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超低氮冷凝蒸汽锅炉

ULTRA-LOW NOX CONDENSING STEAM BOILER



创新
INNOVATION



智能
INTELLIGENT



低氮
LOW NOx



高效
EFFICIENT



安全
SAFETY

中意合资·国际标准
SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

WNS** -1.25-Q (LNK)

超低氮冷凝蒸汽锅炉(前置空预)

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SINO-ITALIAN JOINT VENTURE
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超低NOx排放,改善空气质量,创造美好环境。
高效率回收烟气余热,节约燃气使用量,省气节能。
Ultra-low NOx emissions, improve air quality and create better environment.
Flue gas efficient recovery, natural gas saving.

超低氮冷凝蒸汽锅炉(前置空预)

ULTRA-LOW NOx CONDENSING STEAM BOILER

概述 / overview

超低氮冷凝蒸汽锅炉(前置空预),采用高效率低应力卧式湿背内燃烟气二回程结构,配前置高效空气预热器和节能冷凝一体机;圆弧形对开炉门设计,运用大炉膛全混合燃烧和高效螺纹烟管传热;首创低氮耦合,炉内独有四级低氮燃烧技术,全面抑制NOx生成;配置ABB变频器,意大利Cavallo卡瓦诺变频分体式超低氮燃烧器,7/10英寸液晶触摸屏与高性能PLC可编程控制器,实现锅炉NOx≤30mg/m³的超低排放标准。

Ultra-low nitrogen condensing steam boiler (pre-air preheating), using high efficiency and low stress horizontal wet back internal combustion gas two-return structure, equipped with pre-high efficiency air preheater and energy-saving condensing unit; Circular curved split door design, the use of large furnace full mixed combustion and high efficiency threaded smoke pipe heat transfer; The first low nitrogen coupling, the unique four-stage low nitrogen combustion technology in the furnace, comprehensively inhibit NOx generation; Equipped with ABB inverter, Italian Cavallo Cavanaugh variable frequency split ultra-low nitrogen burner, 7/10 inch LCD touch screen and high-performance PLC programmable controller, to achieve boiler NOx≤30mg/m³ ultra-low emission standard.

核心优势 / core advantage



热效率高达103%
Thermal efficiency up to 103%



蒸汽品质高,蒸汽干燥度达98%
High steam quality, steam drying degree of 98%



氮氧化物排放低于30mg/m³
Nitrogen oxide emissions are less than 30mg/m³



超低排烟温度,高效节能
Ultra-low exhaust temperature, high efficiency and energy saving



超长使用寿命
Long service life



超低氮变频比例调节燃烧技术
Ultra-low nitrogen frequency proportionally regulated combustion

性能特点

PERFORMANCE CHARACTERISTICS

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

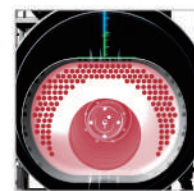


科诺超低氮冷凝蒸汽锅炉,采用高效率低应力卧式湿背内燃烟气二回程结构,将大量低温受热面布置在炉体受压区外,加大蒸汽空间提高蒸汽干燥度,降低锅炉热应力,避免锅炉本体内冷凝腐蚀,从而提高本体热效率。且注重顶层设计,将锅炉本体、空气预热器、节能冷凝一体机、Cavallo卡瓦诺变频分体式超低氮燃烧器、智能控制系统进行完美集成。

管路系统简单可靠,减少安装占地面积,烟气通道简洁流畅。低温冷凝极限回收燃料的同时,提升锅炉最大热效率高达103%,实现小于30mg/m³超低氮排放。

Kenuo ultra-low NOx condensing steam boiler is a two passes fire tube boiler with wet back, high efficiency and low stress. It increases the heat exchange surface on the 2nd pass and increases the steam drum for better steam dryness. Meanwhile it reduces the thermal stress, avoids the corrosion due to the condensation inside the boiler. The thermal efficiency of the body is also increased. The air-preheater and condenser are integrated on the top of the flue gas exit. Cavallo ultra-low NOx dual-bloc burner is adopted, together with the state-of-the-art control system.

The system is very compact, reducing the installation area. Thanks to the air-preheater and condenser, the heat efficiency is up to 103%, and guarantees 30mg/m³ NOx emission.



二回程结构设计

锅炉优化设计为跑道型回燃室,二回程管束,有效增大蒸汽空间,提高蒸汽干燥度。

Two Passes Design

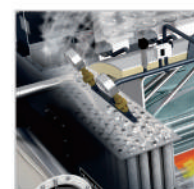
The optimized two passes design enlarged the heating surface on the 2nd pass and steam drum, which provides a better steam quality.



意大利Cavallo卡瓦诺悬臂式风机及不锈钢消音器体积小、重量轻、风压/风量稳定;增加了消音装置,超长寿命、超低噪音。

Cantilever Air-fan and Stainless Steel Silencer from Cavallo Italy

Small size, lightweight, stable air pressure and flow, stainless silencer to decrease noise emission.



前置空气预热器

低温情况下可快速启动,迅速加热空气;换热强度高,抗腐蚀性强;双向纯逆流换热模式,瞬间提高空气温度,加速燃烧,燃烧效率高达99.99%。

Air-preheater

At low temperature, it can fast start to heat up the air; Good heat exchange and anti-corrosion ability; Counter-flow heat exchange, efficient heat transfer to heat up the air and accelerate the combustion. Combustion efficiency is up to 99.99%.



PLC智能控制器

采用高分辨率、高存储空间、大屏液晶显示触摸屏,与高性能可编程PLC控制器完美匹配;具备一键启、停功能,具备高低水位/超压/超温报警等连锁安全防护功能,可有效实时记录锅炉运行状态,具有标准的RS485接口,MODEBUS通讯协议,良好的人机对话功能,全面监控锅炉运行安全。

PLC Control System

High resolution touch screen, large storage, compact with PLC controller; Start/stop button; with water level/ pressure / temperature alarm and interlock functions, it can effectively record the operating state of the boiler and monitor the safety of the boiler. Can communicate with upper control system or DCS with Modbus RS 485 protocol.

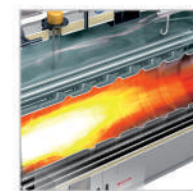


变频给水

给水稳定,自动跟踪蒸汽使用负荷调节给水量;炉水温度平稳,炉水波动小;蒸汽压力稳定;蒸汽干燥度高。

Feed Water with Inverter

Stabilize feed water, automatically tracking the steam load to adjust the feed water quantity; stable boiler water temperature, less fluctuation; stable steam pressure; high quality of steam.



超大波纹炉胆

炉水受热均匀,水位、汽压更加稳定;增大燃烧空间,降低火焰温度,实现NOx≤30mg/m³的超低排放标准。

Large Corrugated Furnace

Balanced heat exchange and water level & steam pressure more stable; Larger combustion chamber, reducing the flame temperature, guarantee NOx≤30mg/m³ emission.



节能冷凝一体机

极限回收烟气中的显热和水蒸汽凝结后的汽化潜热,提高给水温度,降低排烟温度,节省燃气费用,有效提升锅炉热效率高达103%;采用优质ND钢+硅镁铝合金缠绕复合翅片管,传热性能高,耐腐蚀性强。

High Efficiency Condenser

Recover the both the sensible and latent heat from the flue gas, to heat up the feed in water. The maximum efficiency can be increased up to 103%; Body is made by ND steel and finned tubes by silicon magnesium aluminum alloy. Better heat exchange rate and anti-corrosion ability.



Cavallo卡瓦诺变频分体式超低氮燃烧器

意大利Cavallo卡瓦诺超低氮燃烧器,拥有燃料三级分布技术、空气四级混合技术、预混技术、烟气内循环技术等众多的燃烧技术使燃烧器燃烧更稳定;结合卡瓦诺独特的FGR烟气循环技术,实现小于30mg/m³超低氮排放;采用西门子LMV5系列电子比例调节安全管理控制器+ABB变频器,全程高精度调节,高低负荷平滑过渡,精准跟踪使用负荷;更安全、更高效、更节能。

Ultra-low NOx Dual-bloc Burner from Cavallo

Ultra-low NOx burner from Cavallo Italy has many combustion technologies, such as fuel three-stage distribution technology, air four-stage mixing technology, premixing technology, FGR technology etc, to make the burner more stable; Integrated with Cavallo FGR technology to guarantee an ultra-low NOx emission of 30mg/m³; Equipped with Siemens LMV5 electronic cam and ABB inverter, to have High-precision adjustment, smooth transition on full loads; safer, more efficient, less energy consumption.

工作原理

WORKING PRINCIPLES

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

锅炉采用大容积全波纹炉胆，湿背式跑道型回燃室，全螺纹烟管对称且均匀布置在炉胆两侧。Cavallo卡瓦诺变频分体式超低氮燃烧器提供燃料燃烧，喷出的火焰在炉胆内湍流燃烧。产生的高温烟气经回燃室折返，进入螺纹烟管，高效换热后，由前烟箱进入空气预热器，烟气逆流换热，加热冷空气；降温的烟气顺流进入节能冷凝一体机，烟气逆流通过错排的硅镁铝合金翅片管扩展受热面，回收烟气潜热和显热，预热锅炉给水温度，热量极限回收后的烟气经烟囱排入大气。

The boiler has large corrugated furnace, wet backand full threaded tubes symmetrically located on both sides of the furnace. Cavallo ultra-low NOx dual-bloc burner is installed inside the furnace. Flue gas is reverted into the 2nd pass tubes at the back chamber. After heat exchange, flue gas enters into the air-preheater, where it counter-flow heat exchanges with the combustion air. Then the flue gas goes into the condenser to heat up the feed water, recovering all the sensible and latent heat. Finally the glue gas exits from the chimney to the air.

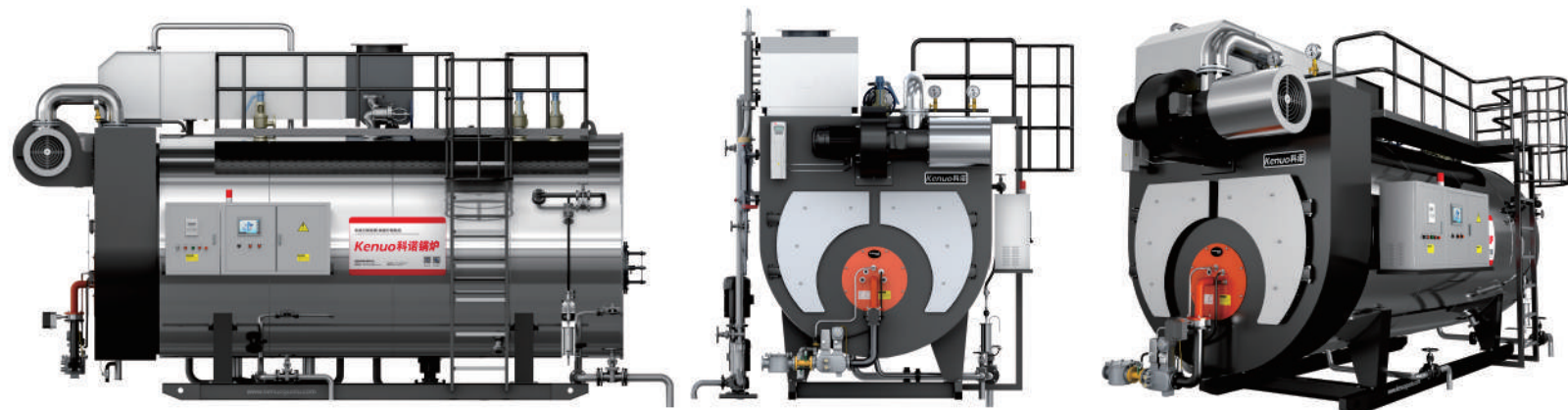
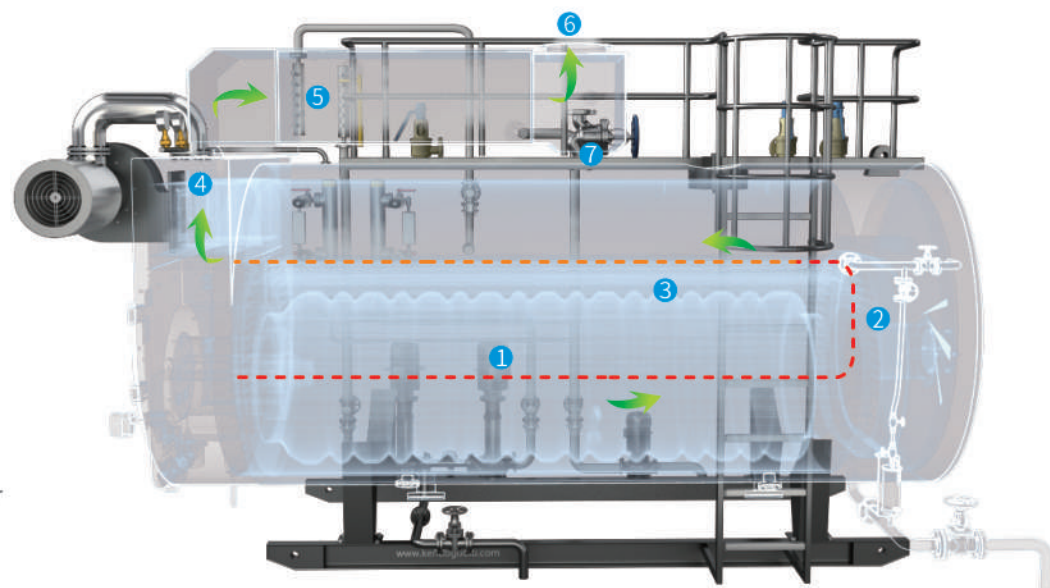
烟气换热流程图

Flue gas heat transfer flow chart

第一回程 First pass
第二回程 The second pass

烟气走向 flue gas direction

- ① 波纹炉胆 / Corrugated furnace
- ② 回燃室 / Reversal chamber
- ③ 螺纹烟管 / Thread pipe
- ④ 空气预热器 / Air-preheater
- ⑤ 节能冷凝一体机 / High Efficiency Condensing Boiler
- ⑥ 排烟口 / Stack
- ⑦ 蒸汽出口 / Steam outlet



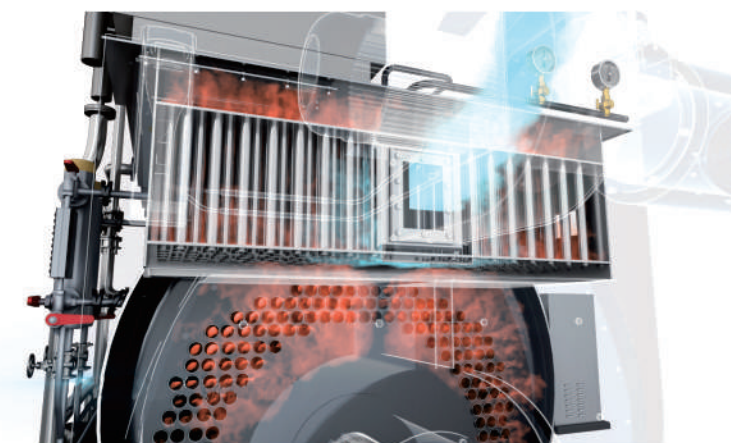
前置空预器

PRE-AIR PREHEATER

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

前置空气预热器，有效提高热交换性能，降低能源消耗
Air preheater to further recover the flue gas heat

- 可在低温情况下快速启动，迅速换热，防烟气结露产生冷凝水对燃烧器及锅炉产生腐蚀现象；
- 换热管采用ND管，换热强度高，抗腐蚀性强；
- 双向纯逆流换热模式，瞬间提高空气温度，加速燃烧，燃烧效率高达99.9%；
- 锅炉热效率可提升3%以上。
- At low temperature, it can start fast and heat up the combustion air;
- Tube in ND steel, good heat exchange and anti-corrosion ability;
- Counter-flow heat exchange, efficient heat transfer to the combustion air to accelerate the combustion. Combustion efficiency is up to 99.9%.
- Can increase 3% of efficiency



蒸汽微过热器 Steam micro superheater

过热器是锅炉中将一定压力下的饱和水蒸气加热成相应压力下的过热水蒸气的受热面。锅炉中将蒸汽从饱和温度进一步加热至过热温度的部件称蒸汽过热器。原理优势就是过热器接受高温烟气的对流换热，汽包产生的湿蒸汽，进入过热器以后压力不变提高温度变成过热蒸汽。

The superheater is the heating surface in the boiler that heats saturated steam under a certain pressure into superheated steam under the corresponding pressure. The part in the boiler that further heats the steam from the saturation temperature to the superheat temperature is called the steam superheater.

The principle advantage is that the superheater accepts the convective heat exchange of the high-temperature flue gas, and the wet steam generated by the steam drum enters the superheater without changing the pressure and increasing the temperature to become superheated steam.



技术参数

TECHNICAL PARAMETERS

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

额定蒸发量/Nominal Capacity	t/h	2	3	4	5	6	8	10	12	15	20	25	
额定工作压力/Nominal Working Pressure	Mpa	1.25 / 1.6											
饱和蒸汽温度/Saturated Steam Temperature	°C	194 / 204 *(微过热230)											
给水温度/Feed Water Temperature	°C	20 (常温)					104 (热力除氧)						
设计排烟温度/Flue Gas Temperature	°C	<60 (20°C给水)											
受热面积/Heating Surface	M ²	119	152	185	278	299	385	485	566	755	985	1240	
设计热效率/Efficiency in Design	%	101~103											
天然气消耗量/Natural Gas Consumption	Nm ³ /h	148	220	295	370	390	520	650	781	976	1302	1621	
氮氧化物/(NOx)/NOx Emission	mg/Nm ³	30 (FGR)											
电源/Power	V/Hz	380/50											
用电最大量/Maximum power consumption	kW	9	13	18	25	27	36	49	56	78	105	140	
燃烧型式/Combustion Type		室燃微正压燃烧 / Room burning micro positive pressure combustion											
燃烧调节方式/Combustion Regulation		变频比例调节 / Frequency ratio adjustment											
给水方式/Feed Water Type		变频连续补水 / Frequency continuous replenishment											
锅炉净重/Net Weight	t	8.7	10.3	13.6	17.5	17.5	21.5	27.5	30.3	37.5	49.3	57.6	
锅炉满水容量/Water Content	t	5	7	9	10.8	10.8	15	19	23	25	39	44.5	
锅炉满水重量/Weight with Flooded Water	t	13.7	17.3	22.6	28.3	28.3	36.5	46.5	53.3	62.5	88.3	102.1	
燃烧器/Burner	电机功率/Power	kW	4	7.5	11	15	15	22	30	37	55	75	110
	供气动压/Air Pressure	kPa	13-15	13-15	15-20	20-25	20-25	25-30	30-35	30-35	40-45	45-55	45-55
	阀组口径/Valve Diameter	DN	50	50	65	65	65	80	100	100	100	125	125
	负荷范围/Load Range	%	30~110%										
接口尺寸/Connection Diameter	DN	80	80	100	100	100	125	150	150	150	200	200	
锅炉主汽口/Steam Main Outlet	N1	DN	65	80	100	125	125	150	150	200	200	200	
锅炉副汽口/Steam Backup Outlet	N2	DN	25	25	40	40	40	40	40	40	40	40	
锅炉给水口/Feed Water	N3	DN	32	32	40	40	50	50	65	65	80	80	
底部定期排污口/Periodic Blowdown	N4	DN	40	40	2x40	2x40	2x40	2x40	2x40	2x40	2x50	2x50	
表面连续排污口/Continuous Blowdown	N5	DN	/	/	/	/	25	25	25	25	25	25	
炉水取样口/Water Sampler	N6	DN	15										
安全阀口径 N7	接口/Connection	DN	2x40	2x40	2x50	2x80	2x80	2x80	2x80	2x100	2x100	2x125	
	泄放口/Release	DN	2x50	2x50	2x65	2x100	2x100	2x100	2x100	2x125	2x125	2x150	
锅炉排烟口/Stack Connection	N8	mm	Φ350	Φ400	Φ450	Φ500	Φ500	Φ600	Φ650	Φ700	Φ800	Φ900	Φ1000
节能器进/出水口/Economizer in/outlet Connection	N9	DN	25	32	32	40	40	40	50	50	65	65	
冷凝器进/出水口/Condenser in/outlet Connection	N10	DN	25	25	32	32	40	40	40	50	65	65	
冷凝器疏水口/Condenser Drain Connection	N11	DN	25										
烟道冷凝水排放口/Flue-gas Duct Drain Connection	N12	DN	32	32	32	32	32	40	40	40	50	50	
烟箱冷凝水排放口/Smoke Box Drain Connection	N13	DN	25	32	32	32	32	32	32	32	32	32	
锅炉运输尺寸	mm	4600*2200	4800*2300	5300*2500	6200*2700	6200*2700	6800*2800	7250*2900	7750*3100	8000*3300	9050*3500	9850*3700	
Transport Dimension (L1×W1×H1)		*3000	*3150	*3500	*3900	*3900	*3050	*3250	*3500	*3700	*4050	*4300	
参考锅炉外形尺寸	mm	5500*2650	5750*2750	6350*2950	7250*3100	7250*3100	7850*3250	8300*3500	8900*3650	9200*4300	10300*4700	11100*5000	
Boiler Dimension (L×W×H)		*3300	*3450	*3850	*4250	*4250	*4450	*4700	*5050	*5450	*6100	*6350	

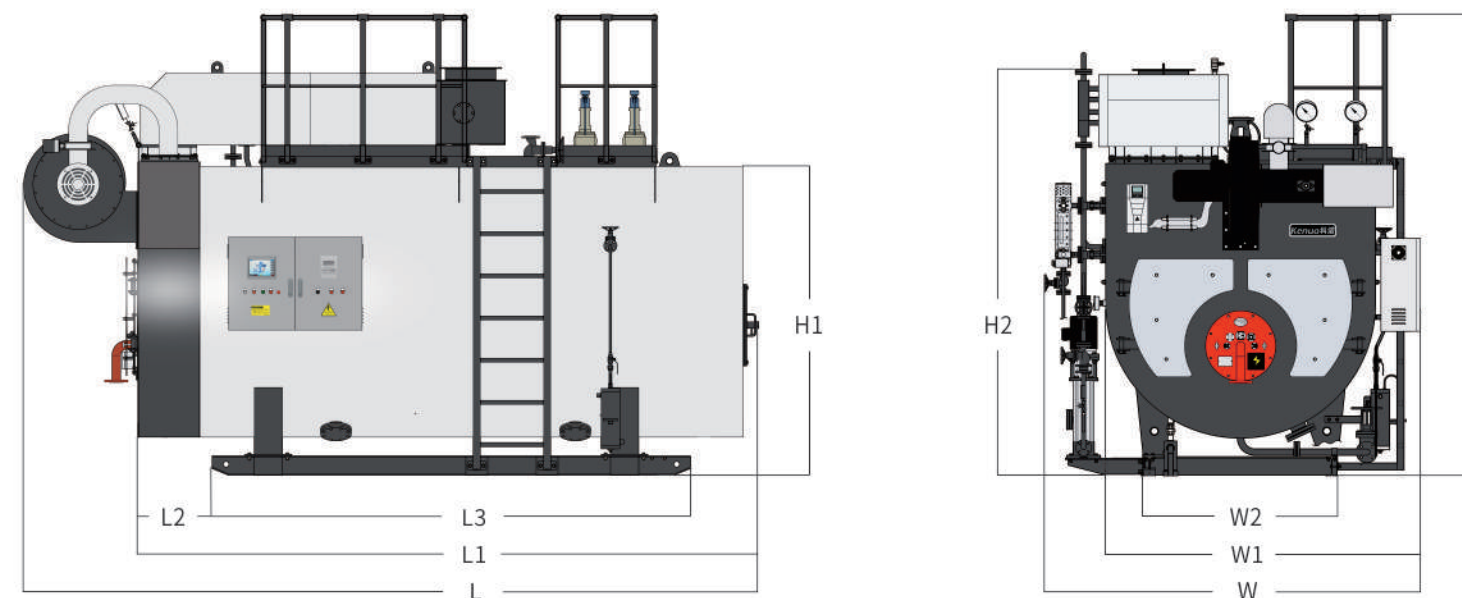
- 意大利Cavallo卡瓦诺燃烧器为本公司的标准配置, 用户自选其它品牌, 在订货时须书面说明确认;
- 燃料计算基准值: 天然气低位发热值8500kcal/Nm³;
- 燃气锅炉, 排烟温度低于露点时, 会产生大量呈酸性冷凝水会对尾部烟道造成腐蚀, 建议使用防腐或不锈钢材质烟道;
- 科诺产品在不断创新和改进中, 上述参数可能会发生变化, 最终以图纸或实物为准。

- The Italian Cavallo burner is the company's standard configuration, the user can choose other brands, and must be confirmed in writing when ordering;
- Fuel calculation benchmark value: natural gas low calorific value 8500kcal/Nm³;
- For gas boilers, when the exhaust gas temperature is lower than the dew point, a large amount of acidic condensate will be generated which will cause corrosion to the tail flue. It is recommended to use anti-corrosion or stainless steel flue;
- In the continuous innovation and improvement of KENUO products, the above parameters may change, and the drawings or actual objects shall prevail.

外形尺寸

SPECIFICATIONS

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS



额定蒸发量	L	L1	L2	L3	W	W1	W2	H	H1	H2
t/h										
2	5500	4600	380	3100	2650	2200	1300	3300	2550	3000
3	5750	4800	400	3300	2750	2300	1500	3450	2600	3150
4	6350	5300	410	3600	2950	2500	1500	3850	2800	3500
5	7250	6200	420	4000	3100	2700	1700	4250	2900	3900
6	7250	6200	420	4000	3100	2700	1700	4250	2900	3900
8	7850	6800	440	4400	3250	2800	1800	4450	3050	4050
10	8300	7250	450	5200	3500	2900	1900	4700	3250	4550
12	8900	7750	460	5900	3650	3100	2000	5050	3500	4800
15	9200	8000	470	6800	4300	3300	2200	5450	3700	5050
20	10300	9050	480	7200	4700	3500	2500	6100	4050	5550
25	11100	9850	500	7800	5000	3700	2800	6350	4300	5900

科诺产品在不断创新和改进中, 上述参数可能会发生变化, 最终以图纸或实物为准。
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▶ **WNS**-1.25-Q(LNK)**
超低氮冷凝蒸汽锅炉(后置空预)
ULTRA-LOW NO_x
CONDENSING STEAM BOILER

SINO-ITALIAN JOINT VENTURE
 INTERNATIONAL STANDARDS



超低氮冷凝蒸汽锅炉(后置空预)

ULTRA-LOW NO_x CONDENSING STEAM BOILER

概述 / overview

科诺的产品设计工程师,针对凝结水回收率高、凝结水回水温度高的蒸汽系统,且有更高系统节能要求的用户,设计推出(后置空预型系列产品),配置后置高效空气预热器搭配节能/冷凝一体机,进一步降低排烟温度,节省能源,提高热效率;采用高效率低应力卧式湿背内燃烟气二回程结构,圆弧形对开炉门设计,运用大炉膛全混合燃烧和高效螺纹烟管传热;变频给水,炉水波动小,蒸汽压力稳定,蒸汽干燥度高;配置Cavallo卡瓦诺变频分体式超低氮燃烧器、ABB变频器、液晶触摸屏与高性能PLC可编程控制器,实现锅炉NO_x≤30mg/m³的超低排放标准。

Kenuo engineers, for the steam system with high condensate recovery rate and condensate return temperature, and users with higher system energy saving requirements, design and launch (post-air pre-type series products), configure the rear high efficiency air preheater with energy saving/condensing unit, further reduce the smoke exhaust temperature, save energy, and improve thermal efficiency; High efficiency and low stress horizontal wet back internal combustion flue gas two-pass structure, circular curved split door design, the use of large furnace full mixed combustion and high efficiency threaded smoke pipe heat transfer; Variable frequency water supply, small fluctuation of furnace water, stable steam pressure, high steam dryness; Equipped with Cavallo variable frequency split ultra-low nitrogen burner, ABB inverter, LCD touch screen and high-performance PLC programmable controller, boiler NO_x≤30mg/m³ ultra-low emission standard.

控制系统 / Control System

-  锅炉集成状态监控功能
Monitoring of full functions of the boiler
-  锅炉单独运行/停止功能
Boiler start / stop function
-  高低水位/超压/超温报警功能
High or low level / high pressure / high temperature alarm
-  锅炉具备预约运行功能
Scheduled startup of operation
-  断电自锁保护功能
Self-interlock during power down for protection
-  SMS文字信息实时提醒功能
SMS text message for real time alert.
-  数据/信息的收集、分析、存储功能
Data / information collection, analysis, and storage function
-  控制器具有密码(Password)锁定功能
Password protection of the controller
-  锅炉运行历史数据查询及故障自动识别功能
Historical data query and automatic fault identification of boiler operation
-  具有标准的RS485接口,采用MODEBUS协议,可实现多台锅炉的远程群控功能
Modbus RS485 interface, connection to the upper control system or DCS system of the plant from multiple boilers

性能特点

PERFORMANCE CHARACTERISTICS

SINO-ITALIAN JOINT VENTURE INTERNATIONAL STANDARDS



智能控制
Intelligent control



超低氮变频
比例调节燃烧
Ultra-low nitrogen frequency
conversion ratio Regulated
combustion



蒸汽干燥度达98%
Steam dry Degree
up to 98%



热效率高达103%
Thermal efficiency
up to 103%



高效冷凝换热技术
Efficient condensing
heat transfer technology



氮氧化物排放 $<30\text{mg}/\text{m}^3$
Nitrogen oxide
emissions $<30\text{mg}/\text{m}^3$



超低排烟温度
Ultra-low nitrogen
exhaust temperature



后置空预器

后置空预器,是科诺研发的最新产品,后置空预器采用双向逆流换热模式,低温下课迅速启动,瞬间提高空气温度,加速燃烧,燃烧效率高达99.99%。空预器换热管选用ND管,具有换热强度高、抗腐蚀性等特点。

Rear empty preheater

The rear air preheater is the latest product developed by Kenuo. The rear air preheater uses two-way countercurrent heat transfer Mode, low temperature class starts quickly, instantly increases the air temperature, accelerates combustion, and combustion efficiency Up to 99.99%. ND tube is selected as the heat exchange tube of air preheater, which has high heat exchange strength and strong corrosion resistance And other characteristics.



变频给水

超低氮蒸汽锅炉采用最新变频给水系统,该系统自动跟踪蒸汽使用负荷调节给水量,给水稳定,炉水温度平稳,炉水波动小,实现蒸汽压力稳定,蒸汽干燥度高。

Variable frequency feed water

The ultra-low nitrogen steam boiler adopts the latest frequency conversion water supply system, which automatically tracks the steam usage load and adjusts the water supply. The water supply is stable, the furnace water temperature is stable, and the furnace water fluctuation is small, so as to achieve stable steam pressure and high steam dryness.

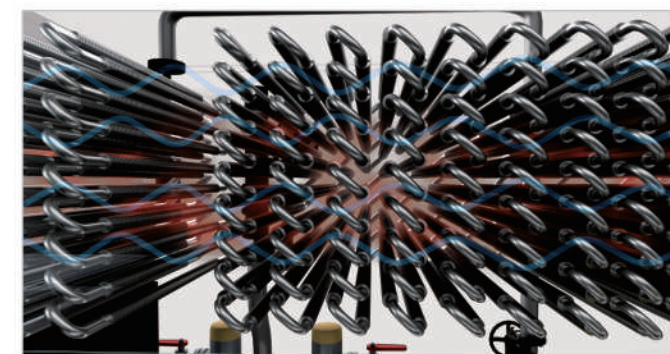


节能冷凝一体机

高效技能冷凝一体机,是科诺自主研发,采用优质ND钢+硅镁铝合金缠绕复合翅片管,具有传热性能好,耐腐蚀性强等特点。拥有双重节能效果,极限回收烟气中的显热和凝结潜热,降低排烟温度,提升锅炉热效率。

Energy-saving condensing machine

High efficiency skill condensing machine, is independently developed by Kenuo, using high quality ND steel + silicon magnesium aluminum alloy winding composite finned tube, with good heat transfer performance, strong corrosion resistance and other characteristics. With double energy-saving effect, limit recovery of sensible heat and condensation latent heat in the flue gas, reduce the exhaust temperature, improve the boiler thermal efficiency.

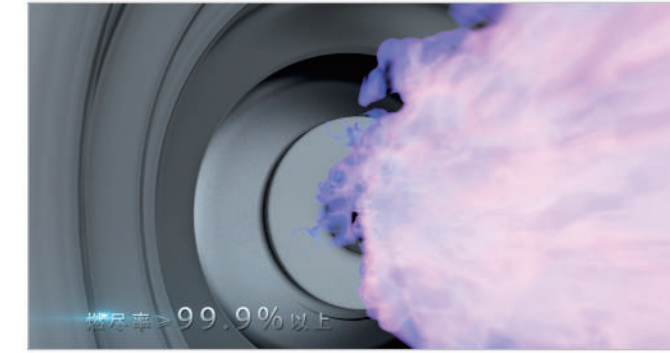


NOX $<30\text{mg}/\text{m}^3$ 超低排放

超低氮蒸汽锅炉采用Cavallo卡瓦诺分体式超低氮燃烧器,该燃烧器拥有燃料三级分类技术、空气四级混合技术、预混技术、FGR烟气循环技术,实现小于 $30\text{mg}/\text{m}^3$ 超低氮排放。

NOX $<30\text{mg}/\text{m}^3$ Ultra-low emission

The ultra-low nitrogen steam boiler adopts Cavallo split ultra-low nitrogen burner, which has three fuel classification technology, four air mixing technology, premix technology, FGR gas cycle technology, to achieve ultra-low nitrogen emission of less than $30\text{mg}/\text{m}^3$.



技术参数

TECHNICAL PARAMETERS

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

额定蒸发量/Nominal Capacity	t/h	2	3	4	5	6	8	10	12	15	20	25	
额定工作压力/Nominal Working Pressure	Mpa	1.25 / 1.6											
饱和蒸汽温度/Saturated Steam Temperature	°C	194 / 204 *(微过热230)											
给水温度/Feed Water Temperature	°C	凝结水回收+20 (常温)					凝结水回收+104 (热力除氧)						
设计排烟温度/Flue Gas Temperature	°C	<60 (凝结水回收率80%/温度90°C)											
受热面积/Heating Surface	M ²	140	179	218	327	352	453	570	665	888	1159	1459	
设计热效率/Efficiency in Design	%	>97											
天然气消耗量/Natural Gas Consumption	Nm ³ /h	137	205	274	342	411	548	685	822	1027	1370	1712	
氮氧化物/(NOx)/NOx Emission	mg/Nm ³	30 (FGR)											
电源/Power	V/Hz	380/50											
用电最大量/Maximum power consumption	kW	9	13	18	25	27	36	49	56	78	105	140	
燃烧型式/Combustion Type		室燃微正压燃烧 / Room burning micro positive pressure combustion											
燃烧调节方式/Combustion Regulation		变频比例调节 / Frequency ratio adjustment											
给水方式/Feed Water Type		变频连续补水 / Frequency continuous replenishment											
锅炉净重/Net Weight	t	9.1	10.8	14.3	18.4	18.4	22.6	28.9	31.8	39.4	51.8	60.5	
锅炉满水容量/Water Content	t	5	7	9	10.8	10.8	15	19	23	25	39	44.5	
锅炉满水重量/Weight with Flooded Water	t	14.1	17.8	23.3	29.2	29.2	37.6	47.9	53.3	64.4	90.8	105	
燃烧器/Burner	电机功率/Power	kW	4	7.5	11	15	15	22	30	37	55	75	110
	供气动压/Air Pressure	kPa	13-15	13-15	15-20	20-25	20-25	25-30	30-35	30-35	40-45	45-55	45-55
	阀组口径/Valve Diameter	DN	50	50	65	65	65	80	100	100	100	125	125
	负荷范围/Load Range	%	30~110%										
接口尺寸/Connection Diameter	DN	80	80	100	100	100	125	150	150	150	200	200	
锅炉主汽口/Steam Main Outlet	N1	DN	65	80	100	125	125	150	150	200	200	200	
锅炉副汽口/Steam Backup Outlet	N2	DN	25	25	40	40	40	40	40	40	40	40	
锅炉给水口/Feed Water	N3	DN	32	32	40	40	50	50	65	65	80	80	
底部定期排污口/Periodic Blowdown	N4	DN	40	40	2x40	2x40	2x40	2x40	2x40	2x40	2x50	2x50	
表面连续排污口/Continuous Blowdown	N5	DN	/	/	/	/	25	25	25	25	25	25	
炉水取样口/Water Sampler	N6	DN	15										
安全阀口径 N7	接口/Connection	DN	2x40	2x40	2x50	2x80	2x80	2x80	2x80	2x100	2x100	2x125	
	泄放口/Release	DN	2x50	2x50	2x65	2x100	2x100	2x100	2x100	2x125	2x125	2x150	
锅炉排烟口/Stack Connection	N8	mm	Φ350	Φ400	Φ450	Φ500	Φ500	Φ600	Φ650	Φ700	Φ800	Φ900	Φ1000
节能器进/出水口/Economizer in/outlet Connection	N9	DN	25	32	32	40	40	40	50	50	65	65	
冷凝器进/出水口/Condenser in/outlet Connection	N10	DN	25	25	32	32	40	40	40	50	65	65	
冷凝器疏水口/Condenser Drain Connection	N11	DN	25										
烟道冷凝水排放口/Flue-gas Duct Drain Connection	N12	DN	32	32	32	32	32	40	40	40	50	50	
烟箱冷凝水排放口/Smoke Box Drain Connection	N13	DN	25	32	32	32	32	32	32	32	32	32	
锅炉运输尺寸	mm	5000*2070	5230*2160	5780*2350	6600*2530	6600*2530	7130*2630	7550*2730	8100*2910	8730*3100	9380*3290	10100*3480	
Transport Dimension (L1×W1×H1)		*2390	*2440	*2630	*2720	*2720	*2860	*3050	*3280	*3470	*3800	*4040	
参考锅炉外形尺寸	mm	5000*2730	5230*2840	5780*3040	6600*3200	6600*3200	7130*3350	7550*3610	8100*3760	8730*4430	9380*4850	10100*5150	
Boiler Dimension (L×W×H)		*3690	*3850	*4300	*4750	*4750	*4970	*5250	*5640	*6090	*6820	*7090	

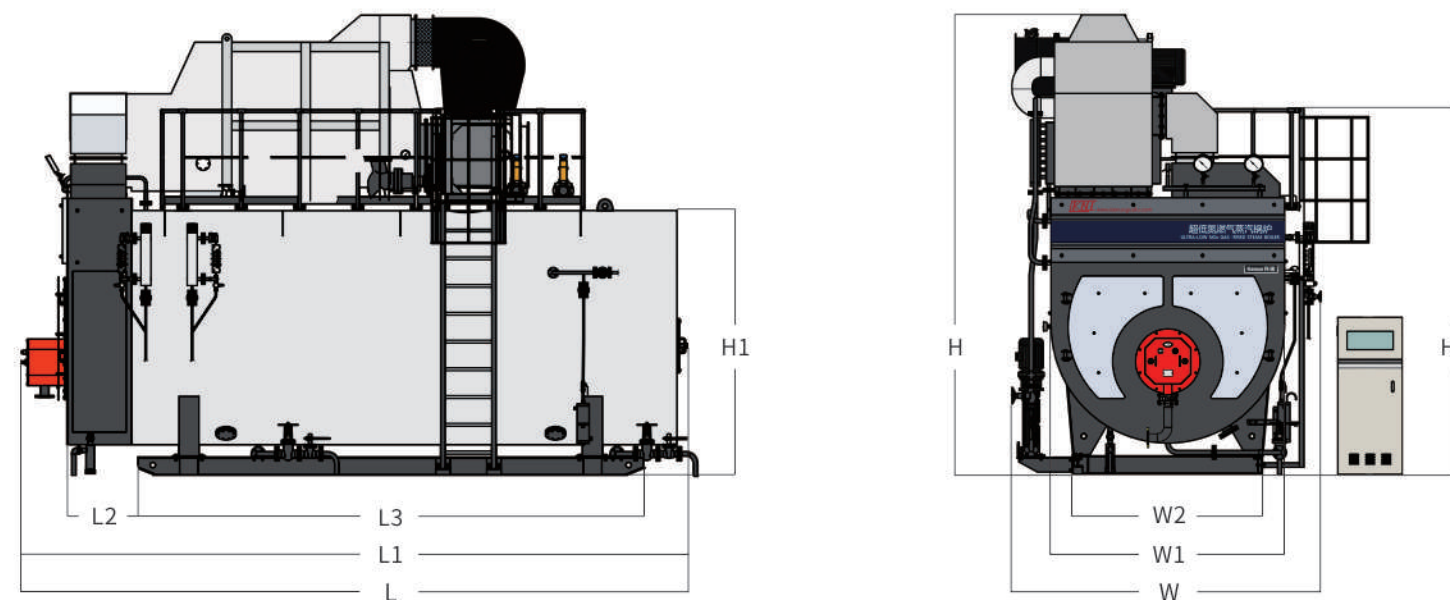
- 意大利Cavallo卡瓦诺燃烧器为本公司的标准配置, 用户自选其它品牌, 在订货时须书面说明确认;
- 燃料计算基准值: 天然气低位发热值8500kcal/Nm³;
- 燃气锅炉, 排烟温度低于露点时, 会产生大量呈酸性冷凝水会对尾部烟道造成腐蚀, 建议使用防腐或不锈钢材质烟道;
- 科诺产品在不断创新和改进中, 上述参数可能会发生变化, 最终以图纸或实物为准。

- The Italian Cavallo burner is the company's standard configuration, the user can choose other brands, and must be confirmed in writing when ordering;
- Fuel calculation benchmark value: natural gas low calorific value 8500kcal/Nm³;
- For gas boilers, when the exhaust gas temperature is lower than the dew point, a large amount of acidic condensate will be generated which will cause corrosion to the tail flue. It is recommended to use anti-corrosion or stainless steel flue;
- In the continuous innovation and improvement of KENUO products, the above parameters may change, and the drawings or actual objects shall prevail.

外形尺寸

SPECIFICATIONS

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS



额定蒸发量	L	L1	L2	L3	W	W1	W2	H	H1	H2
t/h										
2	5000	5000	650	3850	2730	2070	1480	3690	2390	2930
3	5230	5230	690	4090	2840	2160	1710	3850	2440	3080
4	5780	5780	710	4470	3040	2350	1710	4300	2630	3420
5	6600	6600	730	4960	3200	2530	1940	4750	2720	3810
6	6600	6600	730	4960	3200	2540	1940	4750	2720	3810
8	7130	7130	760	5460	3350	2630	2050	4970	2860	3960
10	7550	7550	780	6450	3610	2730	2160	5250	3050	4450
12	8100	8100	790	7320	3760	2910	2280	5640	3280	4690
15	8370	8370	810	8440	4430	3100	2510	6090	3470	4940
20	9380	9380	830	8930	4850	3290	2850	6820	3800	5430
25	10100	10100	860	9680	5150	3480	3190	7090	4040	5770

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► 超低氮变频比例燃烧技术(前置/后置空预型)

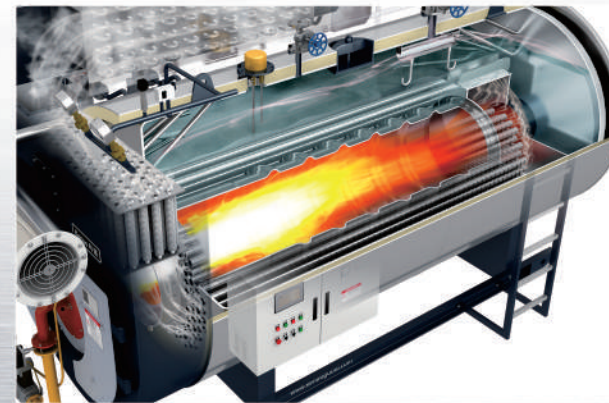
ULTRA-LOW NOX VARIABLE FREQUENCY PROPORTIONAL COMBUSTION TECHNOLOGY

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

拥有超低氮燃烧环境的炉膛设计 Furnace design to achieve ultra-low NOx

大炉膛设计结构, 不仅有效提升锅炉的传热性能, 提升了锅炉热效率; 大炉膛设计结构, 在抑制氮氧化物在炉内产生还起到了关键性作用; 波纹炉胆的选用, 在提高了传热性能提升锅炉热效率的同时还满足了热应力的释放, 提高产品寿命和安全性。

Large furnace design, not only to increase the heat exchange in the radiant zone but also to low down the flame temperature which is the key to NOx production. Corrugated furnace is the best choice of heat transfer and stress release, which can increase the stability and boiler lifetime.



<30mg/m³极低氮氧化物排放 <30mg/m³ NOx emission

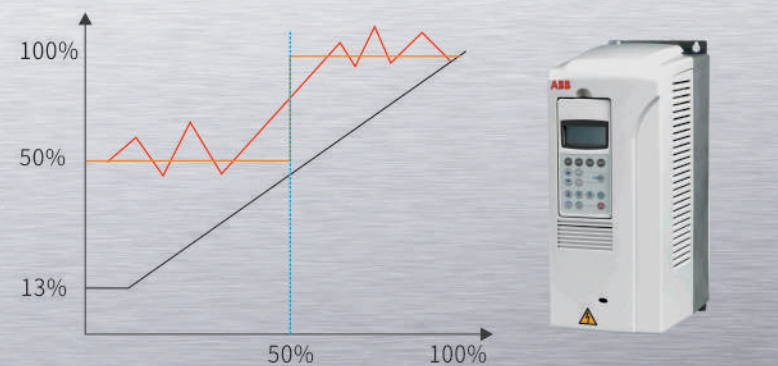
	NOx排放 NOx emissions
普通蒸汽锅炉 Conventional steam boilers	80-150mg/m ³
科诺超低氮冷凝蒸汽锅炉 Kenuo ultra-low NOx condensing steam boiler	<30mg/m ³

配置ABB变频器, 实现比例控制燃烧, 高效节能

Adoption of ABB inverter and electronic cam to modulate combustion

该款锅炉配置ABB变频器和SIEMENS比例调节燃气阀, 可提供最佳混合比例的燃气与助燃空气, 蒸汽稳定性好, 实现99.99%完全燃烧, 降低锅炉能源消耗。

ABB inverter and Siemens electronic cam to optimize the air/fuel ratio, realizing 99.99% combustion, lower down the fuel consumption.

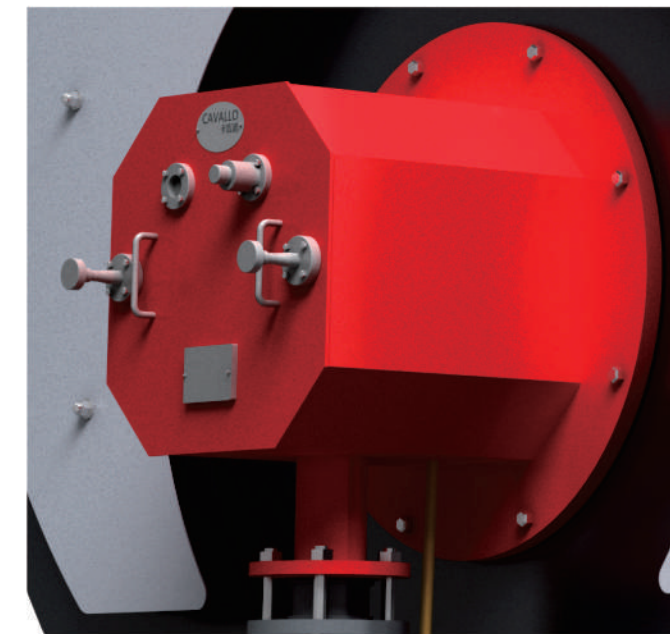


配置Cavallo卡瓦诺超低氮分体式燃烧器

Compact with Cavallo Dual Bloc ultra-low NOx burner

意大利Cavallo卡瓦诺超低氮燃烧器, 拥有燃料三级分布技术、空气四级混合技术、预混技术、烟气内循环技术等众多的燃烧技术使燃烧器燃烧更稳定; 使燃料完全燃烧, 节省锅炉运行成本。

Italy Cavallo ultra-low NOx burner has many combustion technologies, such as fuel three-stage distribution technology, air four-stage mixing technology, premixing technology, FGR technology, to make the combustion more stable, and complete, to save operation cost.



- 分级燃烧: 分级燃烧技术包括空气分级供给、燃气分级供给和燃气空气同时分级供给三种方式; 其原理是把贫氧燃烧与过氧燃烧相结合, 通过中和火焰温度, 来降低NOx浓度, 以及形成部分NOx还原的条件, 从而总量上降低排放。
- 预混式燃烧: 预混式燃烧技术是把部分燃料和空气进行预混, 并通过旋流片的调节和控制, 保证了燃气和空气的完全混合, 使燃烧更充分, 氮氧化物排放低。
- 分布式燃烧: 将火焰分成数个小火焰增大散热面减少排放
- 烟气内循环燃烧: 烟气内循环燃烧技术是指燃烧生成的烟气通过特殊的头部设计, 从新与燃料和空气再次掺混并进行燃烧; 通过烟气内循环技术可以达到消除燃烧热点, 增加火焰辐射, 控制氮氧化物排放的效果。
- 完全燃烧: 燃烧火焰完全覆盖锅炉燃烧室, 提高燃烧效率

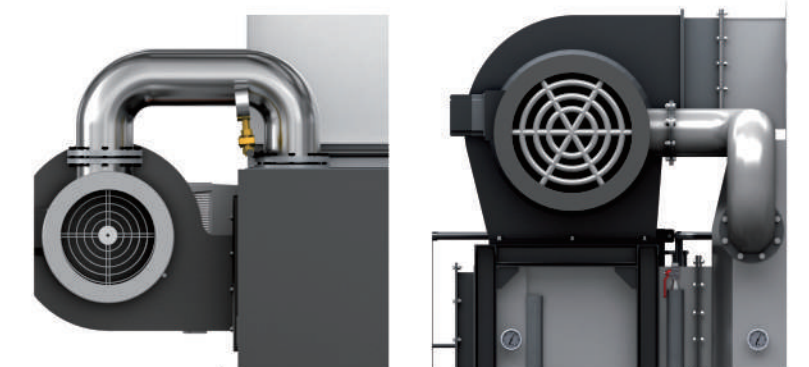
- Staged combustion: Staged combustion technology includes three modes: air supply by stages, gas supply by stages and gas air supply by stages at the same time. Its principle is to combine lean oxygen combustion with peroxide combustion, to reduce NOx production by lower down flame temperature, and to partially form NOx redox, so as to reduce total emission.
- Pre-mixing combustion: Pre-mixing combustion technology is to premix some fuel and air, and via the regulation and control of swirl vane, to ensure the complete mixing of gas & air and combustion, less NOx emission.
- Distributed combustion: divide the flame into many small flames to increase the heat dissipation surface and reduce emissions.
- FIR: FIR refers to the combustion of flue gas generated by combustion through special head design, re-mixing and combustion with fuel and air; through FIR, to eliminate the combustion hot spots, increase flame radiation and less NOx production.
- Full combustion: The flame completely fullfill the boiler combustion and improves the combustion efficiency.

配置Cavallo卡瓦诺FGR不锈钢管道

FGR flue gas duct in stainless steel from Cavallo

为防止冷凝水腐蚀管道及燃烧系统, 本产品配置有不锈钢材质管道, 可延长锅炉使用寿命, 确保锅炉运行安全; FGR不锈钢管道, 结合卡瓦诺超低氮燃烧器, 可轻松实现小于30mg/m³超低氮排放标准。

In order to prevent condensate water from corroding pipes and combustion systems, this product is equipped with stainless steel pipes, which can extend the service life of the boiler and ensure the safe operation of the boiler. Cavallo ultra low NOx burner with FGR can easily reach 30mg/m³ NOx emission.



WNS**-1.25-Y(Q)

超低氮冷凝蒸汽锅炉(高效冷凝)

ULTRA-LOW NOx
CONDENSING STEAM BOILER

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS



创新
INNOVATION



智能
INTELLIGENT



低氮
LOW NOx



高效
EFFICIENT



安全
SAFETY

超低氮冷凝蒸汽锅炉(高效冷凝)

ULTRA-LOW NOx CONDENSING STEAM BOILER

概述 / overview

超低氮冷凝蒸汽锅炉(高效冷凝),是科诺最新的高效冷凝蒸汽锅炉,配置节能冷凝一体机,降低排烟温度,节省能源,提高热效率;采用高效率低应力卧式湿背内燃烟气二回程结构,圆弧形对开炉门设计,运用大炉膛全混合燃烧和高效螺纹烟管传热,蒸汽压力稳定,蒸汽干燥度高;配置Cavallo卡瓦诺分体式超低氮燃烧器、液晶触摸屏与高性能PLC可编程控制器,实现锅炉NOx≤30mg/m³的超低排放标准。

Ultra-low nitrogen condensing steam boiler (high efficiency condensing), is Kono's latest high efficiency condensing steam boiler, equipped with energy-saving condensing machine, reduce the exhaust temperature, save energy, improve thermal efficiency; High efficiency and low stress horizontal wet-back internal combustion flue gas two-pass structure, circular curved split furnace door design, the use of large furnace full mixed combustion and high efficiency threaded smoke pipe heat transfer, stable steam pressure, high steam dryness; Equipped with Cavallo split ultra-low nitrogen burner, LCD touch screen and high-performance PLC programmable controller, the boiler NOx≤30mg/m³ ultra-low emission standard is achieved.

应用领域 / Application

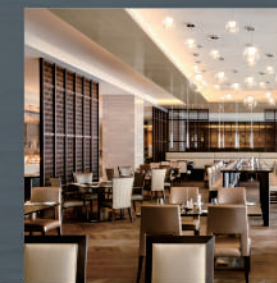
该款锅炉可广泛应用于食品、饮料、医药、化工、电子、工业制造等工业领域;也可应用于医院消毒、空调加湿、酒店餐饮等民用领域。

The boiler can be widely used in food, beverage, pharmaceutical, chemical, electronics, industrial manufacturing and other industrial fields; it can also be used in hospital disinfection, air-conditioning humidification, hotel catering and other civilian areas.

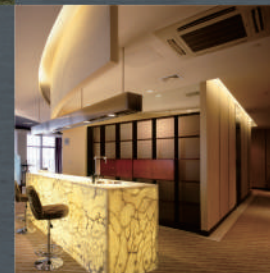
工业制造业领域
Industrial
Manufacturing



餐饮酒店
Catering Hotel



医院
Hospital

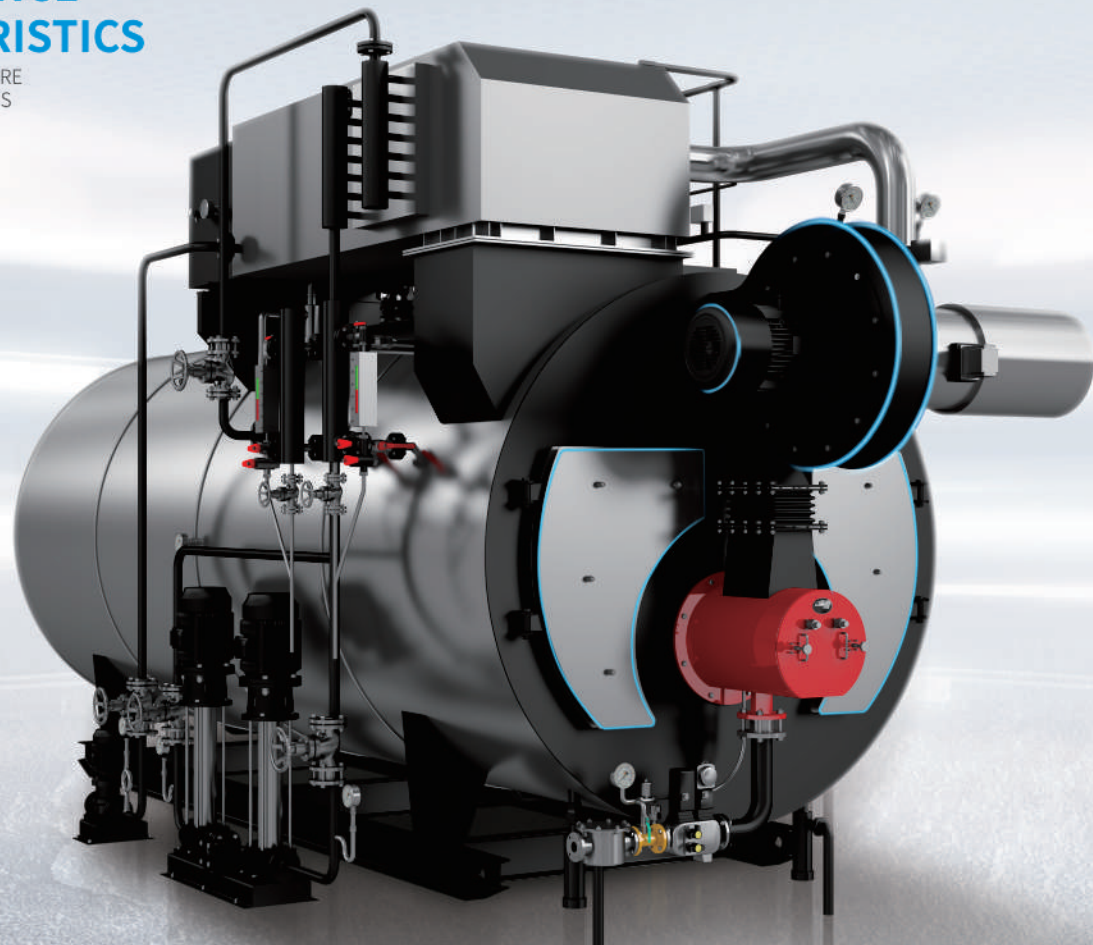


空调加湿
Air conditioning
humidification

性能特点

PERFORMANCE CHARACTERISTICS

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS



蒸汽品质高, 干燥度高达99%
The steam quality is high and the dryness is up to 99%



智能控制
Intelligent control system



深度冷凝换热技术
Condensation heat transfer technology



超长使用寿命
Long service life



氮氧化物排放低于30mg/m³
Nitrogen oxide emissions are less than 30mg/m³



产气速度快
High gas production speed



超低氮燃烧技术
Ultra-low nitrogen combustion technology

冷凝换热技术/超低氮燃烧技术

CONDENSING HEAT TRANSFER TECHNOLOGY ULTRA-LOW NITROGEN COMBUSTION TECHNOLOGY

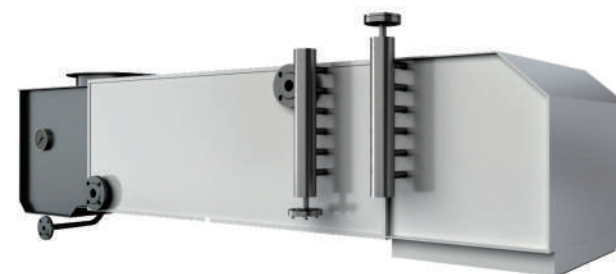
SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

配置高效节能冷凝一体机

Integrated economizer and condenser

配置高效节能冷凝一体机, 拥有双重节能效果, 极限回收烟气中的显热和水蒸汽的凝结潜热, 降低排烟温度; 提升锅炉热效率并降低NOx的排放。

Equipped with high efficiency and energy saving condensing machine, with double energy-saving effect, limit recovery of sensible heat in flue gas and condensation latent heat of water steam, reduce smoke exhaust temperature; Improve boiler thermal efficiency and reduce NOx emissions.



采用优质ND钢+硅镁铝合金缠绕复合翅片管

Adoption of ND steel and Silicon-Magnesium-Aluminum Alloy Winded finned tube

配置的节能冷凝一体机为科诺锅炉自主研发, 采用优质ND钢+硅镁铝合金缠绕复合翅片管, 传热性能更好, 耐酸腐蚀性更强。

The energy-saving condensing machine is independently developed by Kenuo Boiler. It adopts high quality ND steel + silicon magnesium aluminum alloy winding composite finned tube, which has better heat transfer performance and stronger acid and corrosion resistance.

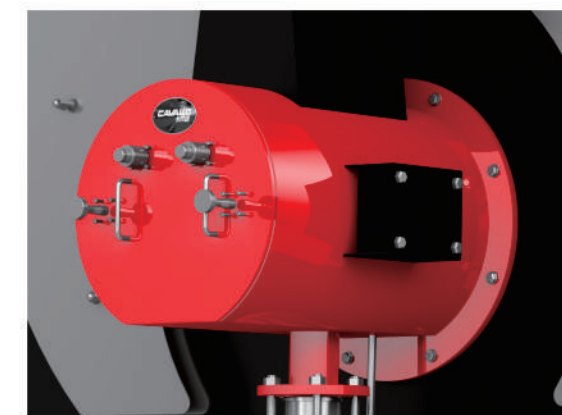


配置Cavallo卡瓦诺超低氮分体式燃烧器

Equipped with Cavallo ultra-low nitrogen split burner

Cavallo卡瓦诺超低氮分体式燃烧器, 拥有燃料三级分布、空气四级混合、预混、FGR等众多先进燃烧技术。配置电子比例调节, 提供燃气和空气最佳的混合比例, 使燃烧稳定、燃料充分燃烧, 实现氮氧化物<30mg/m³排放标准。

Cavallo ultra-low nitrogen split burner has many advanced combustion technologies such as three-stage fuel distribution, four-stage air mixing, premixing and FGR. Equipped with electronic proportional regulation, to provide the best mixture ratio of gas and air, so that the combustion is stable, the fuel is fully burned, and the nitrogen oxide emission standard is < 30mg/m³.



技术参数

TECHNICAL PARAMETERS

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

额定蒸发量/Nominal Capacity	t/h	1	2	3	4	5	6	
额定工作压力/Nominal Working Pressure	Mpa	1.25 / 1.6						
饱和蒸汽温度/Saturated Steam Temperature	°C	194 / 204						
给水温度/Feed Water Temperature	°C	20 (常温)						
设计排烟温度/Flue Gas Temperature	°C	<90 (20°C给水)						
受热面积/Heating Surface	M ²	68	107	136	166	247	269	
设计热效率/Efficiency in Design	%	>96						
天然气消耗量/Natural Gas Consumption	Nm ³ /h	78	156	234	312	390	486	
氮氧化物/(NOx)/NOx Emission	mg/Nm ³	30 (FGR)						
电源/Power	V/Hz	380/50						
用电最大量/Maximum power consumption	kW	4.07	9	13	18	25	27	
燃烧型式/Combustion Type		室燃微正压燃烧 / Room burning micro positive pressure combustion						
燃烧调节方式/Combustion Regulation		电子比例调节 / Electronic proportional regulation						
给水方式/Feed Water Type		位式给水 / Unformed feed water						
锅炉净重/Net Weight	t	5.5	8.2	9.8	12.9	16.6	16.6	
锅炉满水容量/Water Content	t	3	5	7	9	10.8	10.8	
锅炉满水重量/Weight with Flooded Water	t	8.5	13.2	16.8	21.9	27.4	27.4	
燃烧器/Burner	电机功率/Power	kW	2.2	4	7.5	11	15	15
	供气动压/Air Pressure	kPa	7-9	13-15	13-15	15-20	20-25	20-25
	阀组口径/Valve Diameter	DN	50	50	50	65	65	65
	负荷范围/Load Range	%	30~110%					
接口尺寸/Connection Diameter	DN	65	80	80	100	100	100	
锅炉主汽口/Steam Main Outlet	N1 DN	50	65	80	100	125	125	
锅炉副汽口/Steam Backup Outlet	N2 DN	25	25	25	40	40	40	
锅炉给水口/Feed Water	N3 DN	25	32	32	40	40	50	
底部定期排污口/Periodic Blowdown	N4 DN	40	40	40	2x40	2x40	2x40	
表面连续排污口/Continuous Blowdown	N5 DN	/	/	/	/	/	25	
炉水取样口/Water Sampler	N6 DN	15						
安全阀口径 N7	接口/Connection DN	2x40	2x40	2x40	2x50	2x80	2x80	
Safety Valve	泄放口/Release DN	2x50	2x50	2x50	2x65	2x100	2x100	
锅炉排烟口/Stack Connection	N8 mm	φ250	φ350	φ400	φ450	φ500	φ500	
节能器进/出水口/Economizer in/outlet Connection	N9 DN	25	25	32	32	40	40	
冷凝器进/出水口/Condenser in/outlet Connection	N10 DN	25	25	25	32	32	40	
冷凝器疏水口/Condenser Drain Connection	N11 DN	25						
烟道冷凝水排放口/Flue-gas Duct Drain Connection	N12 DN	32	32	32	32	32	32	
烟箱冷凝水排放口/Smoke Box Drain Connection	N13 DN	25	25	32	32	32	32	
锅炉运输尺寸	mm	3880*1950	4960*2140	5280*2240	5720*2440	6690*2630	6690*2630	
Transport Dimension (L1×W1×H1)		*2060	*2340	*2380	*2570	*2660	*2660	
参考锅炉外形尺寸	mm	4340*2710	5420*2870	5670*2980	6260*3200	7150*3360	7150*3360	
Boiler Dimension (L×W×H)		*2700	*2920	*3050	*3410	*3760	*3760	

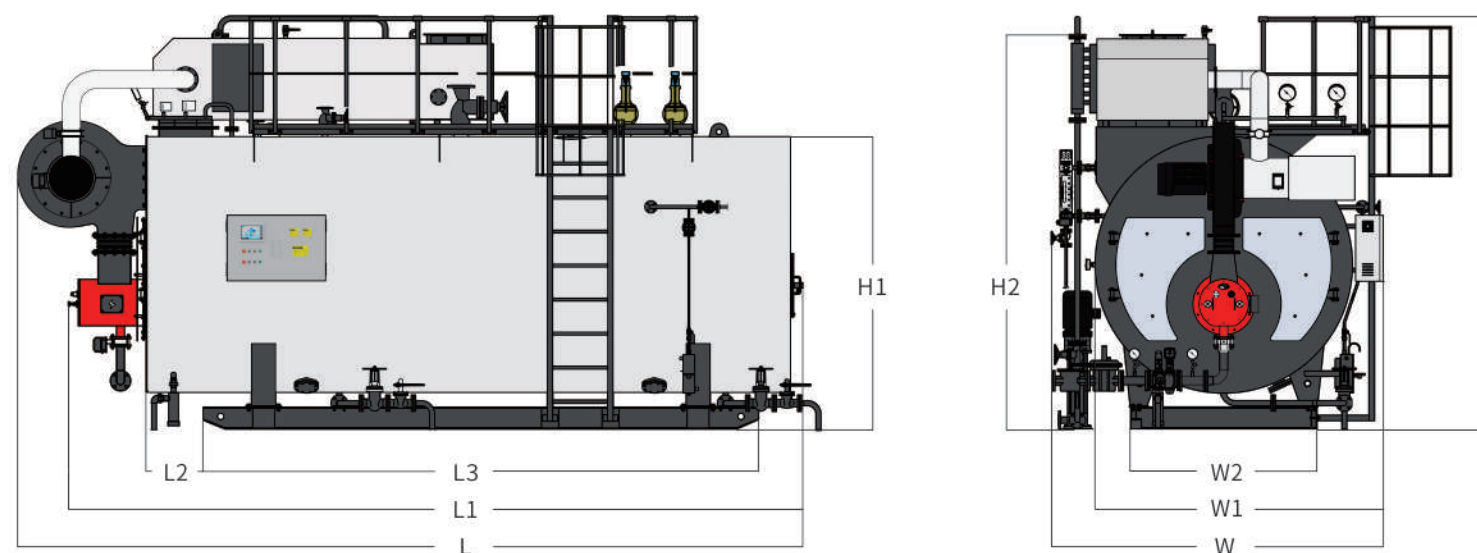
- 意大利Cavallo卡瓦诺燃烧器为本公司的标准配置, 用户自选其它品牌, 在订货时须书面说明确认;
- 燃料计算基准值: 天然气低位发热值8500kcal/Nm³;
- 燃气锅炉, 排烟温度低于露点时, 会产生大量呈酸性冷凝水会对尾部烟道造成腐蚀, 建议使用防腐或不锈钢材质烟道;
- 科诺产品在不断创新和改进中, 上述参数可能会发生变化, 最终以图纸或实物为准。

- The Italian Cavallo burner is the company's standard configuration, the user can choose other brands, and must be confirmed in writing when ordering;
- Fuel calculation benchmark value: natural gas low calorific value 8500kcal/Nm³;
- For gas boilers, when the exhaust gas temperature is lower than the dew point, a large amount of acidic condensate will be generated which will cause corrosion to the tail flue. It is recommended to use anti-corrosion or stainless steel flue;
- In the continuous innovation and improvement of KENUO products, the above parameters may change, and the drawings or actual objects shall prevail.

外形尺寸

SPECIFICATIONS

SINO-ITALIAN JOINT VENTURE
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额定蒸发量	L	L1	L2	L3	W	W1	W2	H	H1	H2
t/h										
1	4340	3880	430	3540	2710	1950	1100	2700	2060	2500
2	5420	4960	470	3920	2870	2140	1300	2920	2340	2770
3	5670	5280	490	4170	2980	2240	1500	3050	2380	2910
4	6260	5720	510	4550	3200	2440	1500	3410	2570	3230
5	7150	6690	520	5060	3360	2630	1700	3760	2660	3600
6	7150	6690	520	5060	3360	2630	1700	3760	2660	3600

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超安全智能控制系统

SMART CONTROL SYSTEM

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS



科诺锅炉物联网技术, 搭载科诺云平台, 涵盖锅炉运行现状、锅炉节能减排数据库等锅炉信息(报告)采集、传输、分析与通讯功能, 内置智能网关, 直接接入锅炉物联网系统, 可同时应用于移动端和PC端, 实现锅炉系统的远程多点实时连接。

KENUO Boiler Internet of Things (IOT) technology, equipped with KENUO cloud platform, covers boiler information collection, transmission, analysis and communication functions such as boiler operation status, boiler energy saving and emission reduction data. The built-in intelligent gateway is directly connected to the boiler IOT system, and can be applied to both mobile and PC terminals, so to realize long-distance multi-point real-time communication.

- 采用7/10英寸液晶显示触摸屏, 与高性能可编程PLC控制器完美匹配;
- 锅炉全自动运行, 可与智能控制平台对接, 实现远程监控;
- 具备高低水位/超压/超温报警等联锁安全防护功能, 可有效实时记录锅炉运行状态, 全面监控锅炉运行安全。
- 7/10 inch LCD touch screen and PLC controller;
- Fully automatic operation, can communicate with DCS system, realize remote monitor.
- With water level/ pressure / temperature alarm and interlock functions, it can effectively record the operating state of the boiler and monitor the safety of the boiler.

概述

Overview

该自动控制系统采用工业全自动冷凝蒸汽锅炉控制技术方案。硬件按功能模块化设计, 信号输入输出、控制器件, 全部采用知名品牌器件; 软件面向对象, 内嵌式精心设计, 软硬结合, 对蒸汽锅炉安全运行进行自动控制和工况检测。丰富的故障检测、故障报警、故障处理功能, 保证了系统的安全可靠运行。系统采用锅炉控制专用模块作为信息处理和中央控制单元。以人机对话方式与锅炉用户交换信息, 给操作者带来极大方便。

The automatic control system adopts the technical scheme of industrial automatic condensing steam boiler. Hardware is designed according to functional modules, signal input and output, control devices, all using well-known brand devices; software object-oriented, embedded elaborate design, combination of software and hardware, automatic control and working condition detection for the safe operation of steam boilers. The abundant functions of fault detection, fault alarm and fault handling ensure the safe and reliable operation of the system.

The system uses special module of boiler control as information processing and central control unit. Exchanging information with boiler users by means of man-machine conversation brings great convenience to operators.

基本功能

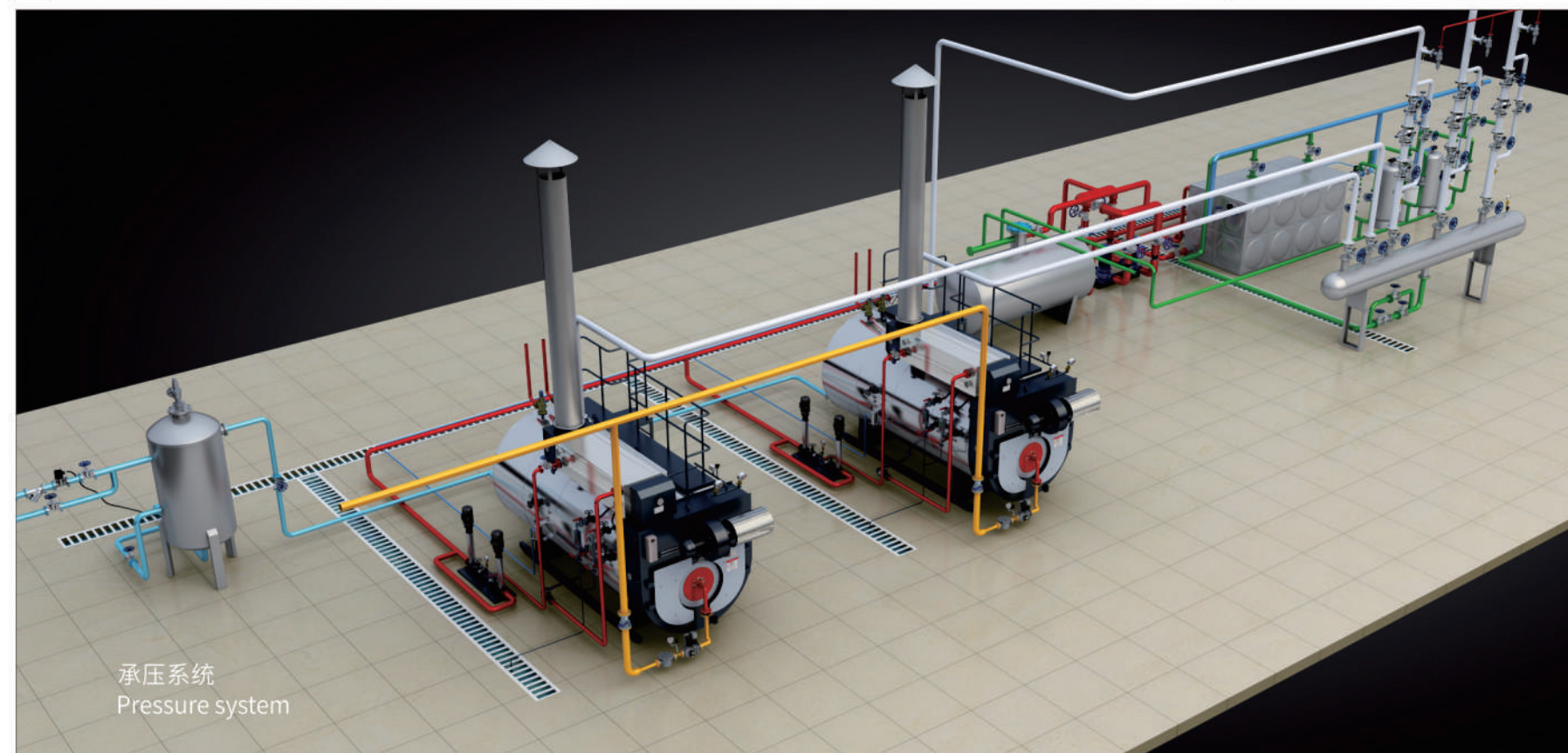
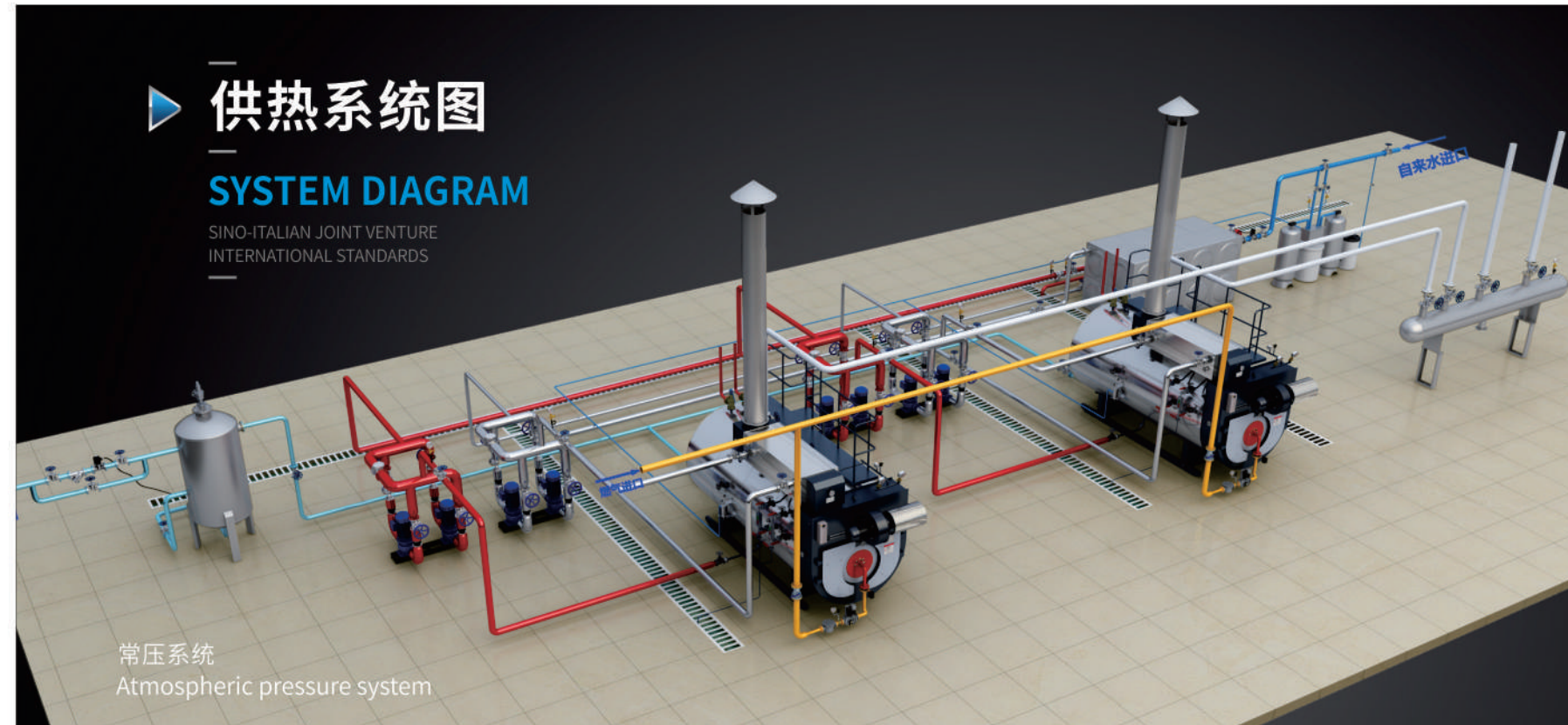
Basic Function

- 显示锅炉的运行状态, 可控制运行或停止。
- 确认锅炉的动作设定及变更设定值。
- 可积算显示点火次数, 燃烧时间。
- 可选择定时运行功能, 在既定时间内改变锅炉运行参数运行或停止锅炉。
- 发生故障时可显示故障状况及发出报警声, 故障内容自动存储, 方便用户分析故障原因。
- 控制器具有密码(Password)锁定功能, 除用户之外不可能更改设定及调整。
- Display the operation status of the boiler, and control the operation or stop.
- Confirm boiler action setting and change setting value.
- Integrable display of ignition times, combustion time.
- Timing operation function can be selected to change the operation parameters of the boiler or stop the boiler in a given time.
- When a fault occurs, the fault status can be displayed and the alarm sound can be issued. The fault content can be stored automatically to facilitate the user to analyze the cause of the fault.
- The controller has Password lock function, so it is impossible to change settings and adjust them except for users.

供热系统图

SYSTEM DIAGRAM

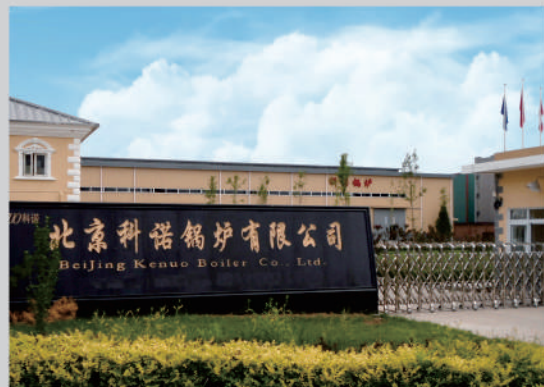
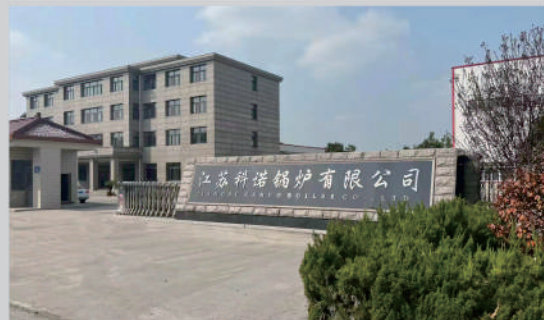
SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS



企业简介

COMPANY PROFILE

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS



科诺锅炉,是一家专注于燃气锅炉及燃烧器研发、生产、销售、投资运营于一体的综合热能实业企业。目前拥有包括北京科诺锅炉有限公司(B级)、江苏科诺锅炉有限公司(A级)、北京科诺热力有限公司、山西科诺热力有限公司、福建科诺热力有限公司、江苏卡瓦诺热能科技有限公司在内的六家分公司。

2017年北京科诺锅炉(B级)与意大利Cavallo卡瓦诺成立股份合资公司,并获得北京市人民政府外商投资企业批准文书。同年,江苏科诺锅炉有限公司(A级)、江苏卡瓦诺热能科技有限公司成立于扬州,秉承意大利Cavallo卡瓦诺丰富的生产经验及核心技术,于国内装配推广销售Cavallo超低氮锅炉及燃烧器,以更好的服务于全国市场。

现阶段,公司核心业务包括超低氮冷凝蒸汽锅炉、超低氮冷凝承压热水锅炉、超低氮冷凝盘管蒸汽锅炉、超低氮铸铝全冷凝热水锅炉、超低氮不锈钢全冷凝热水锅炉、全预混真空/相变热水机组、卡瓦诺超传导电热水机组、卡瓦诺真空相变电热水机组、卡瓦诺全预混超低氮燃烧器、卡瓦诺分体式超低氮燃烧器、卡瓦诺一体式超低氮燃烧器等产品的研发、生产、销售及服务,并承接锅炉低氮节能改造、供热服务、热力投资等关联业务项目。

未来,科诺锅炉将借助意大利Cavallo卡瓦诺锅炉的技术优势,乘势而上,继续秉承“为大众创造美好生活”的宏伟愿景,造福于员工、回报于社会!

Kenuo Boiler, located in Beijing - Capital of China, is a comprehensive enterprise, focusing on gas-fired boiler design, production, sales and BOT investment. It has 6 subsidiary companies including Beijing Kenuo Boiler Co.,Ltd. (Boiler Manufacturing License B), Jiangsu Kenuo Boiler Co.,Ltd. (Boiler Manufacturing License A), Jiangsu Cavallo Thermal Energy Technology Co., Ltd., Beijing Kenuo Thermal Power Co.,Ltd., Shanxi Kenuo Thermal Power Co.,Ltd. and Fujian Kenuo Thermal Power Co.,Ltd.

In 2017, after obtaining the approval document of foreign-invested enterprises of Beijing Municipal People's Government, Beijing Kenuo Boiler become a joint venture with Italy Cavallo. In the same year, Jiangsu Kenuo Boiler Co., Ltd. and Jiangsu Cavallo Thermal Energy Technology Co., Ltd. were established in Yangzhou. Additional with the excellent combustion system design and production experience of Cavallo, Kenuo is to better service the National Market.

At present, the group's core businesses are covering the design, production and sales & service for ultra-low NOx condensing steam boiler, ultra-low NOx condensing hot water boiler (pressure), ultra-low NOx condensing atmospheric pressure hot water boiler, ultra-low NOx condensing vacuum phase change hot water boiler, Cavallo ultra-low NOx condensing natural circulation steam boiler, Cavallo ultra-low NOx stainless steel condensing pressure hot water boiler, Cavallo superconducting electric water heater, Cavallo vacuum phase change electric hot water heater, Cavallo premixing ultra-low NOx burner, Cavallo dual bloc ultra-low NOx burner, Cavallo mono bloc ultra-low NOx burner. It is also engaged in the low NOx revamping, BOT investment and district heating sectors.

In the future, Kenuo boiler, adopting the technology of Italy Cavallo, will remain true to its original aspiration and keep its mission firmly in mind: creating and servicing better for the society!

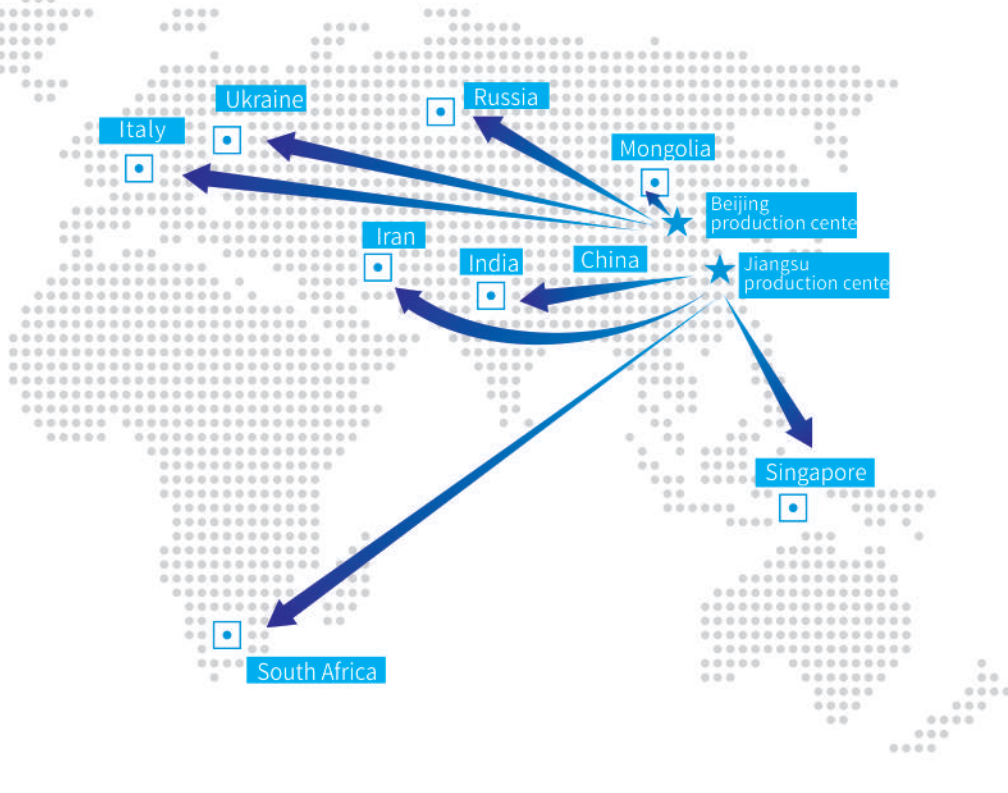


销售网络

SALES FOOTPRINTS

SINO-ITALIAN JOINT VENTURE
INTERNATIONAL STANDARDS

- ★ 生产中心
Production Center
- 销售区域
Sales Area



经典案例 CLASSIC CUSTOMER

