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搪瓷静电粉末喷涂设备
ENAMEL ELECTROSTATIC POWDER
COATING EQUIPMENT

COMPANY PROFILE 公司简介

JOBON
PENTOO

2005

青岛中邦科技发展有限公司成立于2005年

15000

位于青岛莱西市经济开发区, 建筑面积15000平方米

85

目前拥有员工85人, 研发工程师8人, 品管工程师9人

60

公司董事长潘鹏飞先生获得六十多项国内外专利



青岛中邦科技发展有限公司成立于2005年, 是一家集研发、生产、服务一体的科技型制造企业。公司是中国搪瓷装备工程技术研究中心, 中国搪瓷工业协会副理事长单位, 全国搪瓷标准委员会委员单位, 国家级高新技术企业, 东华大学博硕研究生培养基地, 中国表面工程协会涂装分会常务理事单位, 海尔、伊莱克斯等多家公司的设备供应商。

公司位于青岛莱西市经济开发区, 建筑面积15000平方米, 目前拥有员工85人, 其中研发工程师8人, 品管工程师9人。

中邦公司拥有自主品牌JOBON, 主要产品都通过了欧盟的CE和ATEX 防爆认证, 生产的搪瓷静电粉末喷涂设备出口到美国、日本、英国、法国、俄罗斯、澳大利亚、墨西哥、加拿大、沙特等众多国家和地区。

公司董事长潘鹏飞先生是国际知名搪瓷静电粉末喷涂技术专家, 获得六十多项国内外专利, 发表搪瓷静电粉末喷涂有关的国际论文2篇、国内论文2篇, 并被东华大学(原中国纺织大学)聘为博士研究生导师。

我们的目标是为全球用户提供最好的搪瓷静电喷涂设备和最好的服务。



Qingdao JOBON Science & Tech Development Co., Ltd. was established in 2005. It is a scientific and technological manufacturing enterprise integrating R&D, production and service. The company is the China Enamel Equipment Engineering Technology Research Center, the vice-chairman unit of the China Enamel Industry Association, the member unit of the National Enamel Standard Committee, the national high-tech enterprise, the doctoral graduate training base of Donghua University, and the executive director unit of the Coating Branch of the China Surface Engineering Association, the equipment supplier of companies such as Haier and Electrolux etc.

The company is located in Laixi Economic Development Zone, Qingdao, with a construction area of 15,000 square meters and currently has 85 employees, including 8 R&D engineers and 9 quality control engineers.

The company has its own brand JOBON, and the main products have passed the EU CE and ATEX explosion-proof certification; and the company's enamel electrostatic powder coating equipment has been exported to the United States, Japan, UK, France, Russia, Australia, Mexico, Canada, Saudi Arabia and many other countries and regions.

Mr. Pan Pengfei, chairman of the company, is an internationally renowned expert in enamel electrostatic powder spraying technology. He has obtained more than 60 domestic and international patents, published 2 international papers and 2 domestic papers on enamel electrostatic powder coating, and was awarded by Donghua University as a doctoral tutor.

Our goal is to provide the best enamel electrostatic powder coating equipment and the best service for global users.

DEVELOPMENT HISTORY

发展历程



主要产品发展史

Main Products Development History



- 2004年第一代静电粉末喷涂机PF-01A上市;
 - 2004年高压内置的PF-02K型静电粉末喷涂机上市;
 - 2005年MA3300型高压内置静电粉末喷涂机上市;
 - 2011年MA3300D型数字控制静电粉末喷涂机上市;
 - 2018年S10系列触摸屏静电粉末喷涂机上市;
 - 2020年M2型数字控制静电喷涂机上市;
 - 2021年S20系列触摸屏静电粉末喷涂机上市。
- In 2004, the first generation of electrostatic powder coating machine PF-01A was launched;
 - In 2004, the high-voltage built-in PF-02K electrostatic powder coating machine was launched;
 - In 2005, MA3300 high-voltage built-in electrostatic powder coating machine was put on the market;
 - In 2011, MA3300D digital control electrostatic powder coating machine was launched;
 - In 2018, the S10 series touch screen electrostatic powder coating machine was launched;
 - In 2020, M2 digital control electrostatic powder coating machine was launched.
 - In 2021, the S20 series touch screen electrostatic powder coating machine is launched.

公司大事记 Company Events

- 1973** 建厂
In 1973, the company was established
- 1999** 进入静电粉末喷涂设备研发生产行业
In 1999, entered the research & development and production industry of electrostatic powder coating equipment
- 2005** 改名中邦
In 2005, changed its name to Zhongbang (JOBON in English)
- 2013** 入选中国国家高新技术企业
In 2013, selected as a national high-tech enterprise in China
- 2017** 加入中国搪瓷工业协会
In 2017, joined China Enamel Industry Association
- 2018** 在美国芝加哥第24国际搪瓷大会发表论文
In 2018, published a paper at the 24th International Enamel Conference in Chicago, USA
- 新四板上市
In 2018, listed on the New Fourth Board
- 2019** 在国家级技术期刊《搪瓷与玻璃》发表论文
In 2019, published a paper in the national technical journal "Enamel and Glass"
- 通过ISO9001质量管理体系认证
In 2019, passed the ISO9001 quality management system certification
- 2020** 被东华大学(上海)选为搪瓷粉末静电喷涂技术与装备(博硕)研究生培养基地
In 2020, selected by Donghua University (Shanghai) as a postgraduate training base for electrostatic enamel powder coating technology and equipment (PhD)
- 2021** 成为全国搪瓷标准化委员会委员
In 2021, elected as a member of the National Enamel Standardization Committee
- 2022** 当选中国搪瓷工业协会副理事长
In 2022, elected as the vice chairman of China Enamel Industry Association
- 获批中国搪瓷装备工程技术研究中心
In 2022, approved as China Enamel Equipment Engineering Technology Research Center
- 2023** 当选中国表面工程协会涂装分会常务理事
In 2023, elected as the executive director of the Coating Branch of China Surface Engineering Association

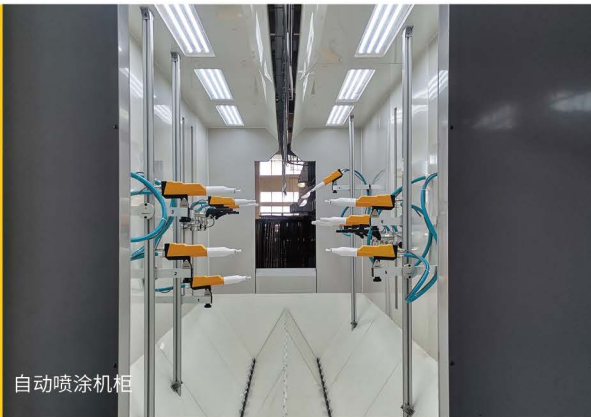
ENAMEL-S20

搪瓷静电粉末喷涂机

Enamel Electrostatic Powder Coating Machine

高性能 | High Performance

- 1、一次上粉率 $\geq 70\%$
 - 2、10秒迁移测试值=30.5g
 - 3、克服法拉第效应的能力强
 - 4、背面自动包覆能力强
 - 5、静电吸附力强
 - 6、质量稳定、故障率低
 - 7、易损件少且价格低廉
 - 8、中文、英文、西班牙文三种语言的触摸屏操作，容易使用
 - 9、宽电压适应：AC100-240V自动适应
- 1. Powder rate at one-time-spray $\geq 70\%$
 - 2. 10 seconds enamel powder migration test value = 30.5g
 - 3. Strong ability to overcome Faraday effect
 - 4. Strong automatic covering ability of parts back
 - 5. Strong electrostatic adsorption capacity
 - 6. Stable quality, low failure rate
 - 7. Few wearing parts and low maintenance cost
 - 8. Touch screen operation in three languages: Chinese, English and Spanish, easy to use
 - 9. Wide voltage range: AC100-240V automatic adaptation





一次上粉率测试装备

One-time powder rate test equipment

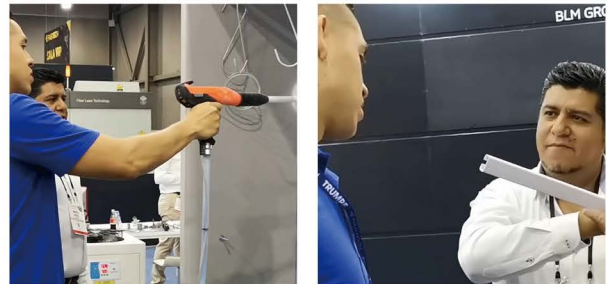
S20的一次上粉率 $\geq 70\%$

One-time powder rate of S20 $\geq 70\%$



30X10MM半封闭槽, 喷涂一枪完成内部的各个面和拐角, 也同时完成工件背面喷涂;

30x10mm purlin profile, spray one shot to complete all internal surfaces and corners, and also complete the covering on the part back at the same time



4X30MM曲折深槽, 展会上邀请观众试喷, “手电照明”检查喷涂效果

4x30mm zigzag deep groove, visitors are invited to try spraying at the exhibition, and "flashlight lighting" to check the spraying effect



第一张图使用中邦S20搪瓷喷枪进行喷涂, 强烈震动后没有掉粉;

第二张图使用其他品牌搪瓷喷枪进行喷涂, 震动后掉粉严重

1st photo to spray with JOBON Enamel-S20: No powder falling after strong vibration

2nd photo to spray with another brand Enamel gun: powder falls off after shaking



中国某大型企业采用S20取代原有其他品牌搪瓷喷枪后, 获得如下成果:

1、实现了全自动喷涂, 去掉了两个人工补喷工位; 2、产能提高了30%; 3、合格率提高了14%; 4、单件能耗降低了30%;

After a large Chinese company adopted S20 to replace the original enamel gun of other brands, the following results were obtained:

1. Fully automatic spraying is realized, and two manual spraying stations are removed; 2. Production capacity increased by 30%; 3. The qualified rate increased by 14%; 4. The energy consumption of a single workpiece is reduced by 30%;



烧结板过滤和滤芯过滤

搪瓷粉专用自动喷房

Automatic Booth For Enamel Powder (Sintered Plate Filtration and Cartridge Filtration)

主要优点 | Main advantages

- 1、内壁为PVC材质不易吸粉,容易清理,寿命长;
 - 2、回收粉既不会在喷房底板堆积,也不会回收风道堆积;
 - 3、回收粉即时自动返回供粉箱,且经过高速气流传输和刮板研磨;
 - 4、回收粉自动除铁、自动过筛;
 - 5、喷涂时粉末不外溢,保持喷涂环境整洁;
 - 6、室内排风,空气内部循环,利于保持隔离房内空气温度和湿度;
 - 7、人员可进入喷房;
 - 8、隔离式LED照明,持久提供足够的照明;
 - 9、可选配快速换粉组件,实现18分钟快速换粉;
 - 10、可选配吨包自动供粉或者55加仑粉末桶自动供粉;
 - 11、可选烧结板回收系统或者滤芯式回收系统;
- 1. The inner wall is made of PVC material, which is not easy to absorb powder, easy to clean, and has a long service life;
 - 2. Recycled powder will not accumulate on the floor of the booth, nor will it accumulate in the recovery air duct;
 - 3. The recycled powder automatically returns to the powder supply box immediately, and does not go through high-speed air transmission and scraper grinding;
 - 4. Automatic iron removal and automatic sieving of recycled powder;
 - 5. The powder does not overflow during spray, and the environment is kept clean;
 - 6. Clean air indoor exhaust; the internal air circulation are beneficial to maintain the air temperature and humidity in the isolation room;
 - 7. Personnel can enter the spray booth;
 - 8. Isolated LED lighting, providing sufficient lighting for a long time;
 - 9. Optional quick powder change component can realize fast powder change in 18 minutes;
 - 10. Optional ton bag automatic powder supply or 55-gallon powder barrel automatic powder supply;
 - 11. Optional sintered plate recovery system or cartridge filter element recovery system;

注:

- (1) 瓷釉粉末如果在喷房内堆积滞留,会容易受潮降低静电性能;
- (2) 回收粉经过刮板研磨或高速粉泵传输,容易破坏粉末颗粒表面的绝缘包裹层。

Note:

- (1) If the enamel powder accumulates and stays in the booth, it will be easily damp and reduce the electrostatic performance;
- (2) If the recycled powder is ground by a scraper or transported by a high-speed powder pump, the insulating coating on the surface of the powder particles would be easily to get damage.





试验打样搪瓷喷房

Sampling Use Enamel Booth

- 1、安装方便,室内排风,不需要向外排风;
 - 2、10MM厚度的PVC制造喷房壳体,不易沾粉,易清理;
 - 3、采用低噪音风机,工作噪音小;
 - 4、PVC材质的喷房壳体寿命超过30年;
 - 5、顶部安装隔离式的长寿命LED灯,持久提供足够的照明;
 - 6、回收系统采用电解镀锌板表面高光静电粉末喷涂制造,寿命长,易清理;
 - 7、顶部安装不锈钢挂杆,确保工件接地可靠。
1. Easy installation, clean air indoor exhaust, no need for external exhaust;
 2. The booth body is made of 10mm thick PVC material, which is not easy to be stained with powder and easy to clean;
 3. Low-noise fan is used, and the working noise is small;
 4. The life of PVC material for booth body is more than 30 years;
 5. Isolated long-life LED light is installed on the top to provide sufficient illumination for a long time;
 6. The recovery system is manufactured by electrolytic galvanized sheet with high-gloss electrostatic powder coated surface, which has a long service life and is easy to clean;
 7. A stainless steel hanging rod is installed on the top to ensure reliable grounding of the workpiece.



单工位手动搪瓷喷房

Single Station Manual Enamel Booth

- 1、室内排风,安装方便,不需要向外排风;
 - 2、采用电解镀锌板表面高光静电粉末喷涂制造,寿命长,易清理;
 - 3、采用低噪音风机,工作噪音小;
 - 4、隔离式LED照明,顶部安装隔离式的长寿命LED等,持久提供足够的照明;
 - 5、顶部按照需要安装滑轨或挂杆,方便使用;
 - 6、可做单侧双工位设计,供两个人同时使用,提高设备利用率;
1. Easy installation, clean air indoor exhaust, no need for external exhaust;
 2. It is manufactured by using electrolytic galvanized sheet with high-gloss electrostatic powder coated surface, which has a long service life and is easy to clean;
 3. Low-noise fan is used, and the working noise is small;
 4. Isolated long-life LED light is installed on the top to provide sufficient illumination for a long time;
 5. A stainless steel hanging rod is installed on the top to ensure reliable grounding of the workpiece;
 6. It can be designed as a double station on one side, which can be used by two workers to improve the utilization rate of the equipment.





搪瓷烤盘全自动喷涂线

Enamel baking pan automatic powder coating line

- 1、全自动喷涂,不需要人工补喷;
 - 2、质量稳定,合格率可在99%以上;
 - 3、喷涂链速可达5米/分钟,12小时产量8000个;
 - 4、瓷釉粉末静电吸附力强,转挂不易掉粉;
 - 5、烤盘悬挂姿态的底部平面不堆粉,产品质量好;
 - 6、烤盘大平面高处与低处厚度一致性好;
 - 7、PVC材质的搪瓷专用自动喷房(参考第07页介绍);
 - 8、配挂具自动清理机,保障挂具的导电性,让零件良好接地;
 - 9、易损件少,价格低廉,运行成本低。
1. Fully automatic spraying, no need for manual touch up;
 2. The quality is stable, and the pass rate can be above 99%;
 3. The spraying chain speed can reach 5 m/min, and the output is 8000 pieces in 12 hours;
 4. The enamel powder has a strong electrostatic adsorption force, and the workpiece is not easy to drop powder when it is hung;
 5. The bottom plane of the baking tray in the hanging posture does not pile up powder, and the product quality is good;
 6. The powder thickness of the high and low areas of the large plane of the baking pan is consistent;
 7. Special automatic powder coating booth for enamel, made of PVC material (refer to the introduction on page 07);
 8. Equipped with an automatic cleaning machine for hangers to ensure the conductivity of the hangers and make the parts well grounded;
 9. Less wearing parts, lower maintenance and operating cost.



烤箱与烤盘双功能自动喷涂线

Dual-function automatic powder coating line for oven and bakeware



搪瓷烤箱全自动喷涂线

Enamel oven automatic powder coating line

- 1、节拍式或者跟踪式,PLC程序控制,自动喷涂;
 - 2、瓷釉粉末静电吸附力强,转挂不易掉粉;
 - 3、烤箱内壁、外壁和开口处的翻边均可自动喷涂;
 - 4、工作时,如果喷枪组对应的挂具上没有挂零件,这组喷枪就不会喷粉;
 - 5、PVC材质的搪瓷专用自动喷房(参考第07页介绍);
 - 6、配挂具自动清理机,保障挂具的导电性,让零件良好接地;
 - 7、易损件少,价格低廉,运行成本低;
1. Beat type or tracking type, PLC program control, automatic spraying;
 2. The enamel powder has a strong electrostatic adsorption force, and the workpiece is not easy to drop powder when it is hung;
 3. The inner wall, outer wall and opening of the oven can be automatically covered;
 4. When working, if there is no hanging part on the hanger corresponding to the powder coating gun group, this group of guns will not spray powder;
 5. Special automatic powder coating booth for enamel, made of PVC material (refer to the introduction on page 07);
 6. Equipped with an automatic cleaning machine for hangers to ensure the conductivity of the hangers and make the parts well grounded.



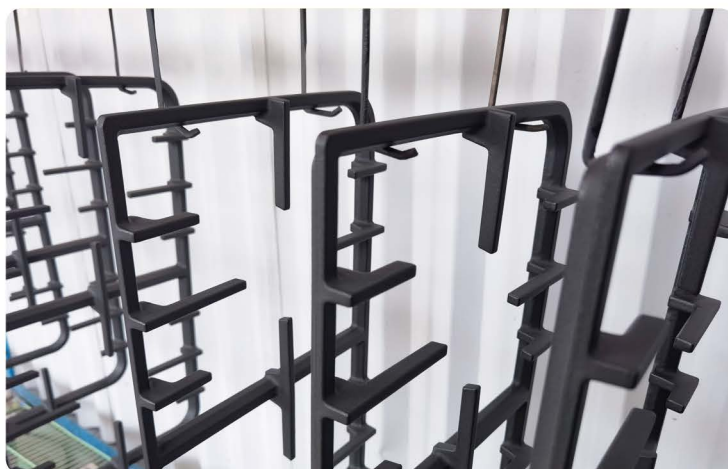
BBQ自动喷涂线

Enamel BBQ Oven automatic powder coating line



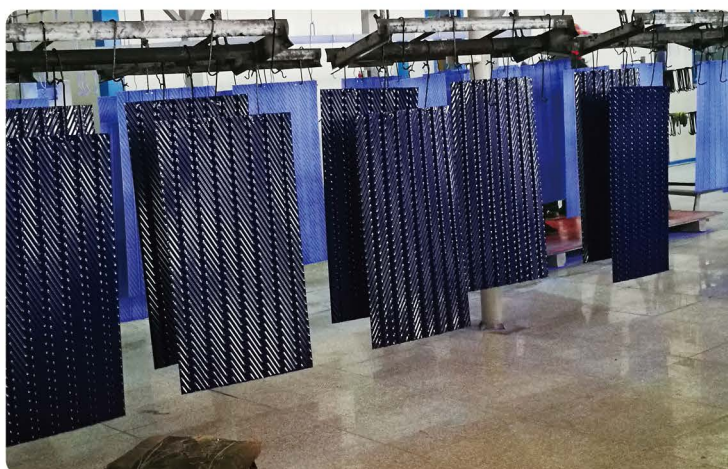
铸铁炉架自动喷涂线

Enamel Cast Iron Hob Automatic
Powder Coating Line



GGH搪瓷钢板(脱硫脱硝板) 自动喷涂线

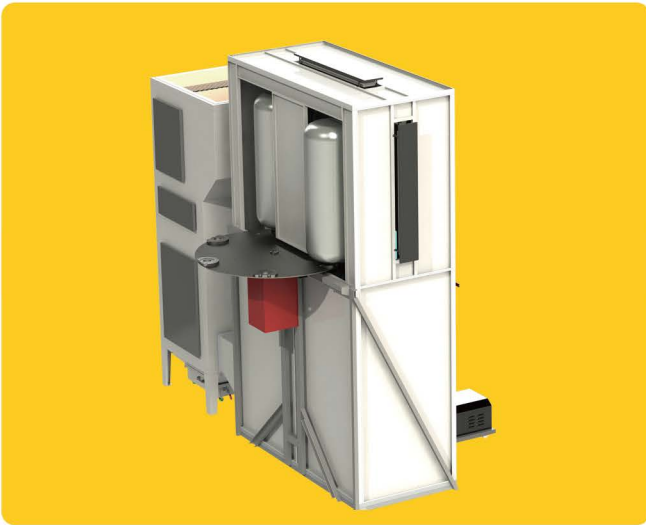
GGH enamel steel plate (desulfurization and
denitrification plate) automatic powder
coating line



装饰搪瓷钢板自动喷涂线

Decorative enamel steel plate automatic
powder coating line





热水器内胆自动喷涂设备

Water heater tank automatic powder coating equipment



保温杯自动喷涂设备

Thermos cup automatic powder coating equipment



机器人自动喷涂

Robot automatic enamel powder coating



超长搪瓷钢管自动喷涂 与自动烧成线

Super-long enamel steel pipe automatic powder coating and automatic firing line

1、自动完成搪瓷静电粉末喷涂

2、自动烧成

3、自动校直

4、钢管长度可超过20米

1. Automatically complete enamel electrostatic powder coating

2. Automatic firing

3. Automatic straightening

4. The length of the steel pipe can exceed 20 meters





实验室打样烧成炉

Lab Use Firing Furnace



底部升降式搪瓷烧成炉

Bottom lifting enamel firing furnace



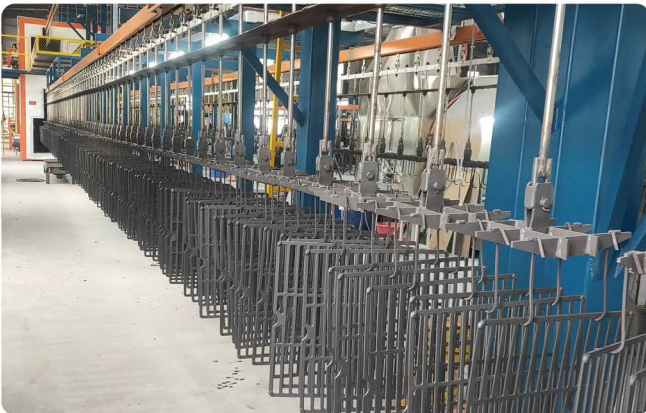
步进式烧成炉

Step-by-Step firing furnace



隧道式滚轴烧成炉

Tunnel type roller drive firing furnace



悬挂链式连续工作烧成炉

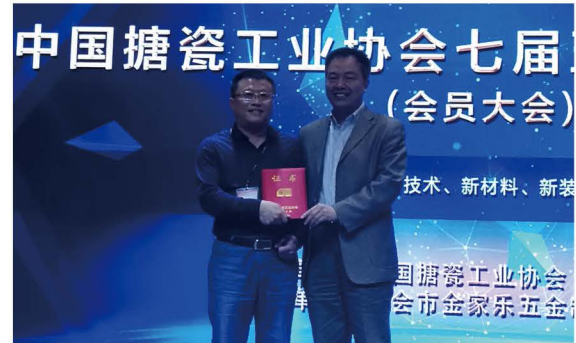
Suspension chain type continuous working firing furnace

ACADEMIC PAPERS & INDUSTRY STATUS

学术成就及行业地位



- 2018年5月在美国芝加哥第二十四届搪瓷大会发表论文
In May 2018, a paper was published at the 24th Enamel Congress in Chicago USA



- 2018年12月9日蒋教授颁发论文证书
On December 9, 2018, Professor Jiang issued a thesis certificate



- 2023在日本第二十五届国际搪瓷大会发表论文的PPT截图
PPT screenshot of the paper published at the 25th International Enamel Conference in Japan in 2023



- 东华大学研究生培养基地
Donghua University Postgraduate Training Base



- 中邦--中国搪瓷工业协会副理事长单位
JOBON--Vice Chairman Unit of China Enamel Industry Association



- 中国搪瓷装备工程技术研究中心
China Enamel Equipment Engineering Technology Research Center

JOBON 中邦

更高的性能 . 更好的服务

青岛中邦科技发展有限公司

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