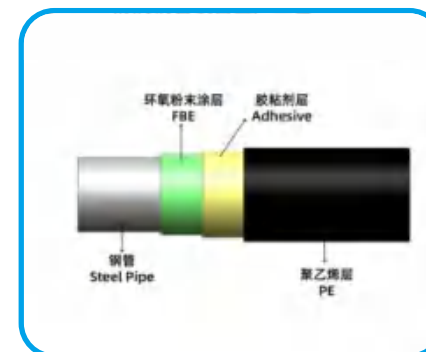
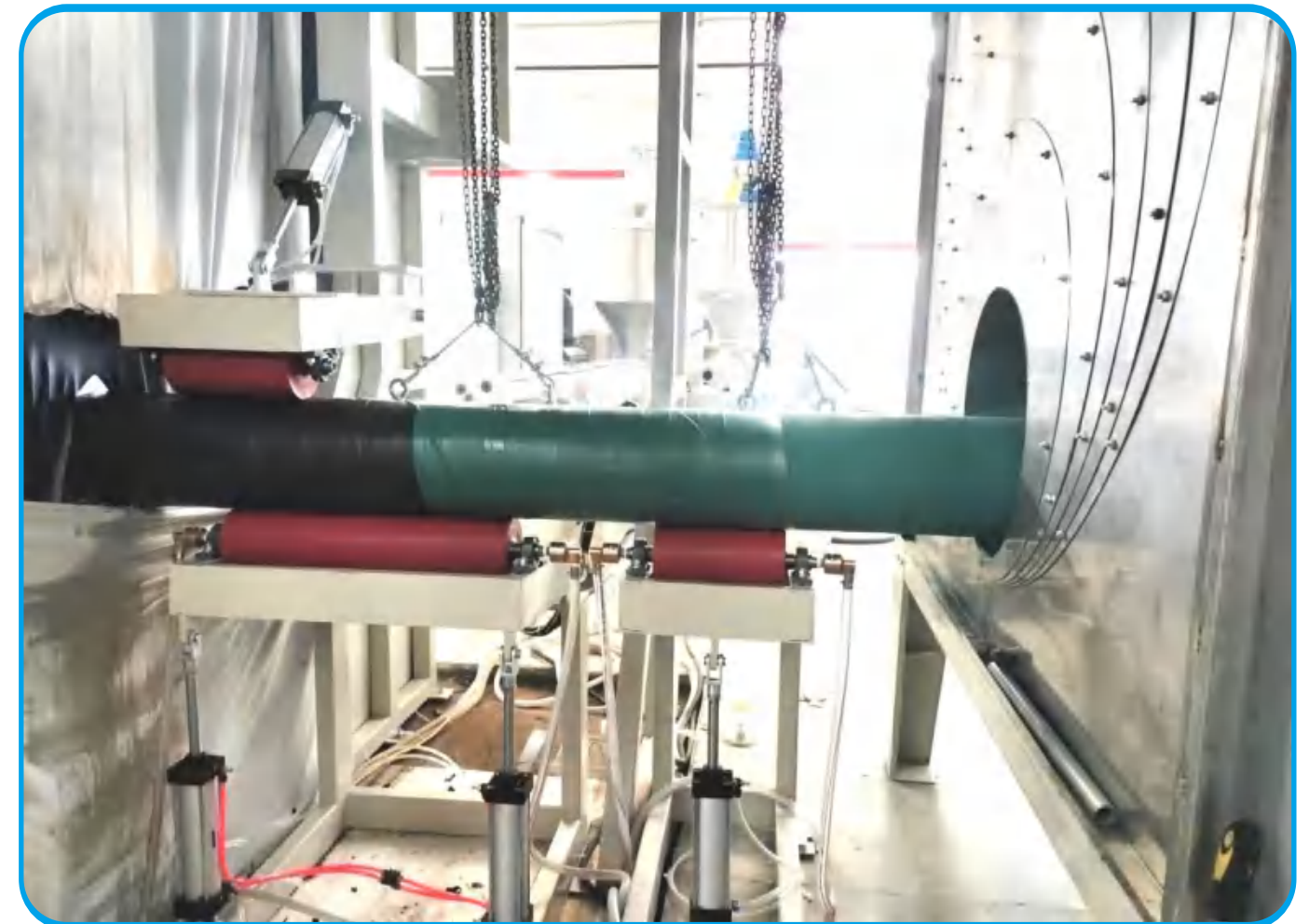
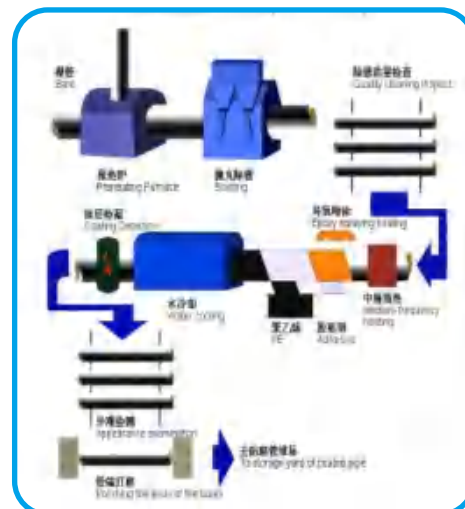
Steel Pipe Outer Wall 3PE Anti-Corrosion Production Line Series



3PE生产线是连续性对钢管外表面进行抛丸除锈、中频加热、环氧粉末喷涂（FBE）、胶粘剂缠绕（AD）、聚乙烯缠绕(PE)、水冷却定型、管端打磨等工序，最终生产出合格的3PE防腐管的生产线。此工艺广泛应用于输送自来水、天然气、石油等的管道。

The 3PE production line is a continuous production line that performs a series of operations on the outer surface of the steel pipe to produce qualified 3PE anti-corrosion pipes. These operations include shot blasting and descaling, medium frequency heating, epoxy powder spraying (FBE), adhesive winding (AD), polyethylene winding (PE), water cooling and shaping, and pipe end grinding. This process is widely used for pipelines used to transport tap water, natural gas, and oil.

钢管规格 Steel pipe specification	管径 Pipe diameter	Φ48~Φ3200mm
	长度 Pipe length	6000~18000mm
除锈等级 Derusting grade	光洁度 Smoothness	Sa 2.5级 Sa Level 2.5
	粗糙度 Roughness	50—100 μm
处理能力 Processing capacity		0.6~6.5m ² /min
环氧粉末厚度 (FBE) Epoxy Powder Thickness (FBE)		100—260 μm
胶粘剂厚度 (AD) Adhesive Thickness (AD)		100—260 μm
聚乙烯厚度 (PE) Polyethylene Thickness (PE)		1.6—4.5mm





一步法聚氨酯发泡直埋保温管生产线

One-step Polyurethane Foam Directly Buried Insulation Pipe Production Line

本系列生产线包括钢管上管、卡壳管制作定型、聚氨酯发泡、黑卡壳发泡液面检测、泡沫层自动纠偏、保温管在线自动检测切割、成品管下管等工序，因所有生产过程在一条生产线上依次完成，故俗称钢管“一步法”聚氨酯防腐保温管生产线。本公司的生产线具有卡壳管真空定型，黑卡壳液面在线检测，管段自动检测自动切割等项目，是国内领先工艺、高自动化程度的生产线。

There are many processes in this series of production lines, including steel pipe mounting, PE pipe making and shaping, polyurethane foaming, detection of black PE foam liquid level, automatic correction of foam layer deviation, on-line automatic inspection and cutting of insulated pipe, and finished pipe discharge, etc. Because all production processes are completed sequentially on one production line, it is commonly known as a "one-step" polyurethane foam insulated pipe production line for steel pipes. Our production line have many projects like PE pipe vacuum forming, real-time detection of liquid level in black PE, automatic inspection and cutting of pipe sections, it is a domestic production line with leading technology and high automation level.



钢管规格 Steel pipe specification	管径 Pipe diamete	$\Phi 32 \sim \Phi 325\text{mm}$
	长度 Pipe length	6000~18000mm
处理能力 Processing capacity		0.5~7m/min
聚氨酯保温层厚度 Polyurethane insulation layer thickness		25—50mm
聚乙烯保护层厚度 Polyethylene protective layer thickness		0.8—5mm

HDPE 供排水及燃气管道挤出生产线

HDPE Water Supply, Drainage And Gas Pipeline Extrusion Line

HDPE 供排水及燃气管道挤出生产线是由高效节能挤出机、专用螺旋分配结构的模具、真空定径箱、喷淋箱、多履带牵引机、无屑切割锯及自动化控制系统组成。该线具有自动程度高、操作方便、出管壁厚均匀、节能降耗、连续生产稳定等特点。

HDPE water supply and drainage and gas pipeline extrusion line is composed of high efficiency and energy saving extruder, special screw distribution structure mold, vacuum sizing box, spray box, multi-track tractor, no chip cutting saw and automatic control system. The line has the characteristics of high automatic degree, easy operation, uniform pipe wall thickness, energy saving and consumption reduction, and stable continuous production.





挤出机

Extrusion Machine

单螺杆挤出机通过螺杆的旋转将物料向前推进并塑化，适用于多种塑料的加工

- 1、使用硬齿面减速机，稳定性高，噪音低，使用寿命长
- 2、特制螺杆螺筒，高挤出，高塑化
- 3、可以连续生产，生产效率高，特别适用于大规模生产需求。
- 4、物料在机内受到充分的塑化和混炼，确保了产品的均匀性和稳定性、排气性能优良，减少了产品中的气泡和杂质。

The single screw extruder pushes the material forward and plasticizes the material through the rotation of the screw, which is suitable for the processing of many kinds of plastics.

1. Using hard gear reducer, high stability, low noise, long service life
2. Special screw, high extrusion, high plasticizing
3. It can continuously produce products with high production efficiency and is especially suitable for large-scale production needs.
4. The material is fully plasticized and mixed in the machine to ensure the uniformity and stability of the product, the exhaust performance of the machine is excellent, and the bubbles and impurities in the product are reduced.

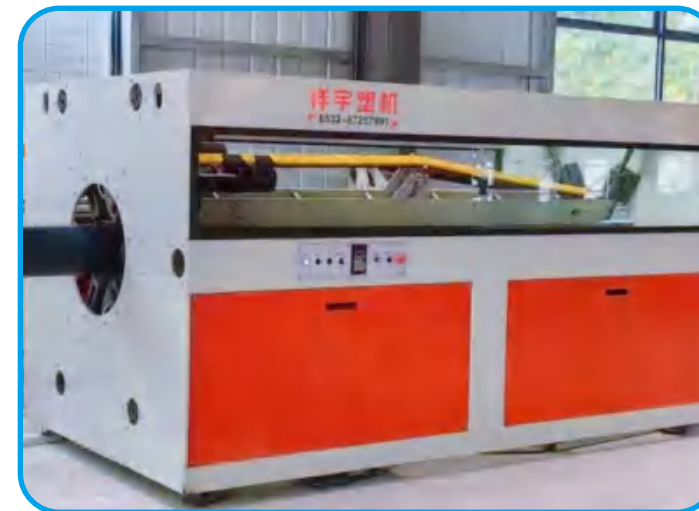


牵引机

Traction Machine

管材牵引机通过电机驱动，能够实现管材的快速、连续输送。对于不同直径管材和挤出速度要求，我们开发了2-18履带牵引机，牵引范围16mm-2000mm。牵引机可以根据管材的大小进行调节，运行稳定可靠、噪音小。每个牵引臂都用独立的电机直接驱动，电机直联减速机，通过数字控制器保证各履带牵引速度的精确同步。

The pipe tractor is driven by the motor, which can realize the rapid and continuous conveying of the pipe. For different diameter pipes and extrusion speed requirements, we have developed 2-18 crawler tractors, traction range 16mm-2000mm. The tractor can be adjusted according to the size of the pipe, its operation is stable and reliable, and the noise is small. Each of its traction arms is directly driven by an independent motor, and the motor is directly connected to the reducer, and it can ensure the precise synchronization of the traction speed of each track through a digital controller.





管材螺旋主体模具

Pipe Helix Mold

1、独特的螺旋流道设计，表面抛光处理。确保原材料在模具内流动均匀，塑化效果好，避免出现壁厚不均，气泡等缺陷。

2、采用优质模具钢、退火调质处理，具备良好的抗压能力和抗磨损性能、高效挤出成型稳定，经久耐用。

3、口模的调节便捷灵活：对不同规格管材的生产切换，都能轻松实现快速准确的调节。

1. The vacuum box forms negative pressure inside the pipe, and promotes the shape of the pipe under the action of external atmospheric pressure to ensure dimensional stability and roundness.

2. The vacuum box adopts automatic negative pressure closed-loop control system, which automatically adjusts the speed of the vacuum pump, keeps the negative pressure constant, and realizes energy saving. The operation of the empty box is simple, reducing manual intervention and improving the degree of production automation.

3. It is made of stainless steel, and it has a unique centralized inlet, drainage and muffler design to reduce noise and extend the service life of the equipment.

4. It is suitable for PE, PVC, PPR and other pipe production.



真空定径箱

Pipe vacuum Box

1.真空箱通过抽真空使管材内部形成负压，外部大气压作用下促进管材定型，确保尺寸稳定和圆度。多段式冷却设计和喷雾冷却功能加快管材冷却速度，提升生产效率。

2.采用全自动负压闭环控制系统，自动调节真空泵转速，保持负压恒定，实现节能。操作简便，减少人工干预，提高生产自动化程度。

3.不锈钢材质，独特的集中进、排水及消声器设计，降低噪音，延长设备使用寿命。

4.适用于PE、PVC、PPR等多种管材的生产。

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真空定径套

Vacuum Sizing Sleeve

管材真空定径套的工作原理是真空吸附法，主要用于冷却和定型。

管材从口模中挤出后，温度较高且容易变形，定径套通过建立管材内腔与壁面之间的压差，使管材外表面被吸附在定径套内壁，从而保持管材外径尺寸和形状的精度。水通过定径套上的孔进入，帮助管材在定径套内均匀冷却。

The working principle of vacuum sizing sleeve is vacuum adsorption method, and its main function is cooling and shaping.

After the pipe is extruded from the die, the temperature is high and it is easy to deform. By establishing the pressure difference between the inner cavity of the pipe and the wall surface, the sizing sleeve makes the outer surface of the pipe be adsorbed on the inner wall of the sizing sleeve, thus strictly ensure the size of the outer diameter of the pipe. And water enters the sizing sleeve through holes in the sizing sleeve to help the tube cool evenly.



管材行星切割锯

Planet Cutting Saw For Pipe

- 1、行星运动能使刀片与管材接触更加均匀，有助于提高切割的精度和表面质量。
- 2、高速旋转的刀片在行星运动和进刀动作的协同作用下，对管材进行环形切割。
- 3、可切割16mm-2000mm范围内不同管径的管材。

1.The planetary motion can make the contact between the blade and the pipe more uniform, which helps to improve the precision and surface quality of the cutting.

2.Under the synergistic action of planetary motion and cutting action, the high-speed rotating blade cuts the pipe in a ring.

3.Cutting different pipe diameters in the range of 16mm-2000mm.





破碎机系列

Crusher Series

破碎机系列具有操作简单，产量大、噪音小等优点。适合破碎厚材料、硬质料块板材料等各种塑料废料，破碎机加工以后的颗粒可直接用于注射和挤出。

Crusher series has the advantages of simple operation, large output, low noise and so on. Suitable for crushing thick material, hard material block, board materials and other plastic waste. The particles processed by the crusher can be directly used for injection and extrusion.

技术参数：Technical Data

型号	旋转刀回转直径	旋转刀片	国定刀片	破碎能力
Type	Revolution Dia. of Rotating Knife	Revolve Blade	Fixing Blade	Breaking Ability
360	360	3	2	200-400
450	450	9	2	300-500
630	630	3	2	500-800
800	800	10	4	600-1000



QGW钢管外壁抛丸除锈生产线

Steel pipe outer wall shot blasting rust removal production line

本设备采用机械驱动抛丸工艺清除钢管外壁表面氧化层、锈蚀、焊渣等，使工件表面呈现金属本色，且表面具有一定粗糙度，从而提高涂敷物的附着力，同时可消除工件因剪切、焊接、成型等工艺产生的表面残余应力，并增加应力提高工件疲劳强度，达到钢管外壁后续防腐的要求。广泛适用于锅炉、自来水、石油、天然气、港口码头桥桩等行业钢管的外表面处理。

The equipment adopts mechanical drive shot blasting process to remove the surface of the outer wall of the steel pipe oxide layer, rust, welding slag, etc., so that the surface of the workpiece shows metal color, and the surface has a certain roughness, so as to improve the adhesion of the coating. At the same time, it can eliminate the surface residual stress caused by cutting, welding, forming and other processes, and increase the stress to improve the fatigue strength of the workpiece, so as to meet the subsequent anti-corrosion requirements of the outer wall of the steel pipe. The equipment is widely used in boiler, tap water, oil, natural gas, port pier bridge pile and other industries of steel pipe surface treatment.



钢管管径范围 Steel pipe diameter range	Φ48mm~Φ3200mm
钢管长度范围 Steel tube length range	9000mm~18000mm
处理能力 Processing capacity	10~380m ² /h
锚纹深度 Anchor grain depth	30~70 μm
除锈等级 Derusting grade	ISO8501-1: 2008, A. B. Sa2.5级 ISO8501-1: 2008, A. B. Sa Level 2.5



QGWNP钢管内壁抛丸清理装置

Steel pipe inner wall shot blasting cleaning device



本系列设备采用液压驱动抛丸工艺，利用高速旋转的抛丸器将弹丸抛射向钢管内壁，并以一定的速度角度冲击内壁，清除钢管内壁表面氧化层、锈蚀、焊渣等，使工件表面呈现金属本色，且表面具有一定粗糙度，从而提高涂敷物的附着力。

This series of equipment adopts hydraulic drive shot blasting technology, the use of high-speed rotating shot blasting machine to throw the projectile to the inner wall of the steel pipe, and impact the inner wall at a certain speed and angle, remove the oxidation layer, rust, welding slag and other impurities on the surface of the steel pipe inner wall, so that the surface of the workpiece shows the metal color, and the surface has a certain roughness, so as to improve the adhesion of the coating.

钢管管径范围 Steel pipe diameter range	$\Phi 426\text{mm} \sim \Phi 3200\text{mm}$
钢管长度范围 Steel tube length range	8000mm~18000mm
最大处理能力 Maximum processing capacity	100~220m ² /h

FBEN钢管内壁粉末静电喷涂装置系列

FBEN Steel pipe inner wall powder electrostatic spraying device series



本系列是对已清理干净的钢管内表面进行环氧粉末喷涂作业，单支钢管放在作业线上旋转，喷粉枪伸入钢管内，由中频加热边加热、边喷粉作业。本喷粉作业是采用高压静电喷涂工艺，经80KV的静电高压雾化，将粉末涂料均匀地涂敷在钢管内表面形成防腐保护层。

The equipment is to carry out epoxy powder spraying operation on the cleaned inner surface of the steel pipe. The operation process is: a single steel pipe is rotated on the operation line, the powder gun is extended into the steel pipe, and the medium frequency heating area of the production line is heated and sprayed powder. The powder spraying operation adopts high voltage electrostatic spraying process, the powder coating is evenly coated on the inner surface of the steel pipe to form an anti-corrosion protective layer through 80KV electrostatic high pressure atomization.

钢管管径范围 Steel pipe diameter range	$\Phi 426\text{mm} \sim \Phi 3200\text{mm}$
钢管长度范围 Steel tube length range	6000mm~18000mm
处理能力 Processing capacity	1~3.8m ² /min
锚纹深度 Anchor grain depth	50~500 μm



QGWP钢管内壁喷砂清理装置

QGWP Steel pipe inner wall sand blasting cleaning device



本设备采用压缩空气驱动喷砂工艺高速喷射到钢管内表面，去除表面氧化层、锈蚀、焊渣等，效果精细灵活性高。

The equipment adopts compressed air driven sandblasting process to spray to the inner surface of the steel pipe at high speed to remove surface oxidation layer, rust, welding slag, etc., the effect is fine and flexible.

钢管管径范围 Steel pipe diameter range	$\Phi 48\text{mm} \sim \Phi 325\text{mm}$
钢管长度范围 Steel tube length range	8000mm~18000mm
最大处理能力 Maximum processing capacity	以 $\Phi 219$ 钢管为例，20分钟/根（12米） Take the diameter of 219 steel pipe as an example, 20 min/set (12 meters)
锚纹深度 Anchor grain depth	25~50 μm

产品展示

Product Display Area



250-1300型螺旋主体系列
250-1300 spiral body series



2000型模具、定径套
2000 Model Mold, Sizing Sleeve



3PE 防腐钢管生产线发货
3PE anti-corrosion steel pipe
production line shipment



聚氨酯喷除缠绕保温管生产线发货
Delivery of polyurethane spray wound
insulation pipe production line