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燃煤热水锅炉

Coal-fired Hot Water Boilers



无锡中正锅炉有限公司

WUXI ZOZEN BOILERS CO.,LTD.

地址：江苏无锡宜兴周铁镇分水新达路76号

Add : No. 76 Xinda Rd., Fenshui, Zhoutie Town, Yixing City,
Jiangsu Province, China

电话/Tel : 0086-510-68991000

传真/Fax : 0086-510-68991001

服务热线/Service Tel : 400-118-7088

邮箱/E-mail: js@zzgl.cn

网址/Website : <http://www.zzgl.cn>

邮编/P.C. : 214262



www.zzgl.cn

公司介绍

无锡中正锅炉有限公司是中华人民共和国质量监督检验检疫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，BRⅡ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12万平方米，是一个具有年产12000蒸吨锅炉生产能力的现代化生产企业，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。

公司拥有一流的生产工艺装备，检测手段齐全，主要设备有：蛇形管生产线、数控盘管生产线、膜式壁生产线、纵环缝自动焊接生产线、钢架自动焊接生产线、数控等离子（火焰）切割机、数控锅筒钻、高速数控平面钻、高速集箱数控钻、100mm三辊数控万能式卷板机、相贯线数控切割、CNC、机器人焊接设备、Φ168数控立体弯管设备、4轴数控弯管机、3维激光切割机、管端成型设备、100T万能材料试验机、金相显微镜、射线探伤仪器、硬度计、光谱分析仪大型热处理炉、喷砂除锈房和喷漆烤漆房等等。

无锡中正锅炉有限公司全面实行计算机信息化管理和6S现场管理。目前主要产品包括工业锅炉、有机热载体锅炉、大型热水锅炉、电站锅炉、余热回收装置（HRSG）、特种余热锅炉、生物质锅炉、压力容器等系列。YLW系列和YY(Q)W(L)系列系列燃煤、燃生物质、燃气有机热载体锅炉、DZL型单锅筒纵置式链条炉排蒸汽和热水锅炉、SZL型双锅筒纵置式链条炉排蒸汽和热水锅炉、WNS型卧式三回程背式蒸汽和热水锅炉、SZS型双锅筒纵置式燃气蒸汽和热水锅炉、SHL型双锅筒横置式链条炉排蒸汽和热水锅炉、循环流化床蒸汽和热水锅炉、与西安交通大学联合研究开发的DHL型角管式大型热水锅炉、与北京之光锅炉研究所技术合作开发的DZL型新型水火管大型热水锅炉、拥有自主知识产权的DHL型单锅筒横置式P型大型热水锅炉、10-220t/h中温中压及高温高压电站锅炉、燃气-燃气轮机联合循环发电余热回收装置、金属行业、化工行业等各行业的余热锅炉、生物质燃料锅炉等400多个品种规格。

“不偏之谓中，中者天下之正道：立天下之正位，行天下之大道。”诚信与敬业为立足市场之根本，技术与质量为领先市场之前提，服务与指导为巩固市场之关键。中正人以用户利益为己任，服务于社会。

COMPANY INTRODUCTION

Wuxi Zozen Boilers Co., LTD is the government designated enterprise of A-grade boilers, BRⅡ. grade pressure containers and ASME "S", "U" manufacturing license that is approved by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China. The Company, situated at the side of beautiful Lake Taihu at Wuxi covering an area of 120,000M², is a modern enterprise with the yearly production capacity of 12000 steam ton. The company has certified for the certificate of ISO9001 quality assurance system, as well as the AAA-grade credit enterprise. It has been evaluated as the Company of Honoring the Contract & Keeping Commercial Integrity, high-tech enterprise, and excellent civil-run enterprise of Wuxi city & Jiangsu Province. Therefore, the Company relies on its professional experts, strict business management and fine production equipments, to manufacture the "ZOZEN" brand boilers and enjoy the reputation in whole China and even in the whole world.

The company has advanced production processing equipment and complete testing method. The main processing equipment are serpent tube line, CNC coiler production line, membrane wall line, vertical & circle welding line, steel frame automatic welding line, digital control plasma (flame) cutting machine, CNC drum drilling, high-speed CNC flat surface drilling, high-speed header digital control drilling, 100mm three roller CNC universal binder, intersecting lines digital control cutting, CNC, robot welding equipment, Φ 168 CNC three-dimensional bending equipment, 4 axis NC tube bending machine, 3D laser cutting machine, pipe end forming equipment, 100T universal material testing machine, metallurgical microscope, x-ray detector, hardness tester, spectrum analyzer, large scale heat treatment furnace, sand blasting and painting etc.

The company comprehensively implements computer information management and 6S site management. The main products include series of: industry boiler, organic heat carrier boilers, hot water boilers, power plant boilers, HRSG, special heat recovery boilers, Biomass boilers and pressure vessels. There are more than four hundred varieties and specifications, i.e. the steam boiler and hot water boiler of YLW series and YY(Q)W(L) series coal fired, biomass fired, gas fired organic heat carrier boiler, DZL type single drum with chain grate, the steam and hot water boilers of SZL type double drum with chain grate, the WNS type horizontal three return back steam and hot water boiler, the SZS type double drum oil/gas combustion D-type steam and hot water boilers, steam and hot water boilers of SHL type horizontal arranged double drum with chain grate, the circulating fluidized bed steam and hot water boilers designed by Tsinghua University, big size DHL corner tube hot water boiler jointly developed with Xi'an Jiao Tong University, the new DZL type water-fire tube (hybrid) hot water boiler jointly developed with the Boiler Research Institute of Beijing Light, the DHL type single horizontal drum P-type large hot water boilers which was self-developed and owns intellectual property right, 10-220t/h medium and high temperature/pressure power plant boilers, combined cycle power generation with waste heat recovery device, the waste heat boilers for the industries of metal, chemical etc. and biomass fuel boilers etc.

The "ZOZEN" people always respect sincerity and business reputation as our marketing principle, and always pursue the market-leading for our technology and product quality, as well as perfect our service and sales guide as the key for consolidating our markets as well. "ZOZEN" people shall abide the aim of protecting the interest of clients as our liability so as to serve the society by our heart!



DHL

系列水管热水锅炉

series water pipe hot water boilers

概述:

近年来随着市场经济的快速发展,人们的生活水平不断提高,其环保意识也不断增强。国家提倡大力发展环保节能型产品。我公司推出单锅筒横置式强制循环链条炉排水管热水锅炉。这种型式的锅炉在国内已得到广泛推广和使用,是目前集中供热的理想设备。

本锅炉系强制循环、单锅筒横置式型布置的高温热水锅炉,采用分层给煤装置及横梁式不漏煤链条炉排的燃烧设备。炉膛的四周布置及中部均布置膜式水冷壁管,以吸收炉膛内高温烟气的辐射热量。在炉膛出口布置由后水冷壁管拉稀的凝渣管,用以进一步吸收辐射热量。为使煤得到充分燃烧并保证燃烧效率,前拱对炉排的遮盖率为25%;后拱对炉排的遮盖率为57%,使之与炉排配合能达到较好的效果。由于该炉较宽,在尾部并列布置两组钢管式蛇形管对流受热面,对流受热面之后并列布置两组空气预热器,烟气在管内纵向冲刷管束,空气在管外横向冲刷。空气预热器置于钢架外边的操作平台上。在炉膛内,采用了科学的前后拱搭配,使得锅炉燃烧效率高,炉膛内部热负荷大,炉排采用无级调速,可以满足用户对负荷的任意调节,而不影响燃烧的热稳定性。

根据用户需要,本锅炉可采用双层布置或单层布置。

INTRODUCTION:

In recent years, with the rapid development of marketing economy, people's rising living standard, the environmental awareness is also growing. The state advocates to develop environmentally friendly energy-saving products. Our company introduced a single drum horizontal chain grate forced circulation hot water boiler. This type of boiler has been widely used in the country, and is ideal for central heating supply.

The boiler, a single drum horizontal type forced circulation hot water boiler, adopts tiered coal feeder and trapezoidal style chain grate combustion equipment. Arrange the membrane wall tubes around and in the center of the furnace, to absorb the radiation heat of high temperature gas in the furnace. Slag screen shall be arranged at the outlet of the furnace, to further absorb heat radiation. In order to fully burn the coal and to ensure combustion efficiency, cover rate of front arch to the grate shall be 25%, the cover rate of rear arch to the grate shall be 57%, to achieve better effect. As the boiler is a little wider, arrange two steel tube type snake tube convection heating surface, after which set two air preheater. Flue gas in the pipe parallel scrub the tube bundle and air cross-flow scrub outside the pipe. The air preheater shall be allocated at the operation platform outside the steel support. The furnace has used the front arch and the rear arch to ensure the high boiler combustion efficiency and the grate heat loads of furnace. The grate adopts stepless speed regulation, meeting any regulation of load and not affecting the thermal stability of combustion.

According to user's requirements, this boiler shall use double-layer or single layer.



锅炉特点

BOILER FEATURES

停电保护

●锅炉上部布置了锅筒，增加了锅炉水容积，锅炉在停电后可满足锅炉水冷壁冷却需要。

●为防止锅炉在运行过程中遇到突然停电可能出现水击，甚至炉管超温等现象，采取以下措施：

——水冷壁每个回路均有钢管与锅筒相连，一旦停电，强制循环则转化为自然循环方式了；

——炉内水冷壁管采用直径为Φ60mm和Φ73mm的管子，突然停电以后，单根管子可以形成自身的自然微循环，使管壁在一定时间内不超温；

——在突然停电时，根据热水压力变化，适当打开一部分放气阀，同时要求在锅炉系统上保证锅炉内热水压力不低于0.5MPa，在此压力下热水的饱和温度不低于150℃，这样可使锅炉仅有少量锅炉水在炉内余热作用下而汽化。由于锅筒在锅炉顶部，所以其它受热面管子始终处在有水的状态，故在突然停电时锅炉是安全可靠的。

Power failure protection

●The upper part of the boiler set drum, increasing the volume of the boiler water, meeting the cooling needs of boiler water wall after power failure.

●In avoid of the sudded waterhammer or even overheating of tubes while coming across power failure in operation,take the following measures:

——There are steel pipes connecting with boiler drum in each circuit of water wall. Once power failure, the forced circulation shall be changed to natural circulation;

——The tubes of water wall in the furnace are with a diameter of Φ60mm and Φ73mm. After a sudden power failure, a single tube can be formed of its own natural micro-circulation, so that the wall shall not be overheated in a certain period of time;

——When power failure, according to the pressure of hot water, properly open some vent valves. Meanwhile the pressure of hot water shall not be over 0.5 Mpa in boiler system. Under this pressure, the saturated temperature of hot water shall not be over 150℃, which allows only a small amount of boiler water become steam. As the drum is at the top of boiler, there are still water in other water pipes, which makes it's safe in sudded power failure.

锅炉本体水流程

●给水 → 炉膛后水冷壁 → 两组蛇形管受热面 → 炉膛两侧水冷壁 → 水冷屏 → 炉膛前水冷壁 → 锅筒 → 锅炉出水

Boiler water flow

●Feed water → Rear water cooled wall of furnace → Two rows of snake tube heating surface → Two sides of water cooled wall of furnace → Water wall panel → Front water cooled wall of furnace → Drum → Effluent

水循环

●锅炉本体采用强制循环，水速较高，上升水速1.0-1.15m/s之间，下降水速1.1-2.0m/s之间。采用锅筒形式，增加锅炉水容量保障锅炉运行安全。

Water circulation

●Useing forced circulation, The water velocity of boiler is a little high, the rising water speed between 1.0-1.15m / s and the decline water velocity between 1.1-2.0m / s. The use of drum, increase the boiler water capacity to protect the safe operation of the boiler.

大炉膛设计

●使烟气在炉膛内停留时间加长，使飞灰、可燃气体得到充分燃烧，提高锅炉热效率。

●烟气在炉膛上升速度低，使其携带的飞灰量大大减少，降低锅炉原始排放浓度。

Large furnace design

●Make flue gas stay longer in furnace and make ash and combustible gas firing sufficiently to improve boiler heat efficiency.

●Decrease the flue gas rising speed in furnace to reduce the ash quantity and decrease boiler original emission concentration.

炉拱

●锅炉拱型采用西安交通大学国家“七五”攻关项目的科技成果(后拱出口采用直角炉拱)，保证劣质煤燃烧，扩大锅炉煤种适应性。

Furnace arch

●This boiler arch adopts scientific and technological achievements of national "Plan" research project of Xi'an Jiaotong University (using rectangular furnace arch in the outlet of the rear arch), to ensure combustion of low-quality coal, and to improve boiler coal's adaptability.

炉排/Grate

●锅炉炉排采用横梁式炉排，提高运行安全性。同时炉排结构合理与良好调风性能，保证燃烧完全，使机械不完全燃烧损失大大减少。

●Boiler grate shall be trabeated style,to improve operation safety. Meanwhile grate-structured and well-tuned wind performance ensure complete combustion, and much reduced the mechanical loss of incomplete combustion.

Π型布置

●采用成熟Π型布置，锅炉布置紧凑，体积小，占地面积少，减少锅炉房投资。

Π arrangement

●Use mature Π-type arrangement, compact boiler layout, small size, less space requiremnet, reducing investment in the boiler room.

锅筒

●锅筒布置在炉膛上方，并与各上集箱之间有停电保护管相通，自身保护比较好。

Drum

●Drum arranged above the furnace, and connected headers with power failure protection pipe, thus could protect themselves better.

对流面、水冷壁

●锅炉受热面的布置充分利用了锅炉的空间，炉膛四周布置膜式水冷壁，连接管布置在锅炉体外。对流受热面采用蛇形管结构，进出口集箱在锅炉外面，安装、检修方便，积灰少，清灰方便。

Convection surface、Water wall

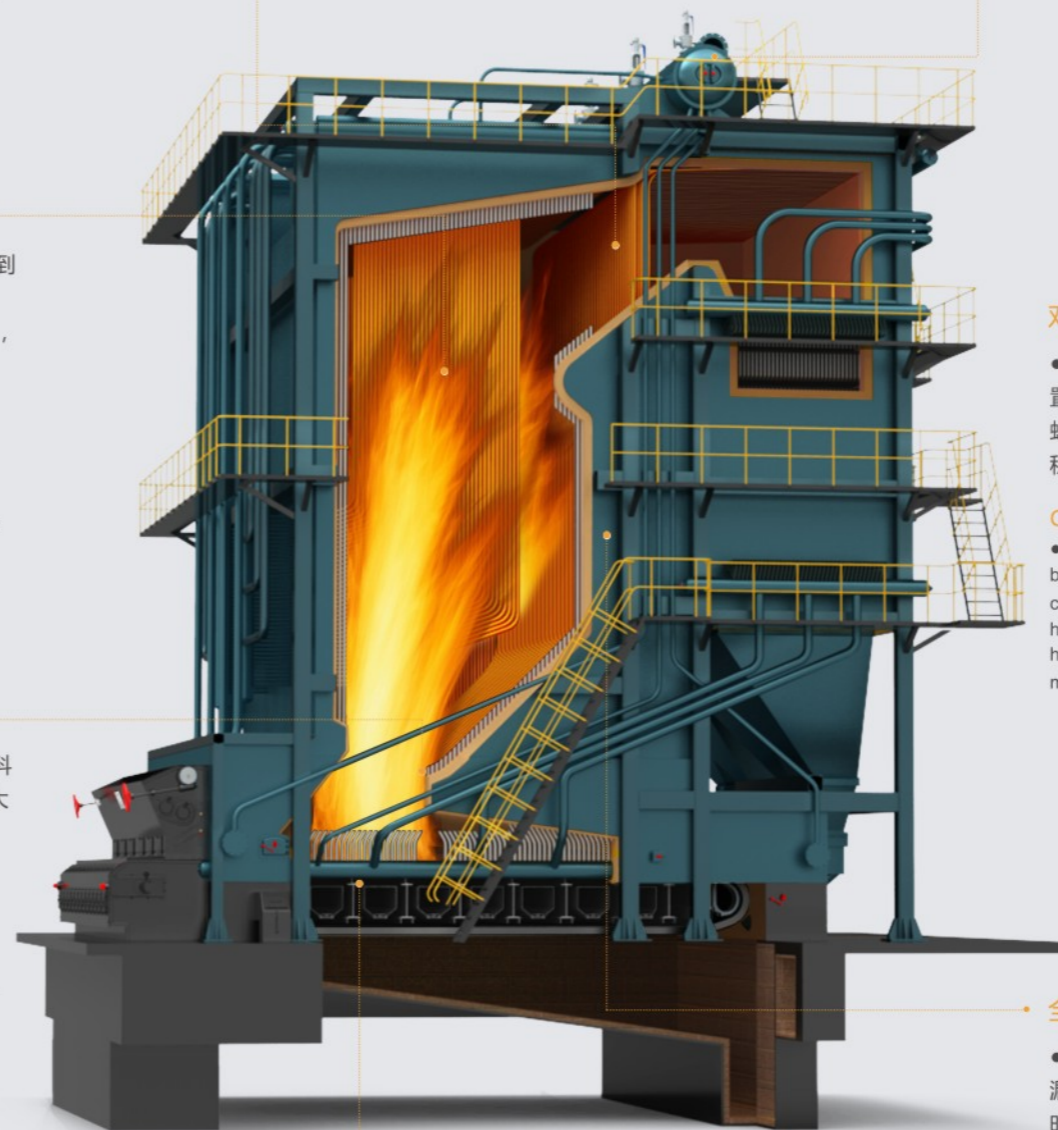
●The arrangement of boiler heating surface has fully used boiler room. Around the furnace set the membrane wall, and connecting tubes arranged outside the boiler body.Convection heating surface uses snake tube structure. Inlet and outlet headers are set outside of the boiler, easy for installation and maintenance,less fouling, convienient for cleaning.

全护板结构

●锅炉采用全护板结构，炉膛为全膜式壁，密封性好，锅炉漏风少，锅炉排烟热损失大大减少，提高锅炉热效率。同时减少锅炉烟气排放量，减少锅炉引风机的电耗。

Full shield structure

●Boiler adopts full shield structure, and the furnace using the whole membrane wall, sealing, and less air leakage, thus heat loss due to exhaust gas is much reduced, boiler thermal efficiency is improved, and at the same time reducing the boiler flue gas emissions and boiler fan power consumption.



DHL系列水管热水锅炉参数表

PARAMETER OF DHL SERIES WATER PIPE HOT WATER BOILER

参数项目 Item	锅炉型号 Model	DHL46-1.6/150/90-AII	DHL58-1.6/150/90-AII	DHL70-1.6/150/90-AII	DHL91-1.6/150/90-AII
额定热功率(MW) Rated thermal power		46	58	70	91
额定工作压力(MPa) Rated working pressure		1.6	1.6	1.6	1.6
额定出口水温(°C) Rated output water temperature		150	150	150	150
额定进口水温(°C) Rated imported water temperature		90	90	90	90
受热面积(m ²) Heating area	本体 Boiler Proper	2328	2901	3625	4637
炉排面积(m ²) Effective area of grate		58.5	71.6	87.7	116.0
适用燃料 Fuel available	设计煤种 Designed coal	AII	AII	AII	AII
	应用低位发热值(kJ/kg) Low heating value	17700	17700	17700	17700
锅炉燃料消耗量(kg/h) Fuel consumption		11265	14204	17142	22285
锅炉热效率(%) Thermal efficiency		≥83	≥83	≥83	≥83
最大运输尺寸L×W×H(m) Overall dimension of boiler assembled		9.52×2.00×1.70	11.10×2.00×1.70	12.70×2.00×1.70	14.40×2.25×1.90
锅炉主机安装后最大外形尺寸(m) Max outside dimension after installation of boiler		15.62×12.03×14.27	16.17×13.47×14.87	16.05×16.00×15.50	18.36×17.28×16.20
强制引风 Forced draft fan	型号 Model	G4-73-12 14D	G4-73-12 16D	G4-73-12 16D	G4-73-12 18D
	风量(m ³ /h) Flow rate	79944	108270	130390	169910
	风压(Pa) Wind pressure	2716	3653	3391	4518
	转速(r/min) Rotation speed	960	960	960	960
	电动机功率(kW) Electric motor power	90	185	185	315
诱导引风 Induced draft fan	型号 Model	Y4-73-11 20D	Y4-73-11 22D	Y4-73-11 22D	Y4-73-11 22D
	风量(m ³ /h) Flow rate	167130	214000	244670	320610
	风压(Pa) Wind pressure	3598	3545	4500	2392
	电动机功率(kW) Electric motor power	355	355	500	630
调速箱 Governor	型号/参数 Model / Parameter	ZJ60W	ZJ80W	ZJ80W	ZJ130W
	电动机功率(kW) Electric motor power	4	4	5.5	5.5



荣耀客户

HONOUR CUSTOMERS



说明: 1、上述风机只适宜海拔小于1000m, 大于1000m需修正; 2、最终数据以蓝图为准, 鼓、引风机型号和参数以设计院设计为准。
Note: 1、The fans mentioned above shall be used when altitude is less than 1000m. If altitude is more than 1000m, fans must be rechosen; 2、The terminal parameters shall be as per blueprint paper, and the model and parameters of forced draft fan and ID fan shall be as per the design of design institute.