Coal-fired Hot Water Boilers
Wuxi Zosen 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 site of beautiful Lake Taihu at Wuxi covering an area of 120,000㎡, is a modern enterprise with the yearly production capacity of 120,000 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 “Zosen” 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, 168 CNC three-dimensional bending equipment, 4 axis NC tube bending machine, 3D laser cutting machine, pipe end forming equipment, 100T universal material testing equipment, 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 YYQ(WJL) 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-tube boiler (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 “Zosen” 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. “Zosen” people shall abide the aim of protecting the interest of clients as our liability so as to serve the society by our heart!
DZL系列新型水火管热水锅炉
series new type water-fire pipe hot water boilers

DZL系列新型水火管热水锅炉是无锡中亚锅炉有限公司与北京之光锅炉研究所开展了全面的技术合作，引进了北京之光锅炉研究所新型（新型水火管热水锅炉、新型水火管蒸汽锅炉）水火管锅炉的全套技术，并聘请李之光教授担任技术总监。

DZL系列新型水火管锅炉，是博国内外水管和火管锅炉之长，针对我国工业锅炉量大，国广技术落后的现状，集国内大专院校、科研院所（所）的科研成果，而开发出来的换代产品。装置特点是：技术含量高，比现有的工业锅炉增加10项新专利，从而实现自动化、强化传热，水循环安全可靠，出力足，效率高，并且出力和效率终生不变；新型，是国内外所未有的新型炉型；有很好的环保效果和节能效果；对用户有显著的经济效益和社会效益。

DZL新型水火管锅炉是无锡中亚锅炉有限公司与北京之光锅炉研究所开展全面技术合作的产品。该新型水火管锅炉是采用北京之光锅炉研究所的新型水火管锅炉，由李之光教授担任技术总监。

DZL新型水火管锅炉在加强传热，水循环安全可靠，出力足，效率高，并且出力和效率终生不变；新型，是国内外所未有的新型炉型；有很好的环保效果和节能效果；对用户有显著的经济效益和社会效益。

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八大优点

出力足而且持续不变
- 因采用高效传热螺纹螺管并严格保证螺纹角度，因此锅炉出力相比旧式出力一般可翻倍提高出力8～15%；由于螺管传热面积大，锅炉正常运行时，螺纹段不存在积灰现象，因此锅炉出力与热效率不会随运行时间增长而有所下降，设备性能可持续运行出力和效率。

外形尺寸小，使锅炉房投资大幅度降低
- 因采用高效传热螺纹螺管，所以出水温度≤150℃的常量热水锅炉与容量较小的蒸汽锅炉的取消尾部受热面，使锅炉长度明显减少，而且锅炉高度在同容量锅炉中又明显降低，故外形尺寸最小，使锅炉房投资至少降低1/3。

突然停电无需专门保护
- 因热水采用混合循环，而且锅炉水容大，当突然停电时，无需采取专门保护措施，仅可防止受热面与锅炉介质因可能汽化而导致的损坏事故。

锅炉效率高
- 因采用高效传热螺纹螺管，使得锅炉内管不受冷空气影响，另外，因取消尾部受热面也使锅炉换入冷空气量减少，并减少散热损失，其次，热水采用混合循环，又取消了省煤器，故锅炉本体的水冷壁热损失甚小，不超过8.55%Pa，使系统循环倍率为大下降，其下降程度大于因采用螺纹螺管而使锅炉吸热能力损失的消耗量叠加，锅炉能再利用了富余的热量并提高了传热系数，又因为回水温度则锅炉热效率高达84%。

锅炉升温快
- 由于锅炉钢材与耐热、耐腐蚀材料总重量少于其它锅炉以及大量高效传热螺纹螺管设于锅筒介质中，而且近半半壁回流受热元件，故使锅炉升压时间显著缩短——约比普通锅炉短1/4。

安装可靠性切实保证
- 采用无依托装置式与螺旋螺管相配合结构，使螺管的弯管区热应力明显下降；由于螺纹螺管将内冷水接线置于管屏出口端，从而最大限度减少的温度差，使水冷壁温度的温差在正常水质条件下，不可能破裂，开裂，锅炉安装可靠性得到切实保证。

锅筒原始排渣浓度低
- 由于锅炉后部都放置水冷螺旋螺管，而且排渣容积大，因而确保锅筒排渣原始排渣浓度低于标准允许值。

安装简单
- 安装周期与安装简单性比钢筒水管锅炉约减少一半，一般从制造开始当年即可投入运行。

Large and constant force
- Since high efficiency heat conductive screw thread duct is used and the height of screw thread is guaranteed, the actual force of this boiler is 10%~15% than that indicated on nameplate. Since the speed of fuel is rational and the boiler can work normally, therefore, the duct is free of accumulated dust. The force of boiler and the heat efficiency will not reduce because of the extension of operation time. It has a ideal constant force and efficiency.

Outside-dimension size, the boiler chamber investment is largely reduced
- Since high efficiency heat conductive screw thread duct is used, then, various capacity of hot water boiler with the output water temperature 150℃ and the smaller capacity steam boiler can be free of tail heating box, and the length of boiler can be reduced largely. Also the height of boiler is rather short comparing with other boiler type with same capacity. Thus, the smallest outside dimension and the investment of boiler room reduce at least 1/2.

No need for special protection of power failure
- Adopt combination cycle because of hot water and because of the large volume of boiler, when the power fails, it is no need to take special protection measures. Therefore, damage of heating surface and media caused by vaporization can be prevented.

High efficiency of boiler
- Since the main combination heating surface-screw thread duct is equipped in shell, then cool wind will not come into the side of duct. Besides, since the removing of tail heating surface also reduce the quantity of cool, and heat dissipation is reduced. Besides, adopt combination cycle because of hot water, and economizer is not used. Thus, the water resistance of boiler body is less, which is no more than 0.05MPa, the energy consumption of boiler also reduced largely. The dropping value is obviously larger than the increasing value of fluid resistance loss because of application of screw thread duct. The tail of boiler is set with casting air preserver, which not only increase the adaptability of different type of coal and the complete burning of coal, but also reduce the discharge temperature, the operation efficiency of boiler is up to 84%.

Quick temperature rising of boiler
- The total weight of boiler steel material, heat resistance and insulation material are less than boilers, and large quantity of high efficiency heat conductive screw thread duct is equipped in shell, and almost half of shell surface is heated, thus, the time required by temperature rising is largely shortened, which is 1/3 less comparing with water boiler.

Safety and reliability
- Adopting protruding panel free structure together with screw thread duct, the thermal stress of duct of panel plate is obviously reduced; because the spraying of backwater of lower tank, the brisilting of front edge of side wall, and the reason of high temperature plate, it will not broke and cracked because the water cooling wall and high temperature panel plate are working under normal situations. The safety and reliability of boiler is ensured.

The initial dust discharge concentration of boiler is low
- Since rear part of hearth is set with dust separation steering chamber; and the volume of hearth is big, then the initial dust discharge concentration of boiler is lower than the allowed value of standard.

Easy installation
- Installation duration and installation costs are 1/2 of that of single water boiler, it can be put into operation from the year of manufacturing.