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佛山市奥斯博机械设备有限公司

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ASB 奥斯博 AOSIBO

KILNS

A WORLD LEADER IN KILN MANUFACTURING

FOSHAN AOSIBO MACHINERY CO,.LTD.
佛山市奥斯博机械设备有限公司

FOR ALL YOUR FIRING SOLUTIONS

为您提供最优的热工应用方案

ASB KILNS specializes in research and development, design, production, installation, commissioning and engineering/maintenance service of various hi tech industrial and specialty kilns. ASB Kilns incorporate the latest technique's to influence fuel efficiency, reliability and a high level of automation. ASB has been cooperating with a well known European kiln company for many years in the manufacture of industrial kilns and are able to provide hi quality kiln products and service to various kinds of industry and enterprises worldwide. It is our business ethos to provide a win win solution to the customer-supplier relationship thereby allowing for long term business cooperation with our clients.

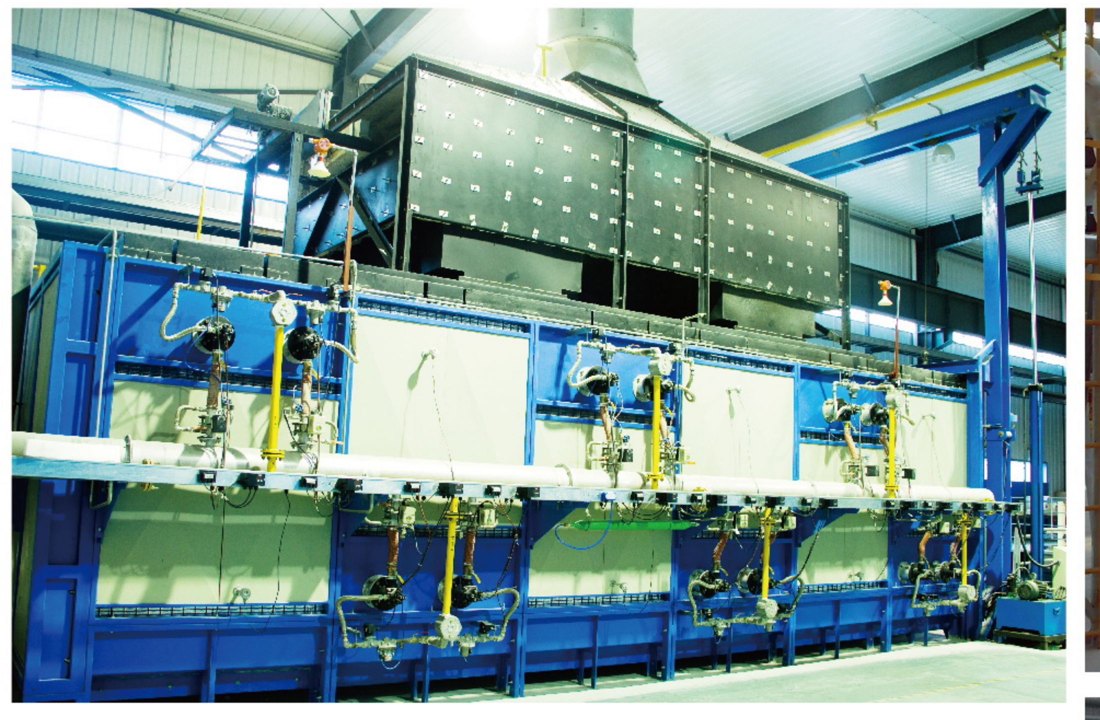
The advantages of ASB Kilns are that we can integrate the mechanical and electrical systems with automatic controls and facilitate the ceramic process engineering requirements seamlessly.

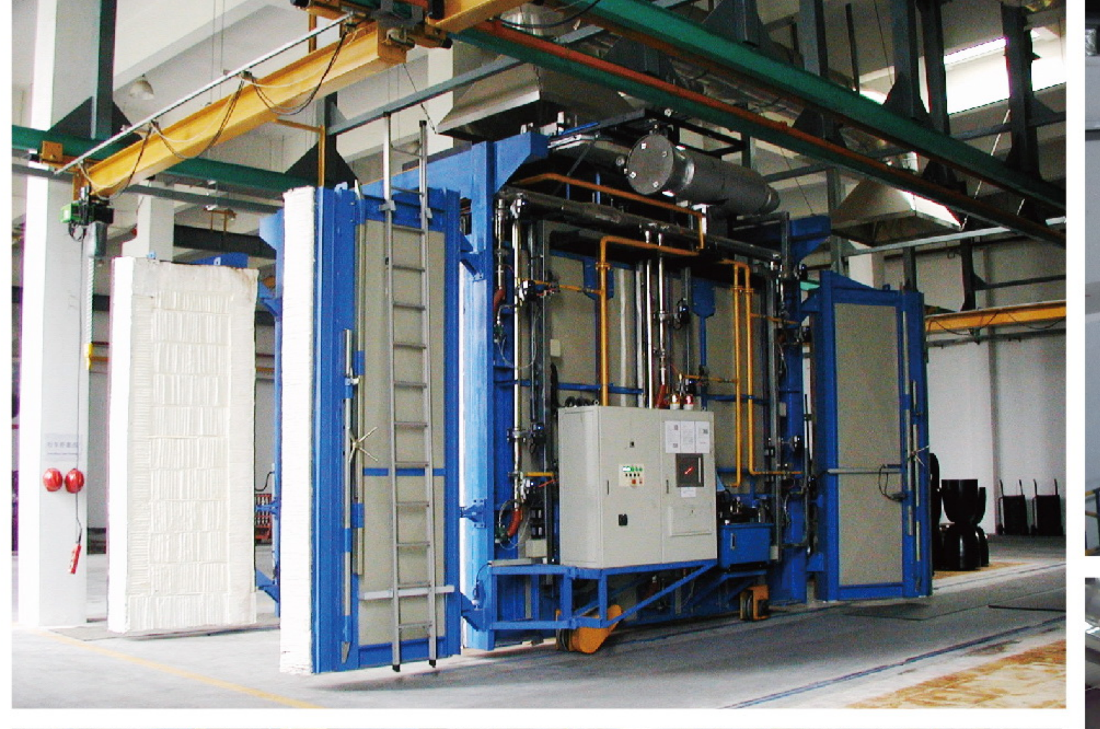
ASB Kilns operates with the ethos of "giving our clients great benefit". It is in pursuit of this that we offer excellent technical solutions to all your manufacturing requirements.

奥斯博窑炉致力于先进工业窑炉和特种窑炉的研发和制造，为用户提供先进的窑炉设计、制造、安装、调试以及技改工程服务。奥斯博窑炉持续保持技术革新，为用户提供低能耗、高可靠性、高自动化、高性价比的窑炉应用体验。多年以来和欧洲知名窑炉公司的合作经历和技术积累，使我们具备为全球多种行业企业提供高品质窑炉产品和服务的能力。我们真诚地和客户保持长久的业务合作，共同分享高端技术成果，共赢未来。

奥斯博窑炉的特点是将自动化工控技术完美地综合进机械系统和电气系统，实现产品工艺过程与设计要求的准确一致。

奥斯博窑炉以“为用户带来最佳的使用价值”作为业务开展准则，以此为用户提供最优秀、最佳性价比的技术工程方案。





ASB KILNS' FEATURES
ASB窑炉特点

Design and Manufacture
设计与制造

The Kiln designs conform to European Standards and all fabrications are subject to inhouse Quality Assurance procedures.

窑炉的设计和制造遵照欧洲标准而设计，安全可靠。

Extensive Use of Internationaly Recognized Components
广泛采用国际知名品牌部件

The mechanical driving system, electrical control system, combustion system and insulation materials supplied and specified within our design are from established international brands to guarantee stability and reliability.

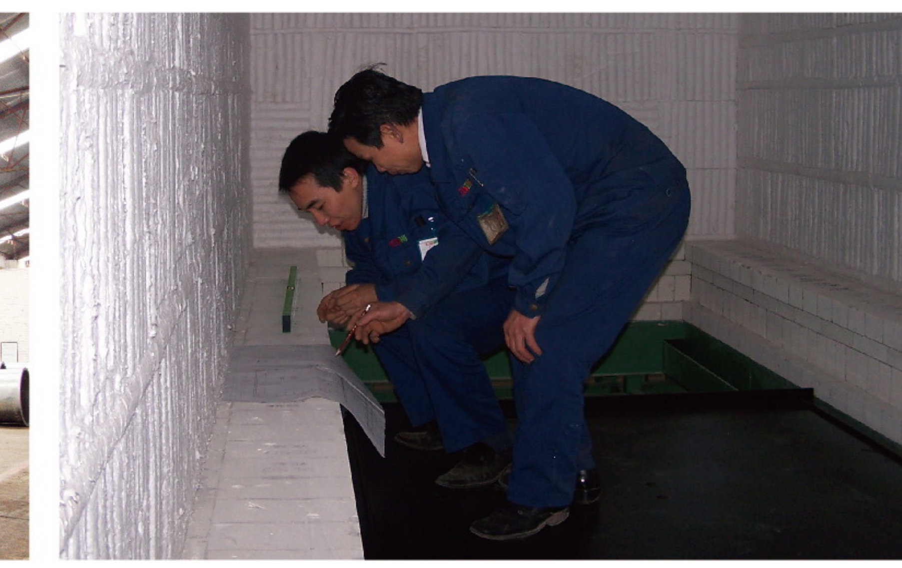
机械驱动系统、电气元件、燃烧组件、工控系统和耐火保温材料采用可靠性极高的国际品牌产品，确保窑炉的稳定性和可靠性。

krom schroder
UNIFRAX
Morgan ThermalCeramics
ISOLITE High Temperature Solutions
Proficy HMI/SCADA - iFIX
OMRON®
SIEMENS
Schneider Electric
MITSUBISHI
Honeywell
MADAS®
AB Allen-Bradley

Modular Design and Preinstallation
模块化制造和工厂预装检查

All equipment including Kilns, Dryers, Ovens and Furnaces are pre-assembled in our factory using a modular format. This process allows for continuous inspection and verification prior to delivery.

制造过程规范严谨，设备使用安全可靠。所有设备包括窑炉、干燥炉及固化炉等均采用模块化设计与制作，以组件形式分段制造，设备发货前在工厂完成试装和进行检查校正。



Site Installation and Commissioning
现场安装与调试

Modular construction allows kilns to be installed and operating in the shortest time, reducing disruption within the factory and achieving a reliable and rapid site installation.

模块化设计和制造可实现设备最可靠、最迅速的现场安装，减少对用户工厂的施工影响。

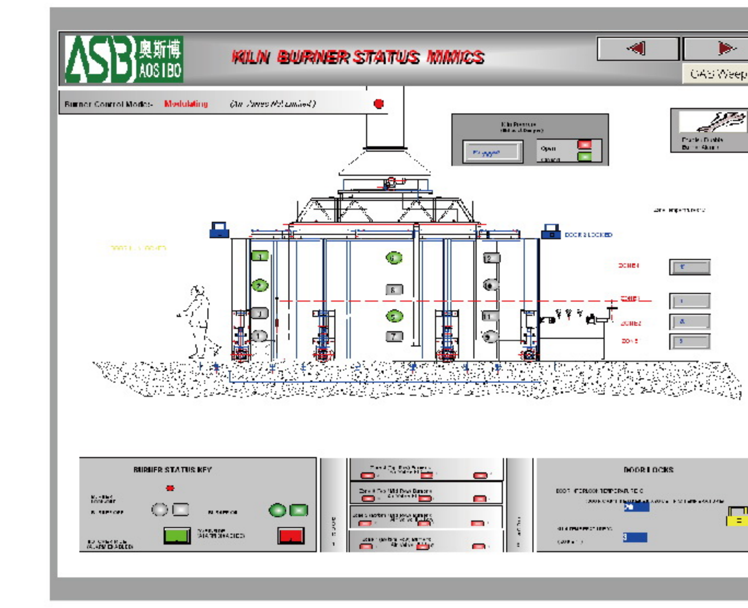
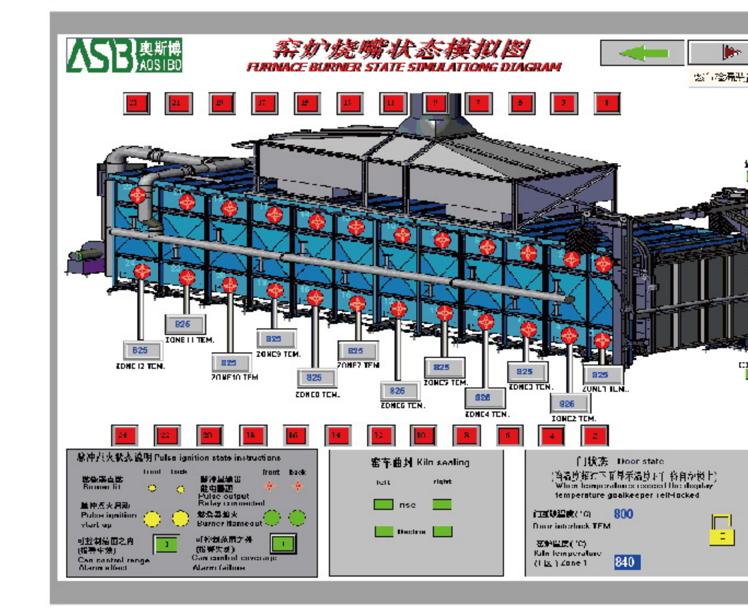



Professional Commissioning Services
专业调试服务


Integrated Industrial Control and Automated Systems
集成化工控系统

The ASB Kiln Control System is fully integrated into the Programmable Logic Controller (PLC), which controls all kiln functions automatically. Data Acquisition System (Scada) is incorporated which provides accurate control for Shuttle and Tunnel Kilns during pre-heat, soak and cooling. The PLC / PC controls all kiln functions – temperature, pressure, profile generation, and also provides the base for comprehensive data monitoring and fault alarm generation. The kilns are equipped with Single Switch Start, this allows the operator to start the kiln after selecting a programme by pressing a single switch. The benefit is high levels of automation, intelligent systems, easy operation, and reliability.

ASB窑炉控制系统是一个为工业环境而设计的集成工控系统，以程序逻辑控制器（PLC）为工控基础，根据不同传感器的工作信号自动调节窑炉各个操作功能；基于SCADA工控平台，集成多区温度控制、燃烧脉冲控制、自动化动作控制为一体，带菜单\海量数据储存\记录追踪\设备操控等友善的人机操作界面，简单方便地实现从点火开始的温度控制、窑压控制、冷却控制、窑炉状态监控、安全报警提示，以至窑车回转的全面管理。其优点是高自动化和智能化、操作方便简单、可靠性强。



Operational Safety Mechanism
安全保证

ASB kilns are equipped with a number of operational safety devices that are designed to ensure safe operation of the equipment at all times. The function of the safety devices is to ensure that gas is only available at the burners when all safe operating criteria have been met. The design complies with all European standards, including of operation procedures safety control, electricity safety control, gas pressure safety control, combustion air pressure safety control, and kiln over temperature safety control.

从燃气安全气站到独立的烧嘴工作安全检测，遵照欧洲安全规范，主要包括：操作程序安全控制，电力安全控制，燃气、助燃空气压力安全控制，窑炉压力安全控制，工作温度安全控制等。

Multizone Control
多区控制

The system provides precise control of the kiln temperature during the firing process, it effectively avoids regional heat centralization and achieves better temperature uniformity. The benefit is very even temperature control during heating over the entire load, allowing for variation of loading densities between kiln cars. The system can also control the cooling process precisely, which ensures the shortest firing cycle.

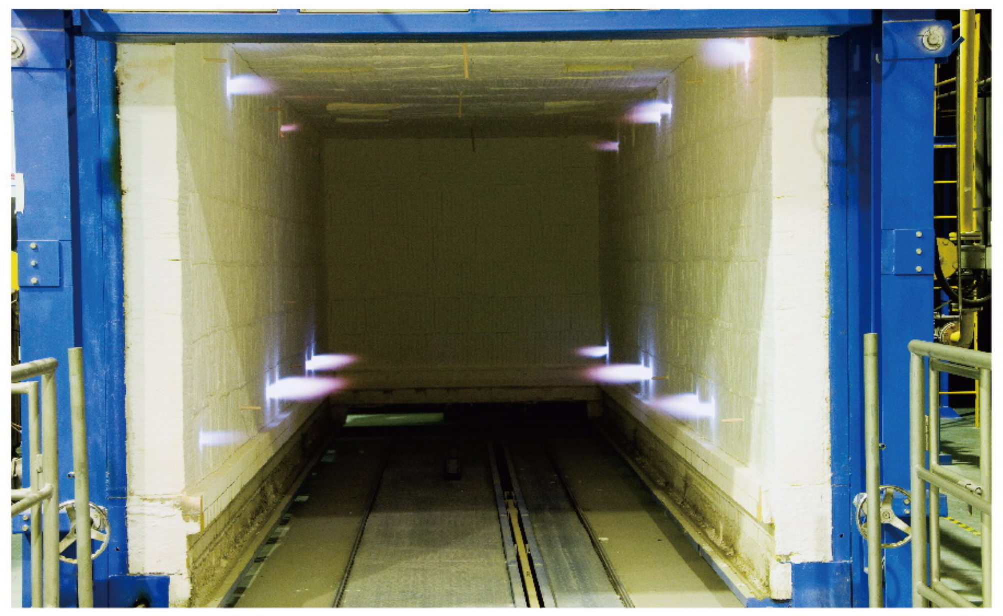
能精确地控制窑炉制品在烧成过程的平均温度，有效避免局部的热集中和局部热点的产生，获得更好的温度均匀性，温度分布不受窑车间不同的装载密度的影响。系统也同时精确控制冷却过程，确保提供最短的烧成周期。

Pulse Control
脉冲控制

ASB Tunnel and Shuttle Kiln's burner pulse control has been developed and perfected. The Control System precisely controls each burner's pulsing time sequence and pulsing cycle according to the temperature feedback signal, the controlled action of the burners prevents localized flame impingement or hot spots in the kiln chamber. This "state of the art" pulse fired system provides the best possible fuel consumption, the best temperature distribution with high mass flow averages, and the greatest turndown compatible with safety.

ASB隧道窑及梭式窑的燃烧脉冲控制已经日趋完美，工控系统根据温度反馈信号精准控制每个烧嘴燃烧脉冲时序和脉冲周期，使炉内形成针对性和强烈的搅拌气流，减少温度死角，形成均匀的温度分布。同时脉冲控制还能发挥节能的效果。

Light Weight Insulation
窑炉隔热保温



The kiln's thermal insulation uses high-quality low thermal mass ceramic fibre modules. This reduces total heat storage in the kiln structure during the firing cycle and allows faster firing cycles with shortened burner firing times to be achieved. It produces excellent speed of response to control inputs with low fuel consumption.

通常采用高品质轻质低散热的陶瓷纤维层叠棉块，有效提高温度反应速度，最大限度适应间歇性生产，通过最小化窑炉内衬的蓄热，大大降低能耗。

Multi- Kiln Door Types
多样性的窑门设计

ASB can offer many types of door mechanism, to suit differing requirements or location restrictions on head room or layout.
these include:

· Mechanical Lift Up Doors (electrical and Hydraulic)
· Swing Doors
· Envelope/Tilting Doors (particularly helpful where there are height restrictions)

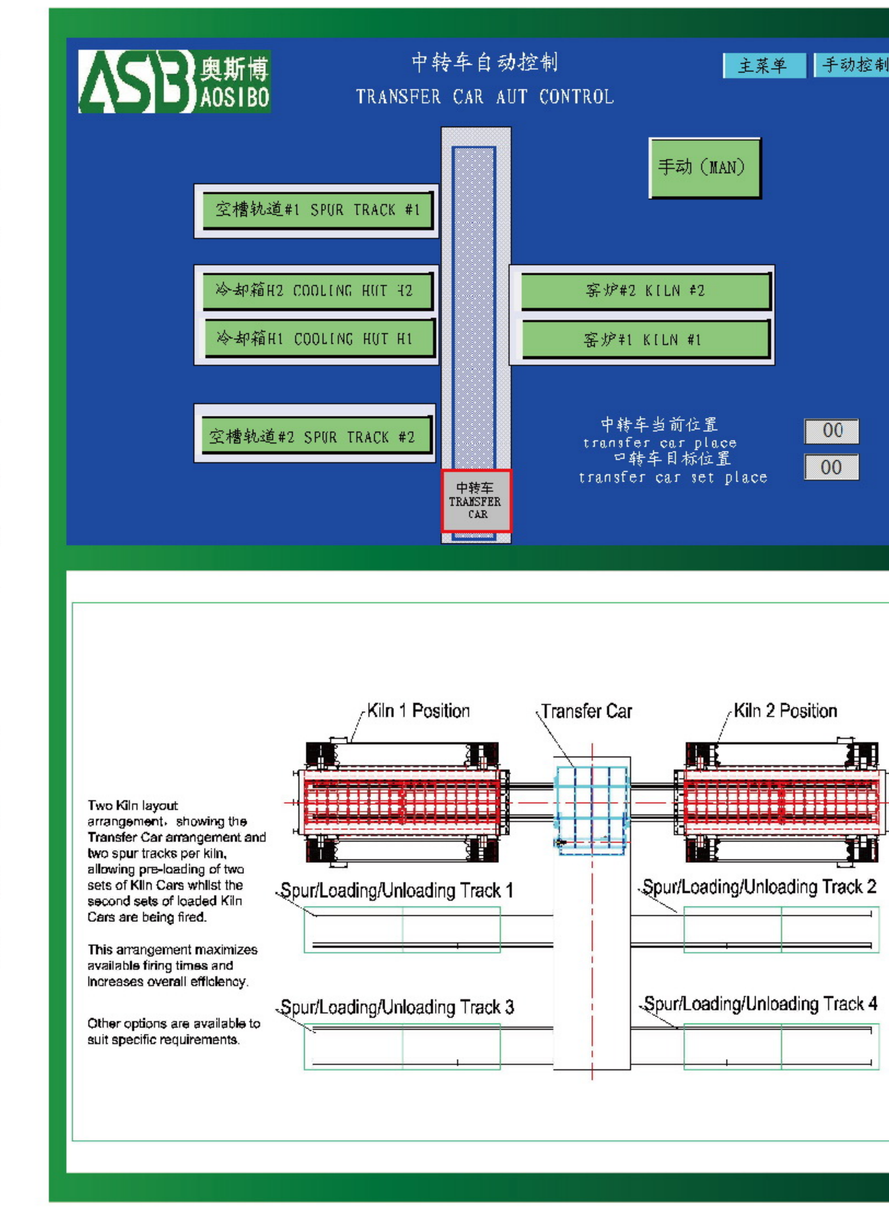
ASB可以根据用户厂房高度及布局情况提供多种方式的窑门设计，包括：

· 垂直升降式窑门（机械驱动或液压驱动）
· 双开门
· 翻转门（该款设计对于厂房高度受限的用户特别有益）

Kiln Car Transportation/Haulage Systems
窑车中转/驱动系统

ASB is able to offer many different designs of Kiln Car Transportation/Haulage Systems, it is especially appropriate when used for multi-track kiln car transportation.All of which are designed to the unique requirements of our customer.They can include automatic or semi automatic Kiln loading and unloading systems complete with interfacing with a transfer car to allow product to be transported to a desired location.These systems can interface with operators, where needed or be programmed to operate on their own.We use touchscreen technology on our control panels to allow for easy use.

ASB可以为用户提供多种窑车中转/驱动系统设计方案。根据预先编制好的程序，通过全自动或半自动的中转车，操作者只需在操作面板中触按“指定位置”按钮，窑车便可自动中转至指定位置完成产品的装卸载。控制面板可为触摸屏界面，为操作者带来直观的操控便利。



THE FEATURES OF ASB SHUTTLE KILN

ASB梭式窑特点

ASB 奥斯博 AOSIBO KILNS A WORLD LEADER IN KILN MANUFACTURING

Rapid Cooling System
快速冷却

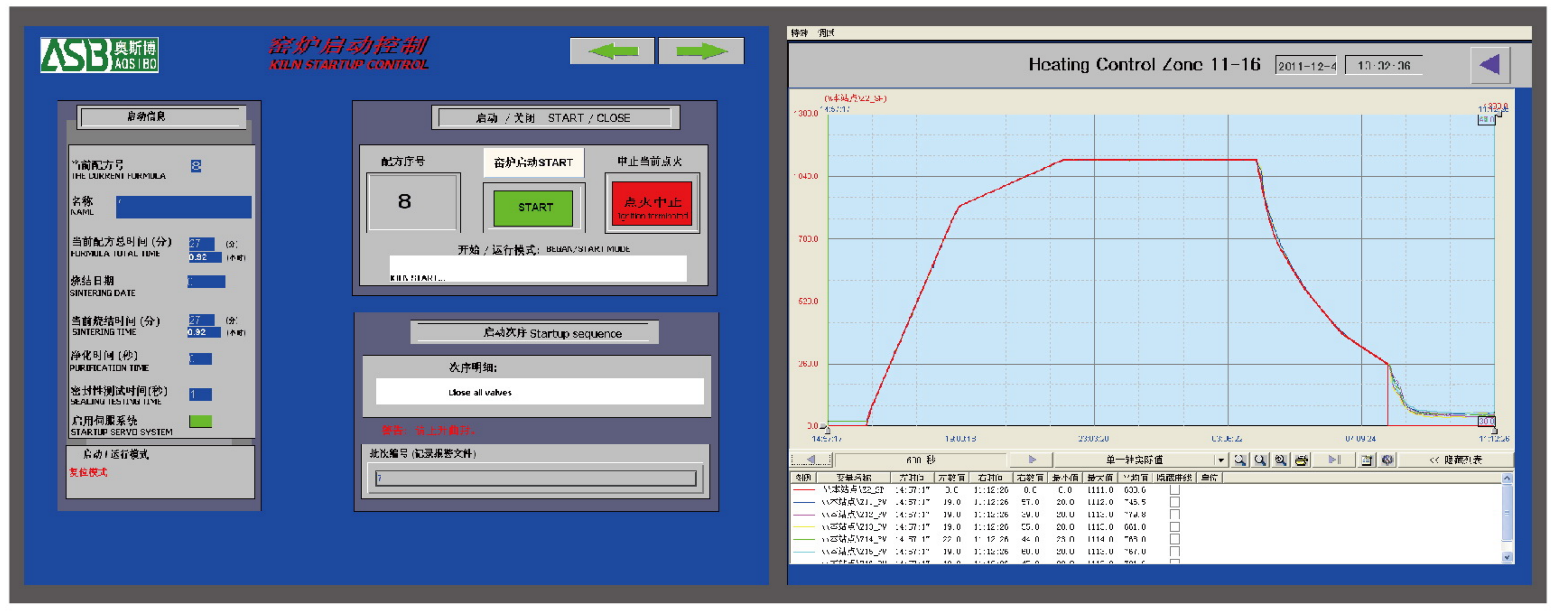
The Rapid Cooling System can provide additional cold air during the cooling cycle, allowing an accelerated cooling rate to be achieved in accordance with the process requirements.

快速冷却系统可使产品在冷却过程获得额外的冷却风，从而满足特殊产品快速冷却的工艺要求。

Precise and Repeatable Firing Curve
烧成的精确性和重复性

Each firing program can be edited into over 60 sections, so it can be set precisely to control the heating, soak and the cooling exactly. Thus it can satisfy complicated firing processes with shortened firing times. All the firing cycles previously used can be repeated with exactly the same results each and every time.

每个烧成曲线可编节段多达60段，能根据设定的烧成制度精确控制产品的升温、保温、降温，可满足复杂的烧成工艺，以实现最快速的产品烧成周期。所有使用过的烧成制度均可以重复使用，能保持一致烧成效果和质量。



Atmosphere Control
烧成气氛控制

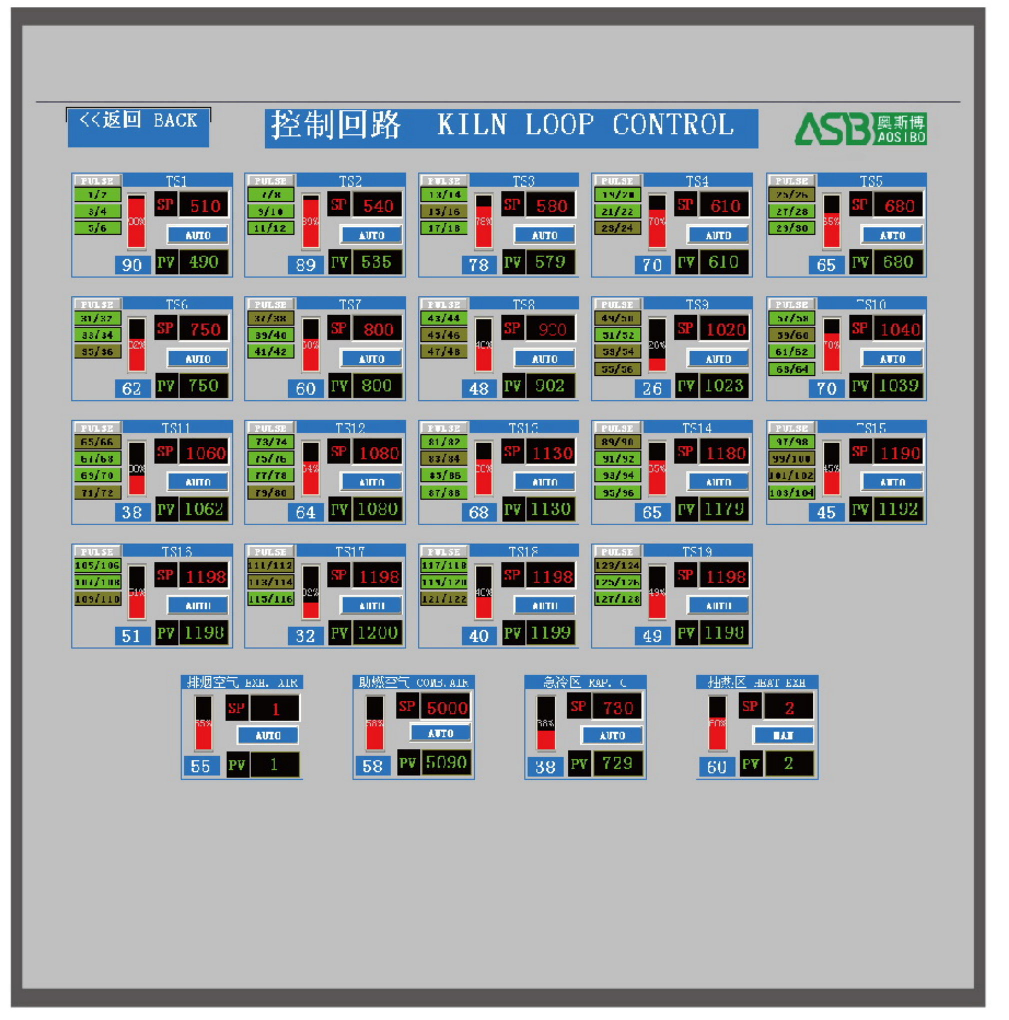
Pulse firing ensures that the fuel and air are always in the correct ratio, according to the process parameters. The Kiln atmosphere can be oxidising, stoichiometric or reducing dependent on the heating profile requirements. With the automatic atmosphere control, kiln atmosphere is fully controlled and results in a consistent atmosphere within the kiln which enables selection of complex firing cycles.

脉冲比例燃烧结合气氛控制系统，可以确保空燃比例处于最正确的配比，可将窑内气氛调至氧化状态、理想配比或者还原状态，实现炉内气氛在烧成过程中全面受控，从而满足复杂的烧成工艺。

Highly Automated Operating System
高自动化的操作系统

PC based, the SCADA system provides recipe format, data storage, live plus historic trending and equipment overview. To start the Kiln the operator just needs to press the singe "Start" button, the Kiln then operates completely automatically, and can be left unattended until the firing cycle concludes. Visible and audible alarms are included to summon the operator should there be any problem. Additionally the kiln always shuts down to safe condition.

基于PC及SCADA工控系统，可储存海量数据，每次操作只需选择指定的烧成制度，启动窑炉后，窑炉将全自动运作。如发生任何故障，安全监控系统会自动进行视听报警并自动记录。当窑炉需要中断操作时，系统亦会自动关闭至安全状态。



THE FEAATURES OF ASB TUNNEL KILN
ASB隧道窑特点

Light Weight Insulation
窑炉轻质隔热保温

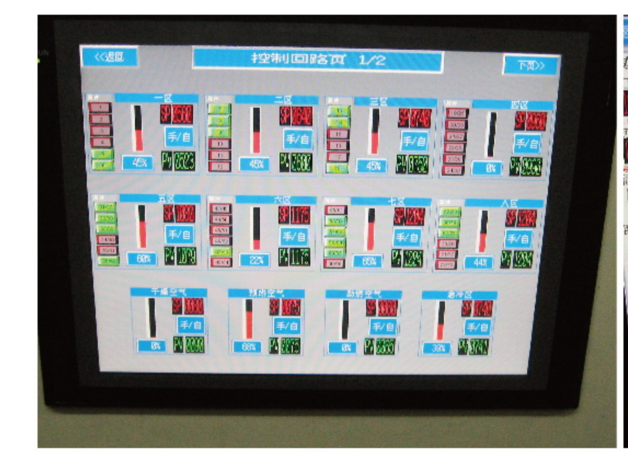
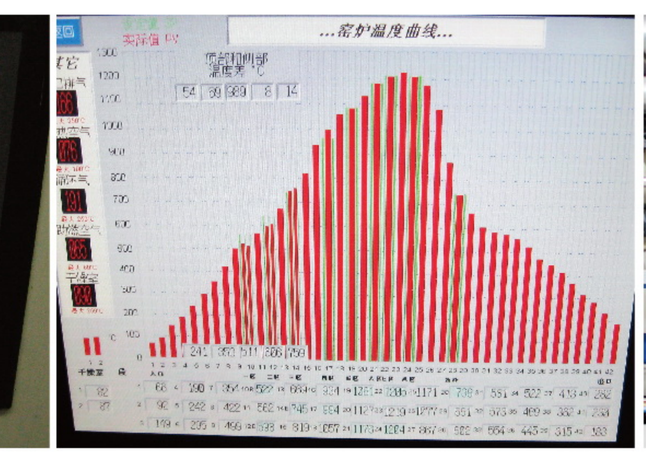
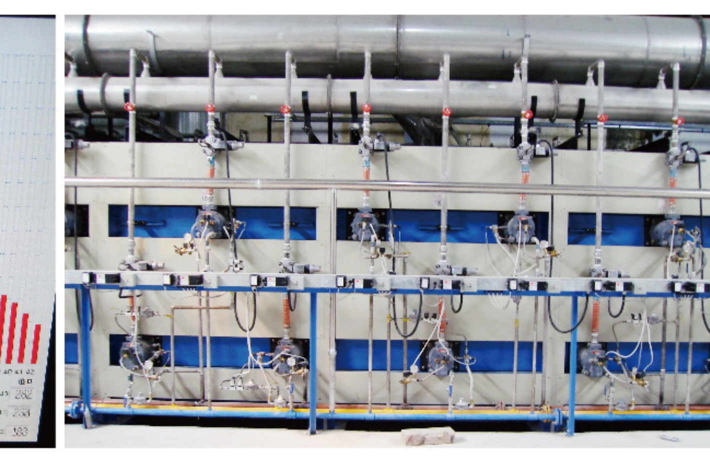
Rapid thermal response to control inputs and low fuel consumption result from the use of lightweight insulation in the walls and lightweight ceramic tiles in the roof. The kiln's thermal insulation uses high-quality low thermal mass ceramic fibre modules to reduce the weight and density of kiln. It effectively reduces energy consumption by minimizing heat storage in the kiln lining.

采用轻质保温结构，大大地降低了窑炉的重量和密度，该种结构能合理地控制窑体散热，提高了窑炉的保温隔热性能，进而有效地降低能耗。

Firing Mode
烧成模式

The burners in the preheating zone and firing zone adopt individual zone supervised or multi-zone control, which ensures very accurate temperature control. Complex firing cycles involving temperature and atmosphere can be programmed to satisfy all technical requirements. Rapid cooling zone consists of the combination of counter flow and jet cooling, to provide a precise cooling curve.

烧嘴在预热区及主烧成区采用单独或分组多区脉冲控制，确保精确地控制产品的烧成温度，复杂的烧成周期、温度及气氛均可编制成程序，以保证所有产品的要求。急冷区采用气流喷射和反冲组合控制，从而提供一个非常精密的冷却曲线。

Full-Automatic Kiln Car Pushing and Returning System
全自动窑车推进及回转系统

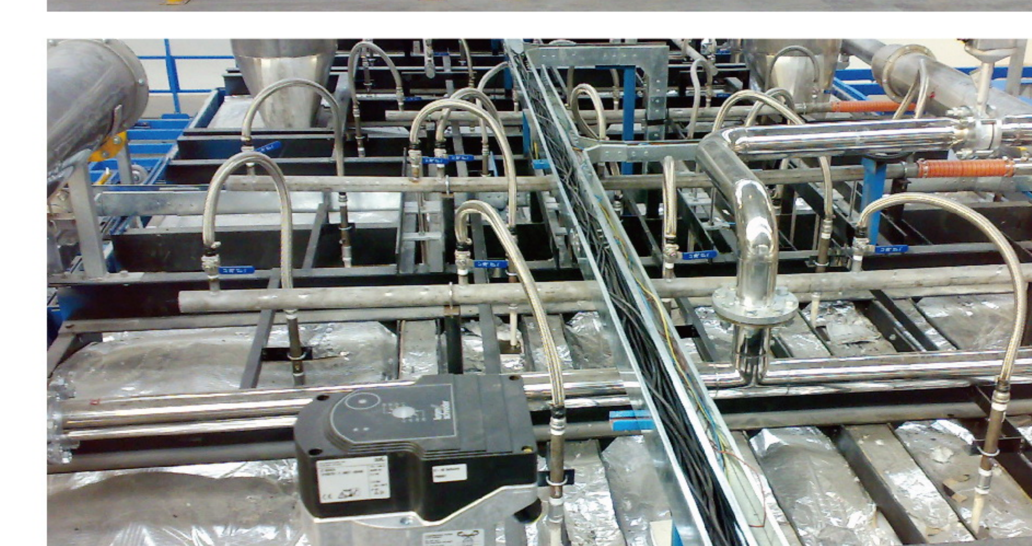
Consisting of Continuous Push System, Full-Automatic Transfer Car System, Full-Automatic Return Car Haulage System and Automatic Position System. It ensures the kiln runs efficiently and automatically.

由连续推进系统、全自动中转车系统、全自动回车牵引系统及自动定位系统组成，确保窑炉高效自动运行。

Heat Recuperation
隧道窑余热利用

The hot air extracted directly from rapid cooling zone and from the tunnel kiln final exit section can be utilized by the Heat Recovery System for combustion air preheating, pre-drying, and kiln entrance hot blast air and roof hot air jetting in pre-heating zone. Recovery of the heat reduces overall energy consumption and improves energy utilization.

包括直接从急冷区排出以及从隧道窑尾排出的热气流，均可通过隧道窑余热控制系统进行利用，包括助燃风预热、窑前干燥、窑头鼓风、预热带搅拌风等，以降低隧道窑能耗和提高能源利用率。

PROJECT CASES
工程案例

Shuttle Kiln
For Sanitaryware
烧制卫生洁具
梭式窑


Tunnel Kiln
For Sanitaryware
烧制卫生洁具隧道窑


Shuttle Kiln
For Tableware
烧制餐具梭式窑


Tunnel Kiln
For Tableware
烧制餐具隧道窑


Roller Kiln
For Tableware
烧制日用瓷
辊道窑

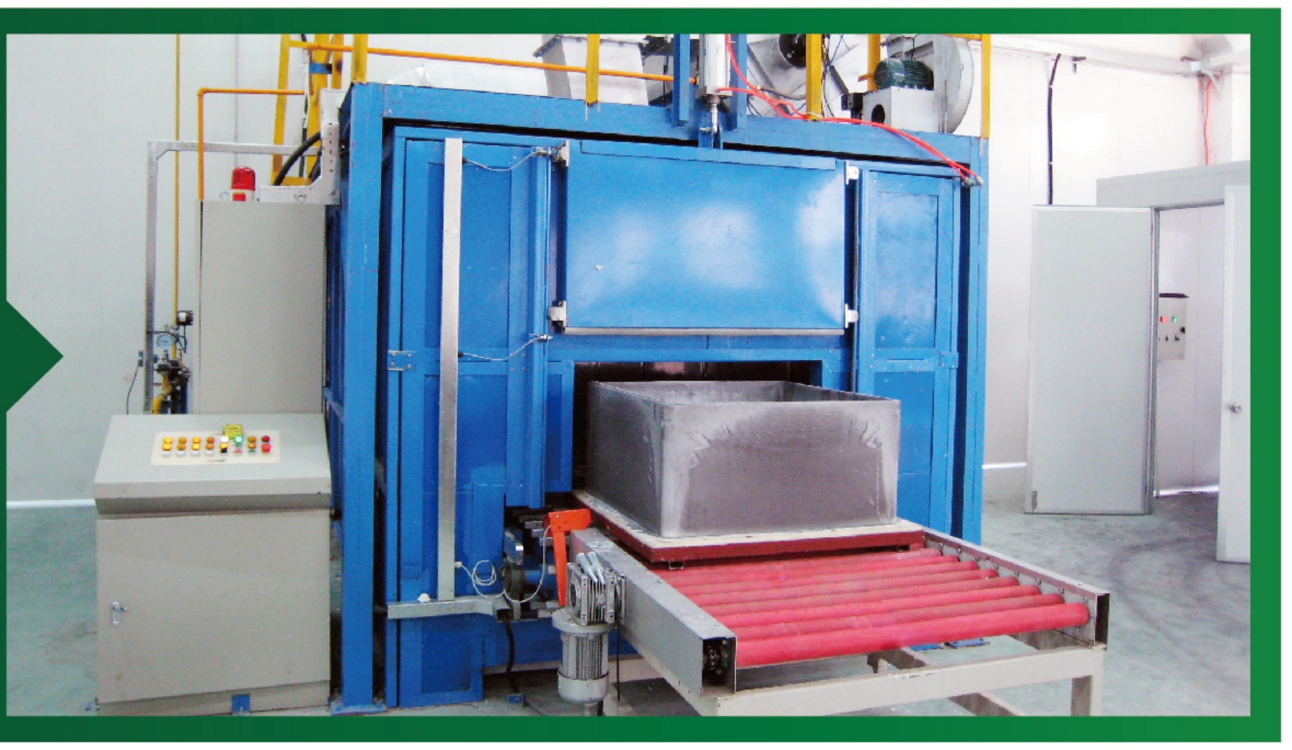

Shuttle Kiln
For Clay Graphite Crucible
烧制石墨坩埚
梭式窑


Shuttle Kiln
For Refractory Materials
烧制耐火材料
梭式窑


Heat Treatment
Furnace
大型热处理炉


PROJECT CASES
工程案例

Continuous Curing Oven
For Fused Silica Crucible
石英坩埚固化炉



Drying Oven
For Fused Silica Crucible
石英坩埚干燥炉

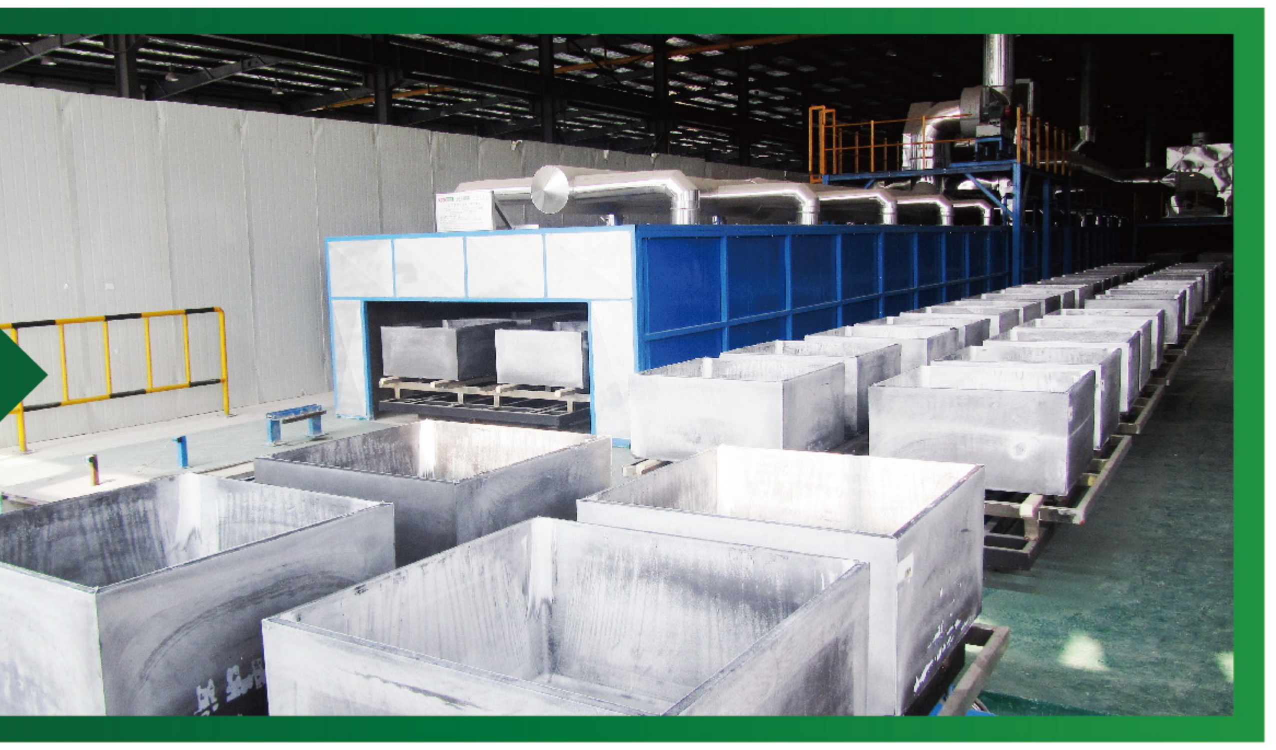
Shuttle Kiln
For Fused Silica Crucible
石英坩埚梭式窑

Tunnel Kiln
For Fused Silica Crucible
石英坩埚隧道窑

Product Inspection Line
For Fused Silica Crucible
石英坩埚成品检验线

Continuous Dryer
For Fused Silica Crucible
石英坩埚成品烘干炉

Continuous Dryer
For Green Fused Silica Crucible Products
石英坩埚连续式
毛坯干燥窑



Milling Machine(CNC)
For Fused Silica Crucible
石英坩埚磨床