

致力于

为全球客户提供满意的个性化锅炉产品及服务 持续为客户创造更大价值

ZOZEN Boiler is committed to providing tailored boiler **products and services** for customers all over the world. Continue to create **more values** for customers.



发展战略

DEVELOPMENT STRATEGY

标准化精益制造・信息化高效管理・全球化市场布局

Standardized lean manufacturing, Informationalized efficient management, Globalized market structure



企业宗旨

ENTERPRISE TENET

为客户创造价值・为员工提供机会

Create value for customers, Provide opportunities for employees



价值理念

ZOZEN VALUES

共享科技・体验完美・贵于品质・恒于服务

Share Technology, Experience Perfection, Quality of High Value, Service of Ever Lasting



公司简介

COMPANY PROFILE

无锡中正锅炉有限公司成立于1988年,是中华人民共和国国家市场监督管理总局核准的锅炉和压力容器定点制造企业。公司持有A级锅炉制造许可证,D1、D2级压力容器制造许可证,美国ASME标准"S"(动力锅炉)、"U"(压力容器)许可钢印,并全面通过ISO9001:2000国际质量体系认证。公司座落于风光优美的太湖之滨,占地15万平方米,是一个具有年产12000蒸吨锅炉生产能力的现代化企业,为AAA级资信等级企业,历年来被评为无锡市及江苏省的重合同守信用企业、出口名牌企业、高新技术企业、优秀民营企业。

中正锅炉始终以客户需求出发,依托专业方案设计能力和几十年行业深耕,为客户提供工业锅炉、有机热载体锅炉、大型热水锅炉、电站锅炉、余热锅炉、生物质锅炉、压力容器等系列产品的整体解决方案,帮助客户提升锅炉运营效益。

Wuxi ZOZEN Boilers Co., Ltd., established in 1988, is a designated manufacturer of boilers and pressure vessels approved by the government. ZOZEN Boiler is an AQSIQ approved A-grade boiler and D1, D2 grade pressure vessel manufacturer. It holds the ASME "S" and "U" Certificates and has earned ISO9001:2000 Certification. ZOZEN Boiler situated along the coast of beautiful Taihu Lake in Wuxi, covering an area of 15,000 square meters, is a modern enterprise with an annual production capacity of 12000 tons of steam. ZOZEN Boiler is a top AAA-grade credit enterprise approved by the banks. Also, it is certificated as the Enterprise For Honoring Contract and Keeping Promise, as well as the title of High-tech Enterprise, Excellent Private Enterprise and Top Export Brand by the city of Wuxi and Jiangsu Province.

ZOZEN Boiler always focuses on the customer's needs, relies on the professional design ability of boiler and decades of industrial experiences, to provide customers with overall solutions for industrial boilers, thermal oil heaters, large-scale hot water boilers, power plant boilers, HRSG, biomass-fired boilers, pressure vessels and other products, in order to improve the operation efficiency of boilers for the customers.

公司优势 COMPANY ADVANTAGES

中正锅炉始终秉承"我们用心,只做锅炉"的发展理念,全面推进精益工厂的建设,实行信息化管理和6S现场管理。目前,中正锅炉在行业内率先建立了锅炉选型、设计、工艺、检验四大数据库,全面实行计算机信息化管理,搭建工业互联网平台。在MES生产执行系统的统一调配下,各个部门高效完成协同配合,促进各锅炉项目的有序推进。

ZOZEN Boiler always adheres to the boiler production and implements the concept of lean manufacturing and 6S site management. At present, ZOZEN Boiler has taken the lead in establishing four databases of boiler type selection, design, technology and inspection in the industry, fully implementing computer information management and building an industrial Internet platform. Each department can coordinate efficiently and promote the orderly advancement of various boiler projects with the Manufacturing Execution System.

为提高生产效率、保证产品质量,中正锅炉不但引进了国际先进的工艺设备,更自主研发了多项生产加工设备,拥有领跑国内的自动化生产线及生产专利技术。同时,独创下料数字化、焊接自动化、装配模具化的工艺标准,全过程严控锅炉品质,使每一台中正锅炉都成为凝结匠心之作。

In order to improve the production efficiency and assure the product quality, ZOZEN Boiler imports international advanced process equipment, independently develops a number of production and processing equipment, with leading domestic automated production lines and patented production technology. At the same time, the original digital blanking, automatic welding and assemble equipment are set to assure product quality in the manufacturing process.

无锡中正锅炉有限公司在全国各省份及德国、印尼、菲律宾、泰国、越南、乌兹别克斯坦等地建立了服务中心,为客户提供项目技术咨询、量身定制锅炉系统方案、完成安装指导等全方位的优质服务,切实为每一位用户排忧解难,实现企业降本增效的预期目标。

ZOZEN Boiler has set up service centers in domestic and abroad, such as in Germany, Indonesia, Philippines, Thailand, Vietnam, Uzbekistan and so on to provide customers with all-round services such as project technical consultation, customized boiler solutions, installation guidance, etc., to effectively solve problems for each user and achieve the expected goal of reducing costs and increasing efficiency.



精益工厂

LEAN MANUFACTURING

FACTORY



03 | www.zozen.com | 04

产品简介 PRODUCT INTRODUCTION

SZS系列燃气(油)锅炉是无锡中正锅炉有限公司自主研发设计的全自动水管锅炉,采用双锅筒、 纵置式、室燃D型布置结构,配有国内外先进的燃烧器。锅炉运行自动化,燃料经燃气管路进入燃烧器, 经燃烧器点火燃烧形成的火焰在全膜式水冷壁炉膛内燃烧,并通过水冷壁传递辐射热,经炉膛换热后 的高温烟气转向进入上、下锅筒间的对流管束区,经对流换热后,进入节能器、冷凝器,使烟气温度降 到经济排烟温度,最后进入烟囱排向大气。

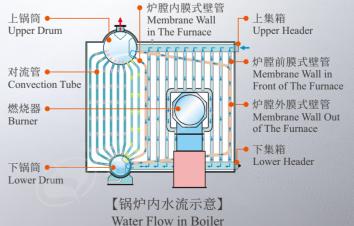
该系列产品燃料适应广,可适合天然气、沼气、煤气、柴油、重油、石化装置尾气、工业废气等多种 燃料,并可实现多种燃料混合燃烧,具有安全可靠、高效率、节能环保、维护方便、经久耐用、全自动智 能控制等特点。经特检院热能测试中心能效测试,各项性能指标均高于设计要求。同时,国家权威部门 环保测试结果显示, NOx已全面实现超低氮排放, 达到国内外先进水平。

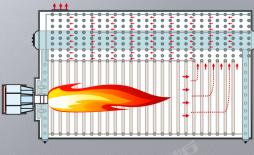
ZOZEN SZS series gas/oil-fired boiler is a kind of automatic water tube boiler. It is designed and developed by ZOZEN Boiler. The boiler adopts the double drum horizontal design with the chamber combustion D-type structure. It can be equipped with the advanced burner. The boiler can be operated automatically. The fuel gas enters the burner through the gas pipeline, and it is ignited by the burner to form the flame. The flame is burning in the membrane cooling wall furnace and the radiant heat is transferred by the cooling wall. After heat exchange in the furnace, the high-temperature flue gas goes into the convection tube bank area between the upper and lower drums. After heat convection, the flue gas enters the economizer and condenser, and the temperature is reduced to the economical exhaust temperature. Finally, it enters the chimney and is discharged into the air.

There are many kinds of fuels that can be suitable for the SZS series boiler, for example, the natural gas, biogas, coal gas, diesel oil, heavy oil, flue gases of petrochemical plants and industrial waste gas, etc. The mixed combustion of various fuels is also available. This series of products has the characteristics of safety, reliability, high efficiency, energy saving and environmental protection. It also features convenient maintenance, long service life and intelligent automatic control and so on. Tested by the authorized agency, all performance indexes are higher than the design requirements. The environmental protection test results of national authorities show that NOx has achieved ultra-low nitrogen emission in an all-round way, which reaches the advanced level at home and abroad.

结构示意图

STRUCTURE DIAGRAMS





【锅炉内烟气示意】 Flue Gas Flow in Boiler

产品优势

PRODUCT ADVANTAGES

人孔. 检查门

Manhole/Inspection door

- 上下锅筒前后布置有人孔,锅炉后部布置有检查门,打开方便,利于用户检修和清理内外部。
- Manholes are arranged on both sides of the boiler drums, and inspection doors are arranged at the rear of the boiler, which is convenient for users to inspect and clean the boiler inside and outside.

炉体保温

■ 采用优质的硅酸铝纤维,再用耐火泥保温,炉体温度控制在45°C以下,有效控制热损失。

Thermal insulation of the boiler

 Good quality alumina silicate fiber and fire clay insulation are used. The boiler body temperature is controlled below 45°C, which effectively controls the heat loss

安全装置

Safety device

- 锅炉布置有防爆门和火焰探测器,运行安全可靠。
- The boiler has explosion door and flame detector for safe and reliable operation.

锅炉油漆

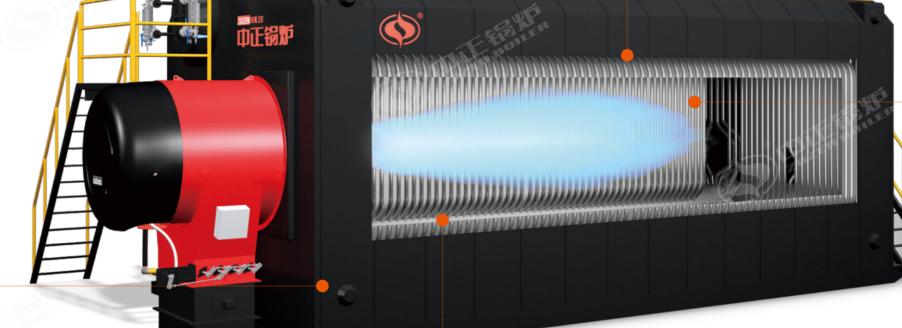
Boiler paint

- 漆膜的厚度至少可达150um,在运输过程中可有效防止海水腐蚀表面;
- 喷砂处理之后,采用高品质油漆和汽车喷漆技术,完成4层油漆和1层清漆的喷涂,具备出色防腐蚀性能的同时,锅炉外观更有质感。
- The paint film can be at least as thick as 150um, it effectively prevents seawater corrosion during transportation.
- After sandblasting, 4 layers paint and 1 layer varnish are sprayed with high quality paint and automobile painting technology, to reach excellent anti-corrosion performance and better boiler appearance.

燃烧室

Combustion chamber

- 由于燃烧室采用了全膜式水冷壁结构, 且采用微正压燃烧,无串烟问题,运行环 境无污染。
- The boiler adopts full-membrane wall combustion chamber, with pressurized firing without smoke mixture and pollution.



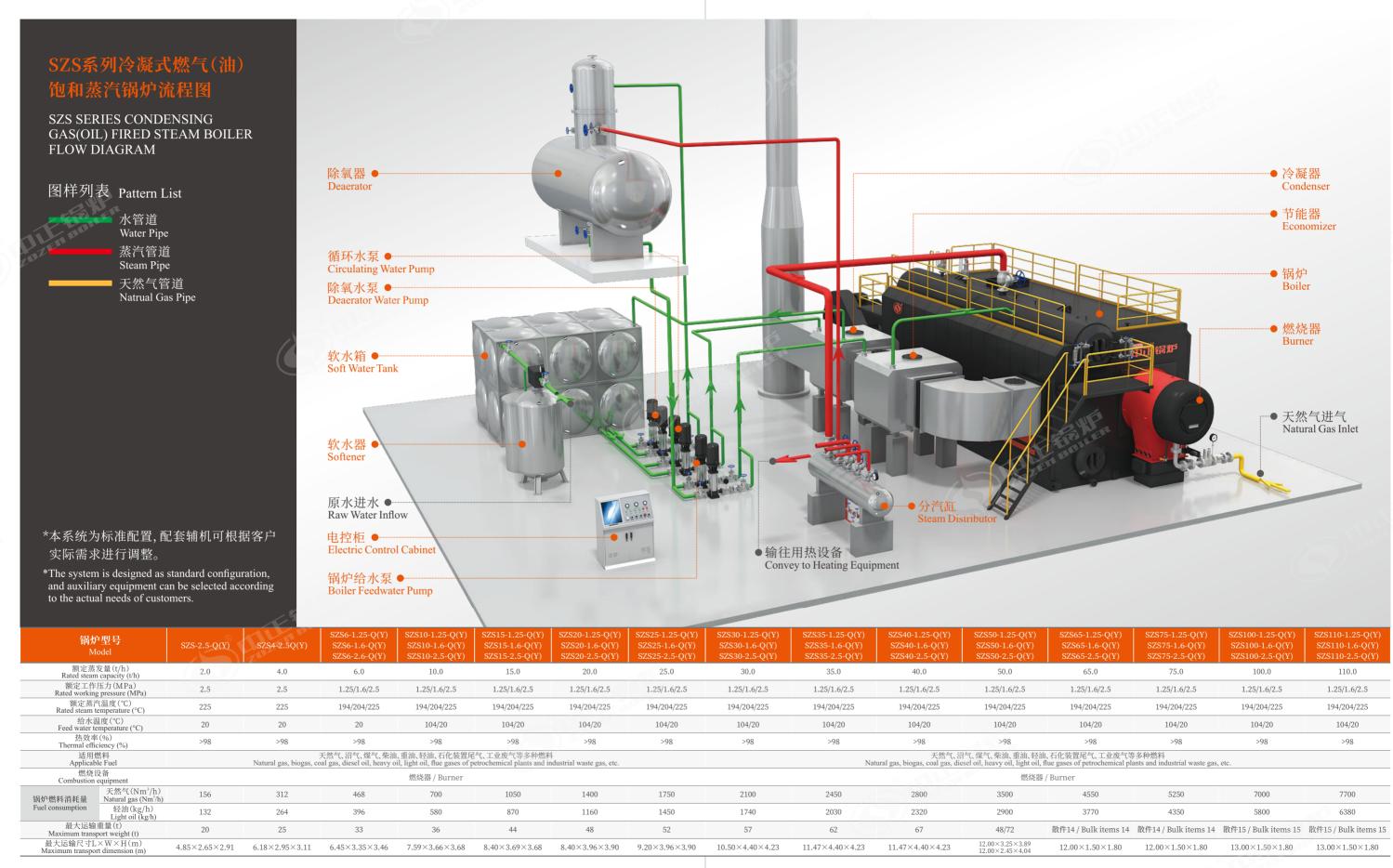
膜式结构

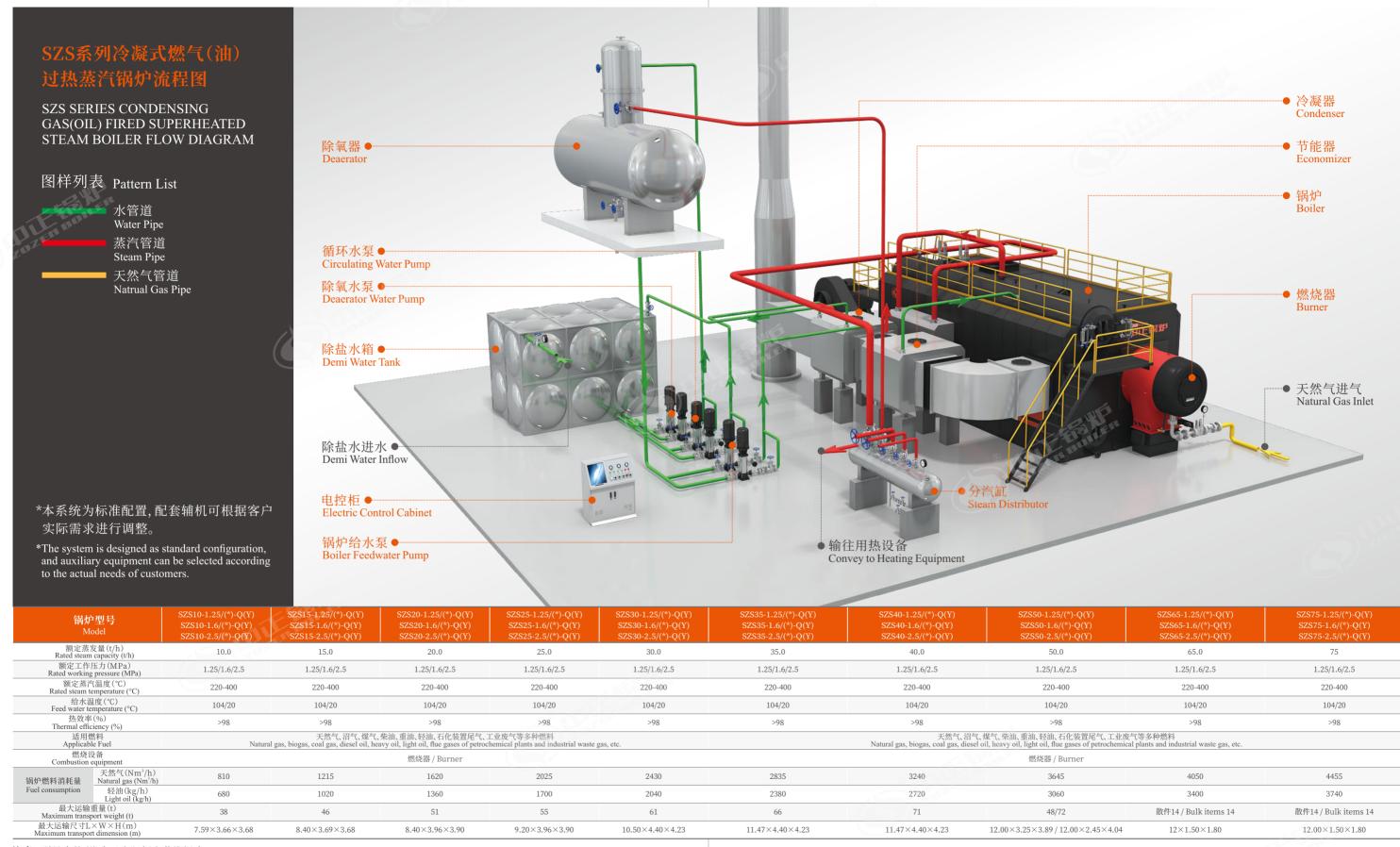
Membrane wall structure

- 全膜式壁结构D型布置。
- 上、下锅筒对流管束形成对流受热面,并保证锅炉整体向两端膨胀。
- 燃烧室采用窄间距管膜式水冷壁, 具有良好的气密性, 减少热损失, 提高锅炉热效率的作用。
- 锅炉本体的前后墙全部采用膜式结构,大大地提高了前后墙的使用寿命,确保使用寿命20年以上。
- 锅炉炉体两侧膜式壁和锅筒间的密封全部采用梳形板, 杜绝了耐火混凝土密封导致冷凝水及燃气泄漏的问题。

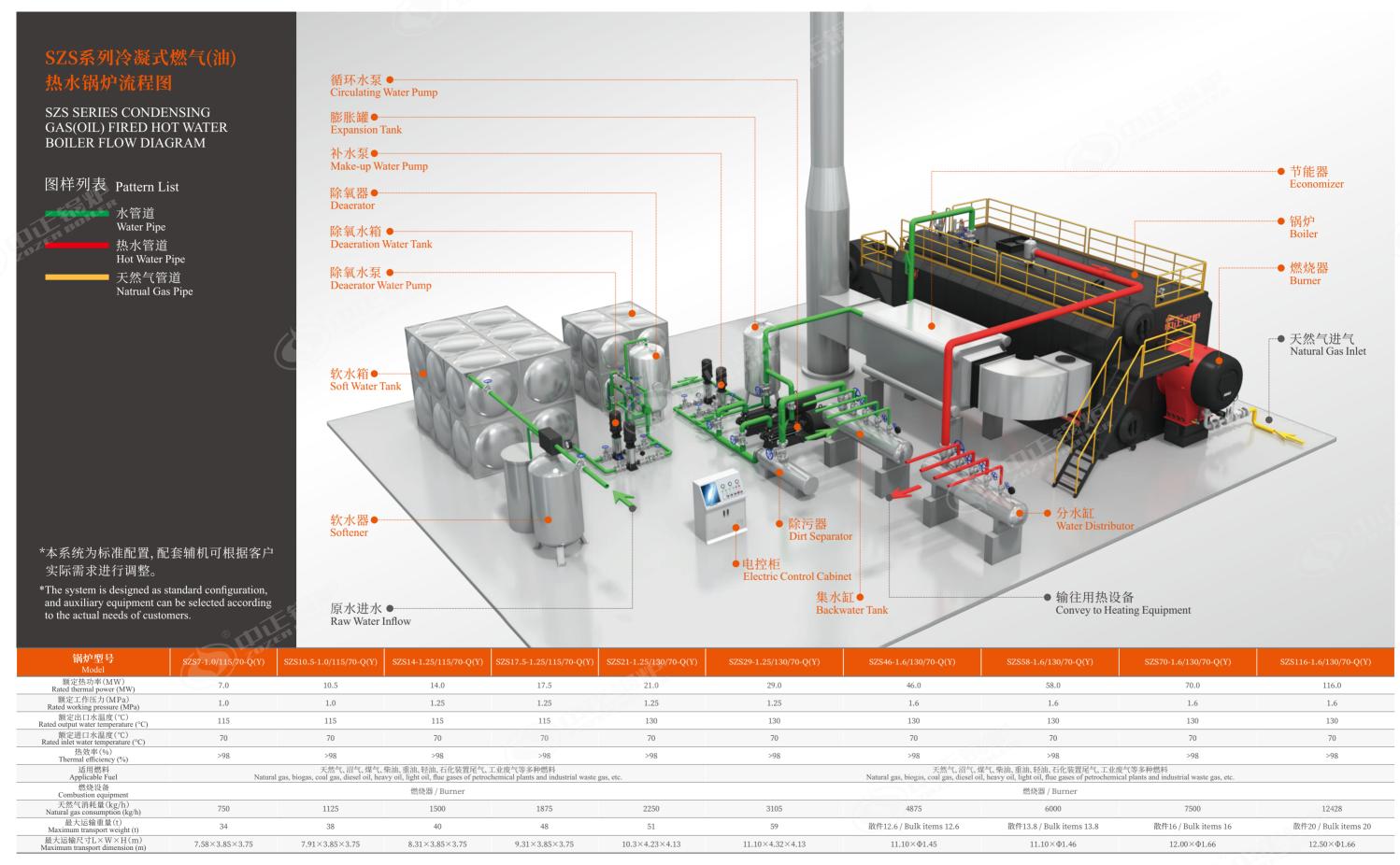
- D-type arrangement with full membrane wall structure.
- The convection tube bundles of the upper and lower drums form the convection heating surface and ensure that the whole boiler expands horizontally to sideways.
- The combustion chamber uses narrow distance tube membrane wall which has good air tightness. It reduces heat loss and increases boiler thermal efficiency.
- Membrane structure of the front and rear wall is used for boiler body, which highly increased their service life to over 20 years.
- The comb-shaped plates are used as the sealing between both sides of the boiler body and the drum, which avoids the leakage of condensed water and gas caused by refractory concrete sealing.

n7 | www.zozen.com | n8





注意: 型号中的(*)表示实际额定蒸汽温度。 Note: (*) in the model indicates the actual rated steam temperature.



锅炉物联网解决方案

IOT SOLUTION FOR BOILERS

物联网系统采用分层结构设计, 共分为三层: 数据采集层(M BOX)、云平台(M SERVER)、应用层(MYZT应用系统)。

IOT system is divided into three layers: data acquisition layer(M BOX), cloud platform(M SERVER), and application layer(MYZT application system).



▶设备监控子系统

通过PC、APP、大屏实时监控锅炉整体运行状态,实现故障报警、视频监控的实时上传。

运行状态: 开关机状态、目标压力、目标水位、目标温度

设备分布:整体设备运行情况、设备地理位置。

炉体参数:炉膛温度、水位、压力、节能器-进出水温度、冷

凝器-进出水温度等。

运行参数: 给水流量、蒸汽流量、氧含量等。

辅机参数: 燃烧输出状态、变频器输出频率等。

环保参数: 大气污染物(SOx、NOx、颗粒物等)指标数据。

操作日志: 系统对该设备所有操作记录。

▶专家管理子系统

对锅炉运行期间常见问题及处理措施,建立锅炉专家管理知识库,通过系统的客服中心提升售后工作服务质量。

预警设定: 确定参数以及触发预警的阈值, 形成预警条件, 确定预警条件下适用的项目(设备)。

应急预案: 对常见故障给出出现问题的原因以及应急处理预案, 发送故障之后可自动推送相关管理

预警检验:通过统计每条预警机制的年(季度)触发次数,以及现场实际反馈情况,对预警条件以及应急预案做反向检验。

▶ Equipment monitoring subsystem

The overall operation status of the boiler is monitored in real time through PC, app and large screen, so as to realize the real-time upload of fault alarm and video monitoring.

Operation status: on/off status, target pressure, target water level, target temperature etc.

Equipment distribution: overall equipment operation and geographical location.

Boiler specification: furnace temperature, water level, pressure, outlet and inlet water temperature of economizer and condenser etc.

Operation specification: feed water flow, steam flow, oxygen content etc.

Auxiliary specification: combustion output status, frequency converter output frequency etc.

Environmental protection parameters: index data of air pollutants (Sox, NOx, particulate matter etc).

Operation log: records all operations of the equipment.

▶ Expert management subsystem

For common problems and treatment measures during boiler operation, establish boiler expert management knowledge base, and improve the after-sales service quality through the system customer service center.

Alert settings: determine parameters and thresholds to trigger alerts to form alert conditions, and determine applicable items (equipment) under alert conditions.

Emergency plan: give the causes of common faults and emergency treatment plan, and automatically push the faults to relevant management personnel.

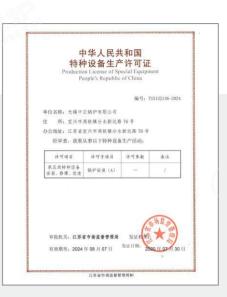
Early warning inspection: conduct reverse inspection on early warning conditions and emergency plans by counting the annual (quarterly) trigger times of each early warning mechanism and the actual feedback on site.

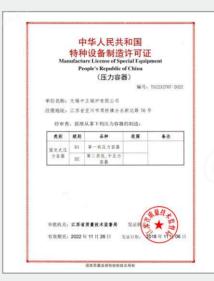
荣誉&资质

HONOUR & QUALIFICATION



















15 | www.zozen.com | 16

荣耀客户

HONOUR CUSTOMERS













































































































每一台锅炉都凝结匠心

EVERY BOILER CONTAINS INGENUITY

下料数字化 Blanking Digitization

数字化确保了零组件的高加工精度,是锅炉焊接和装配的质量保证。目前中正锅炉拥有先进的数控化设备600台套,钢板下料、卷圆、管板钻孔等关键制造环节均采用了先进的数控加工工艺,减少组装应力,延长锅炉使用寿命。

Digitization ensures high machining accuracy of parts and components and is the quality assurance of boiler welding and assembly. At present, ZOZEN boiler has 600 sets of advanced numerical control equipment. Advanced numerical control processing technology is adopted in key manufacturing processes such as steel plate blanking, rolling and tube plate drilling, so as to reduce assembly stress and prolong the service life of the boiler.

焊接自动化 Welding Automatization

大量进口自动焊接设备的引进,实现了从锅筒、膜式壁、蛇形管到钢架等主要部件焊接的自动化,并通过严格把控焊前处理和坡口尺寸,使焊缝质量有了可靠保障。同时,对所有纵、环焊缝进行100%的射线探伤。

A large number of imported automatic welding equipment are introduced to realize the welding automatization of main components from drum, membrane wall, serpentine pipe to steel frame, and ensure the weld quality by strictly controlling the pre-welding treatment and groove size. At the same time, 100% radiographic inspection shall be conducted for all longitudinal and circumferential welds.



装配模具化 Assembly Modularization

克服或减少人为因素对产品质量的影响,是提高锅炉制造工艺水平的重要手段。针对产品的装配环节,中正锅炉实现了装配的模具化、标准化,减少传统划线装配的加工手段,杜绝划线差错,保证锅炉产品品质如一。

Overcoming or reducing the influence of human factors on product quality is an important means to improve the level of boiler manufacturing process. Aiming at the product assembly link, ZOZEN boiler realizes the modularization and standardization of assembly, reduces the processing means of traditional lineation assembly, eliminates scribing errors, and ensures the consistent quality of boiler products.

信息化管理 Management Informatization

在行业内率先推行信息化管理,实现从研发设计、生产制造、质量检测、售后服务等整个流程的信息化全覆盖。在提升锅炉品质的同时,进一步提高服务品质,为每一位用户建立锅炉项目档案,让服务链贯穿锅炉项目的整个生命周期。

Take the lead in implementing information management in the industry to achieve full information coverage of the whole process from R & D design, production, manufacturing, quality inspection, after-sales service and so on. While improving the boiler quality, ZOZEN further improves the service quality, establishes boiler project files for each user, and lets the service chain run through the whole life cycle of the boiler project.





研发实力

R & D STRENGTH

技术创新是企业发展的根本动力。中正锅炉与上海交通大学、西安交通大学等高校和科研院所开展深入合作,建立了密切的合作关系,构建了完整的研发体系。同时,中正锅炉持续加大专业技术人才的引进和研发资金的投入,组建了行业一流的研发团队,坚持走产学研相结合的可持续发展道路,坚持把技术研发能力作为企业核心竞争力来培育。

无锡中正锅炉有限公司凭借专业化的技术研发系统,经过反复的试验与论证,有效提高了各系列锅炉产品的综合性能。截至目前,中正锅炉研发出的科研成果已获得三十余项国家专利,尤其是中正锅炉在冷凝技术和清洁燃烧技术领域的探索更是得到了社会各界的肯定,为行业创新树立了典范。

Technological innovation is the source for enterprise development. ZOZEN Boiler has carried out in-depth cooperation with Shanghai Jiao Tong University, Xi'an Jiao Tong University and other universities and research institutes, establishing a close cooperative relationship and building a complete R&D system. At the same time, ZOZEN Boiler has continuously increased the introduction of professional and technical personnel and the investment of R&D funds, setting up a first-class R&D team in the industry, adhering to the sustainable development road of combining with Industry-University-Research, and insisting on cultivating technology R&D capability as the core competitiveness of enterprise.

With the professional technology research and development system, ZOZEN Boiler has effectively improved the comprehensive performance of each boiler product through repeated tests and operations. Up to now, the scientific research achievements developed by ZOZEN Boiler have obtained more than 30 national patents, the exploration in the field of condensation technology and clean combustion technology has been recognized by all walks of life, which sets the example of innovation for the industry.



服务承诺 SERVICE GUARANTEE

四全服务体系,中正定义行业服务新标准

从锅炉方案到售后支持, 全天候、全过程、全方位、全身心的服务体系为客户 事业保驾护航。



Four "all" service system, ZOZEN define new standard of industry service.

From boiler plan to service support, all day, all aspects, all directions and all heartily escorts the cause of customer.





12个月内免费维修Free maintenance within 12 months



24小时热线待命 24-hour hotline standby



365天全年无休 365 days all year round

21 | www.zozen.com | 22