

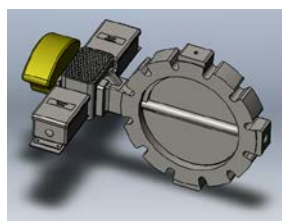
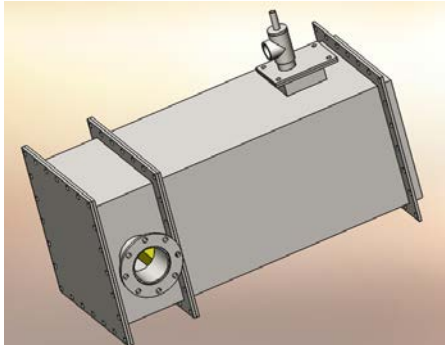
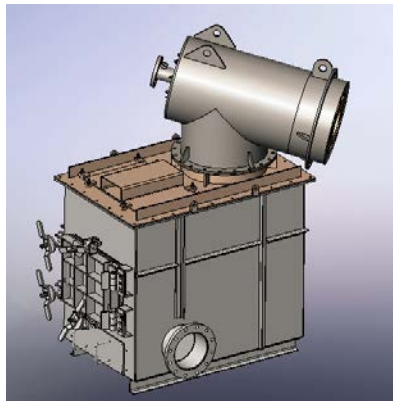
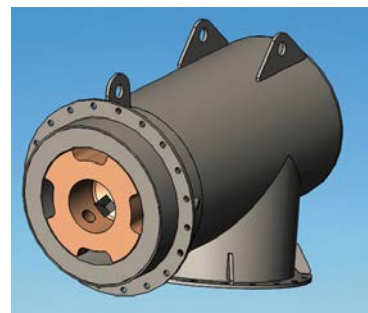
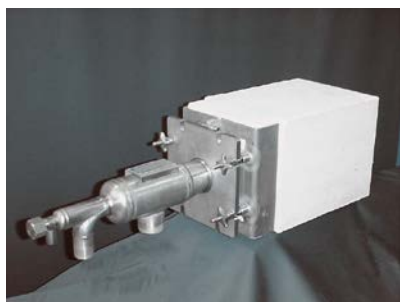


斯世燃烧®

Innovation for better combustion

以高效领先的低NO_x烧嘴、蓄热式烧嘴及燃烧控制方案，服务于钢铁、铝、锌及锻造加热。

Ultra lower NO_x Burner, Regenerative Burner and Combustion Control Solution for Steel, Aluminum, Zinc and Forge Heating Process



上海斯世燃烧设备有限公司
Shanghai Sword Combustion Equipments Co., Ltd

● 公司简介 About us

斯世燃烧®位于中国上海，是一家创新型的专业化燃烧设备及服务供应商；它为全球的高温加热过程设计制造各种低NO_x烧嘴、蓄热式烧嘴、全氧烧嘴及燃烧控制系统，并且提供燃烧调试、燃烧故障排除及维护、燃烧安全审计、燃烧能源审计、燃烧培训等一系列高附加值燃烧服务。

斯世燃烧®拥有自主的低NO_x控制和蓄热燃烧核心技术及丰富的应用经验，服务的领域包括钢铁、铝、锌、锻造、玻璃、陶瓷等行业，产品主要应用于高温加热、熔化、保温、热处理等工序。

Sword Combustion, headquartered in Shanghai as an innovative combustion company, specializes in designing and manufacturing various lower NO_x burner, regenerative burner, oxy-fuel burner and combustion control system serving worldwide high temperature heating process including steel, aluminum, zinc, forge, glass etc.

● 公司使命 Mission

设计制造效率和环保性能一流的工业烧嘴和燃烧系统，满足新制造时代的工业加热需求。

Supplying burners and combustion system solution with the first class level of efficiency and emission performance to meet the process heating demand from new manufacturing era.

● 公司理念 Philosophy

客户需求至上、诚信发展为本
拼搏创新求实、创业和谐为乐

User demand is our highest priority
Integrity-development is our fundamental principle
Devoted, Innovative and realistic
Doing pioneering work harmoniously is happiness



● 产品和服务 Products & Service

1. 蓄热式烧嘴

Regenerative burner

- 低 NO_x 蓄热烧嘴
- 超低 NO_x 蓄热烧嘴
- 紧凑一体式蓄热烧嘴
- 无冷风管型蓄热烧嘴
- 双头结构型蓄热烧嘴

2. 低 NO_x/超低 NO_x 常规烧嘴

Lower NO_x conventional burner

- 高速烧嘴
- 可调焰烧嘴
- 平焰烧嘴
- 高动量烧嘴
- 高调节比烧嘴
- 低过量空气烧嘴

3. 富氧烧嘴、全氧烧嘴

Air-Oxygen fuel burner/Oxy-fuel burner

4. 辐射管烧嘴

Recuperative radiant tube burner

- 单换热器
- 双换热器低 NO_x 型

5. 点火烧嘴

Pilot burner

6. 阀件及燃烧附件

Valves and combustion accessories

- 高性能换向阀
- 蓄热体
- 大口径流量调节阀

7. 集成燃气阀组

Integrated gas valve trains

- 点火控制阀组
- 主燃气控制阀组

8. 新一代集成燃烧控制系统（基于 Honeywell SLATE）

A new generation of integrated combustion control system (Based on Honeywell Slate)

9. 服务 Service

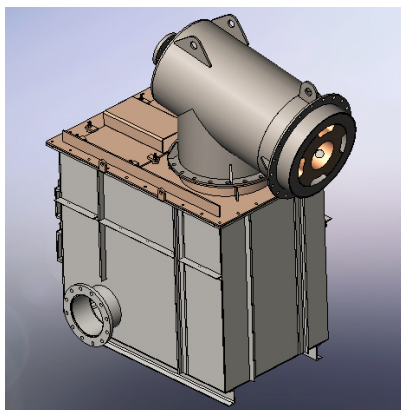
- 燃烧咨询
- 燃烧调试
- 燃烧审计
- 燃烧故障诊断排查
- 燃烧培训

● 产品应用 Application

			
<p>◆ 铝&锌&铅</p> <ul style="list-style-type: none"> - 熔化炉 - 保温炉 - 回转炉 - 坩埚炉 - 立推加热炉 - 铝卷退火炉 	<p>◆ 钢铁业</p> <ul style="list-style-type: none"> - 步进式加热炉 - 推钢加热库 - 酸洗退火炉 - 热镀锌退火炉 - 不锈钢连退炉 - 钢包烘烤 	<p>◆ 锻造业</p> <ul style="list-style-type: none"> - 锻前加热炉 - 锻件退火炉 	<p>◆ 其他</p> <ul style="list-style-type: none"> - 空气加热 - 玻璃熔化 - 热氧化焚烧 - 搪瓷窑 - 镀铅槽

● 主要产品

1. 蓄热式烧嘴 Regenerative Burner



超低NO_x蓄热烧嘴RU115系列:

- ✓ 极低的NO_x排放 (≤45PPM@11%O₂)
- ✓ 极佳的燃烧稳定性
- ✓ 可靠的低温启动性
- ✓ 高温柔性明亮火焰, 有效降低金属烧损
- ✓ 最大功率可达1050KW
- ✓ 标准设计最大适用炉温1427℃
- ✓ 适合熔化炉 (铝/锌/铅)、热轧加热炉、锻造加热炉等高温应用场合。

Ultra lower NO_x Regen Burner RU115:

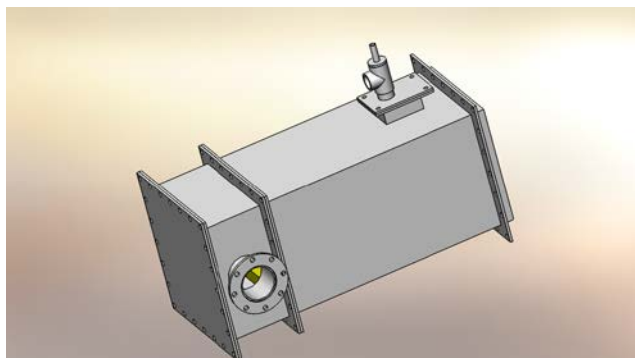
- ✓ Ultra lower NO_x emission (≤45PPM@11%O₂)

- ✓ Excellent flame stability
- ✓ Good cold startup ability
- ✓ Decreased metal oxidation loss benefiting from soft luminous flame
- ✓ Maximum capacity : 1050KW
- ✓ Maximum Suitable furnace temperature : 1427°C
- ✓ Application for melting furnace(Al/Zn/Lead), HSM heating, Forging heating etc.

超低NO _x 蓄热烧嘴RU115功率规格及火焰尺寸 (基于20.9%的助燃空气和10%的过量空气) Capacity and Flame Dimensions based on 20.9% Oxygen in Com. 10% Excess Air								
产品型号 Series NO.	额定天然气 Nominal NG		额定空气 Nominal Capacities		理论火焰长度 Flame Length		理论火焰直径 Flame Diameter	
	KW	Nm ³ /hr*	SCFH	Nm ³ /hr	feet	m	feet	m
RU115-025	670	67	27,500	737	6.5	1.98	2.0	0.61
RU115-050	1340	134	55,000	1,475	8.5	2.59	2.5	0.76
RU115-075	2010	201	82,500	2,212	10.0	3.05	3.0	0.93
RU115-100	2680	268	110,000	2,949	11.5	3.51	4.0	1.22
RU115-150	4020	402	165,000	4,424	14.0	4.27	4.5	1.37
RU115-200	5360	536	220,000	5,898	16.0	4.88	5.0	1.52
RU115-250	6700	670	275,000	7,373	17.5	5.33	6.0	1.83

*基于天然气LHV: 8400kcal/Nm³

更多详细参数, 请咨询斯世燃烧



紧凑一体式超低NO_x蓄热烧嘴RU115C系列:

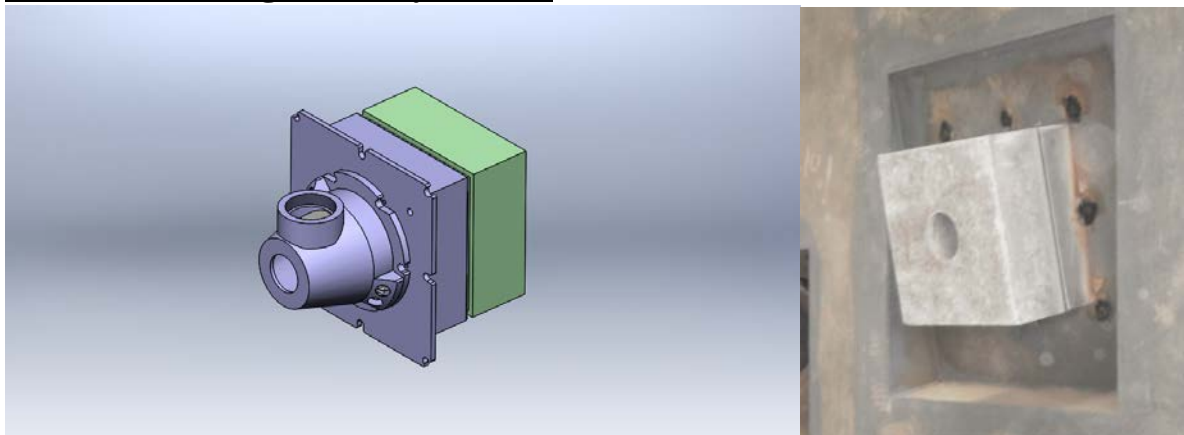
- ✓ 极低的NO_x排放 (≤45PPM@11%O₂)
- ✓ 烧嘴和蓄热箱合为一体, 结构紧凑, 安装方便
- ✓ 可根据现场空间设计为I形或L形结构
- ✓ 可选用蜂窝体或SIC泡沫蓄热体, 更高换热效率
- ✓ 功率规格300KW、600KW
- ✓ 标准设计最大适用炉温1427°C
- ✓ 适合熔化炉(铝/锌/铅)、锻造加热炉等高温应用场合

Compact Ultra lower NO_x Regen Burner RU115C:

- ✓ Ultra lower NO_x emission (≤45PPM@11%O₂)
- ✓ Compact designing, smaller installation space requirement
- ✓ I and L layout is available for different site space
- ✓ Media : optional for honeycomb and foamed ceramics
- ✓ Capacity : 300KW, 500KW
- ✓ Maximum Suitable furnace temperature : 1427°C

- ✓ Application for melting furnace(Al/Zn/Lead), Forging heating etc

2. 高速烧嘴 High velocity burner



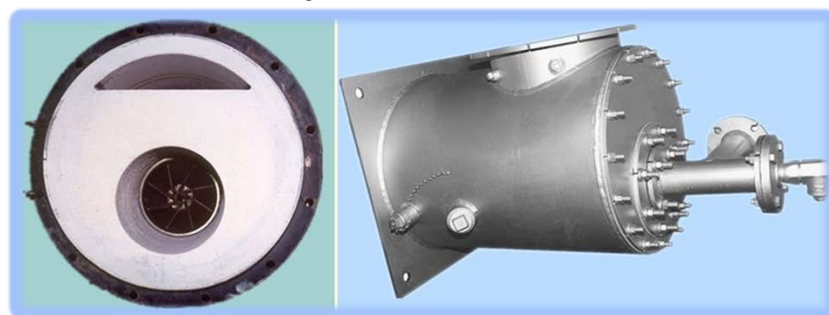
超低NO_x高速烧嘴HV210系列:

- ✓ 高速火焰（出口速度大于150m/s）
- ✓ 低NO_x控制技术（≤40PPM@11%O₂）
- ✓ 高强度对流加热，获得优良炉温均匀性
- ✓ 出色的燃烧稳定性
- ✓ 功率范围70KW-6000kW
- ✓ 标准设计最大适用炉温1427℃
- ✓ 适用于熔铝炉、保温炉、锻造加热炉、连续酸洗退火炉、钢包烘烤等场合。

Ultra lower NO_x high velocity burner HV210:

- ✓ Very high flame velocity (≥150m/s)
- ✓ Ultra lower NO_x emission (≤40PPM@11%O₂)
- ✓ Intensive convective heating for better temperature uniformity
- ✓ Excellent flame stability
- ✓ Capacity :70KW-6000KW
- ✓ Maximun Suitable furnace temperature : 1427℃
- ✓ Application for melting,holding, Forging heating, Pickling annealing furnace etc

3. 可调焰烧嘴 Adjustable flame burner



超低NO_x可调焰烧嘴AU220系列:

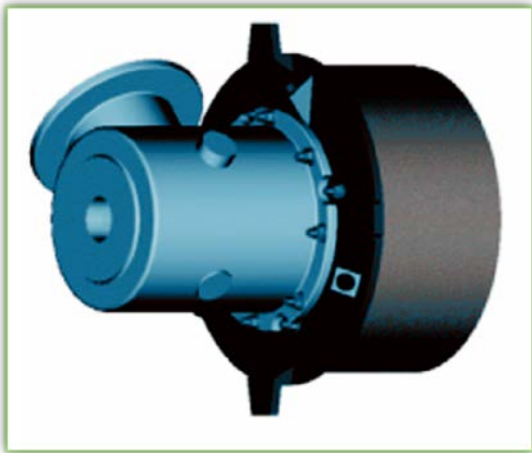
- ✓ 可根据加热需要灵活调节火焰尺寸

- ✓ 超低NO_x控制技术 (≤25PPM@11%O₂)
- ✓ 3-5%低过量空气运行性能
- ✓ 功率调节比10 :1
- ✓ 预热空气温度最大538℃
- ✓ 功率范围从900KW-2500KW
- ✓ 有效工作炉温超过1470℃
- ✓ 适用于板坯加热炉、棒材加热炉、锻造加热炉等场合

Ultra lower NO_x adjustable flame burner AU220:

- ✓ Adjustable flame size for heating requirement
- ✓ Ultra lower NO_x emission (≤25PPM@11%O₂)
- ✓ 3-5% excess air running ability
- ✓ Turn down 10 :1
- ✓ Maximum preheating air : 538℃
- ✓ Capacity :900KW-2500KW
- ✓ Maximum Suitable furnace temperature : 1470℃
- ✓ Application for Slab heating, Bar heating , Forging heating furnace etc

4. 平焰烧嘴 Flat Flame Burner



低NO_x平焰烧嘴FF230系列:

- ✓ 良好的平焰效果 低NO_x控制技术
- ✓ 烧嘴可紧靠工件安装, 火焰紧贴炉壁
- ✓ 均匀的热辐射加热, 无火焰冲击
- ✓ 预热空气温度最大500℃
- ✓ 功率范围从70KW-500KW
- ✓ 适用于热轧加热炉、锻造加热炉、铝屑熔化炉、镀锌炉等场合

Lower NO_x flat flame burner FF230:

- ✓ Excellent flat flame effect and lower NO_x emission
- ✓ Permit to position burner close to loads
- ✓ Uniform radiation heating without flame impingement

- ✓ Turn down 10 :1
- ✓ Maximum preheating air : 500℃
- ✓ Capacity :70KW-500KW
- ✓ Application for Slab heating, Forging heating, Al scrap melting etc

5. 高调节比烧嘴 High turndown burner



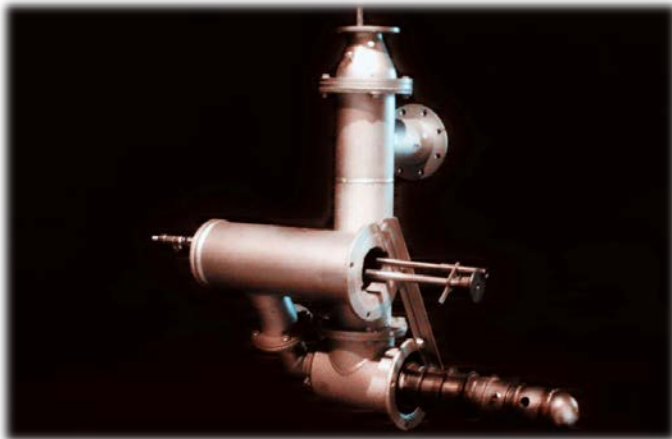
高调节比烧嘴BU250系列:

- ✓ 调节比可达15 :1
- ✓ 过量空气系数可达500%
- ✓ 低NO_x控制技术
- ✓ 预热空气温度可达649℃
- ✓ 功率范围从1000KW-5800KW
- ✓ 适用于热轧加热炉、熔铝炉、保温炉、空气加热器等场合

High turndown burner BU250:

- ✓ Turndown up to 15 :1
- ✓ Excess air up to 500%
- ✓ Lower NO_x control technology
- ✓ Maximum preheating air : 649℃
- ✓ Capacity :1000KW-5800KW
- ✓ Application for Slab heating, melting/holding, Forging heating, air heating etc

6. 自预热辐射管烧嘴 Recuperative radiant tube burner



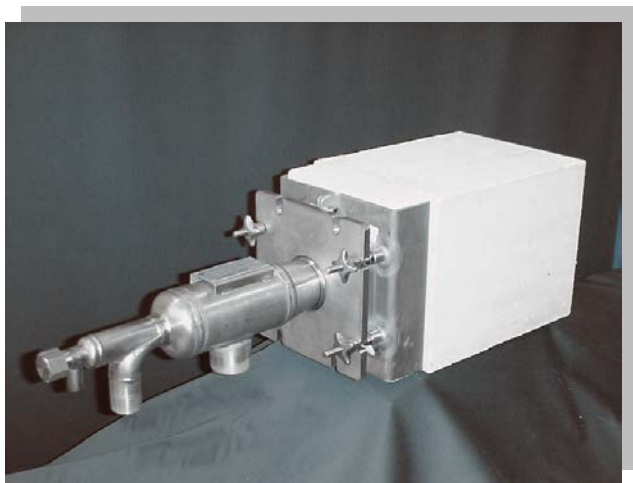
低NO_x型双换热器辐射管烧嘴RT272系列:

- ✓ 烟气卷吸低NO_x控制技术
- ✓ 双换热器设计, 逆向流换热, 更高的热效率
- ✓ 适合内径为DN150-200的U型、W型辐射管使用
- ✓ 高效稳定的燃烧性能
- ✓ 更为均匀的辐射管运行温度
- ✓ 功率范围70KW-160KW
- ✓ 适用于连续退火炉、连续热镀锌退火炉及任何其他需要间接加热的场合

Lower NO_x dual heat exchanger RT burner RT272:

- ✓ FGR lower NO_x control technology
- ✓ Double heat exchanger, reverse flow heat exchanging for higher efficiency
- ✓ Suitable for U or W tube with ID :DN150-200
- ✓ Excellent flame stability
- ✓ Better tube temperature uniformity
- ✓ Capacity :70KW-160KW
- ✓ Application for continous annealing furance for CGL and CAL, any indirect heating process etc

7. 全氧烧嘴 Oxy-fuel Burner



全氧烧嘴XJ410系列:

- ✓ 低NO_x控制技术
- ✓ 强辐射型火焰
- ✓ 燃烧热效率高达78%

- ✓ 烟气量比空气燃烧降低75%
- ✓ 功率范围1000KW-6000KW
- ✓ 适用于熔铝炉、回转炉、加热炉、玻璃窑炉、陶瓷窑等高温场合

Oxygen fuel burner XJ410:

- ✓ Lower NOx emission
- ✓ Very intensive radiant flame
- ✓ Available efficiency up to 78%
- ✓ Exhaust gas 75% decrease vs air combustion
- ✓ Capacity :1000KW-6000KW
- ✓ Application for melting furnace, rotary furnace, reheating furnace, glass melting, ceramics kiln etc

8. 点火烧嘴 Pilot Burner



高性能点火枪 RP300 系列:

- ✓ 高速刚性铅笔形火焰
- ✓ 预混燃烧
- ✓ 100%点火成功率
- ✓ 功率规格: 15KW, 30KW
- ✓ 燃料: 天然气、LPG、煤气等
- ✓ 适用于: 蓄热式烧嘴、各种常规烧嘴 (可定制设计)

High performance pilot burner RP300:

- ✓ Rigid pencil profile flame
- ✓ Pre-mixing combustion technology
- ✓ 100% ignition success rate
- ✓ Capacity :15KW, 30KW
- ✓ Available for natural gas, LPG, producer gas etc
- ✓ Application for regenerative burner, various conventional burner (customization)

9. 高性能换向阀 High performance Cycle Valve



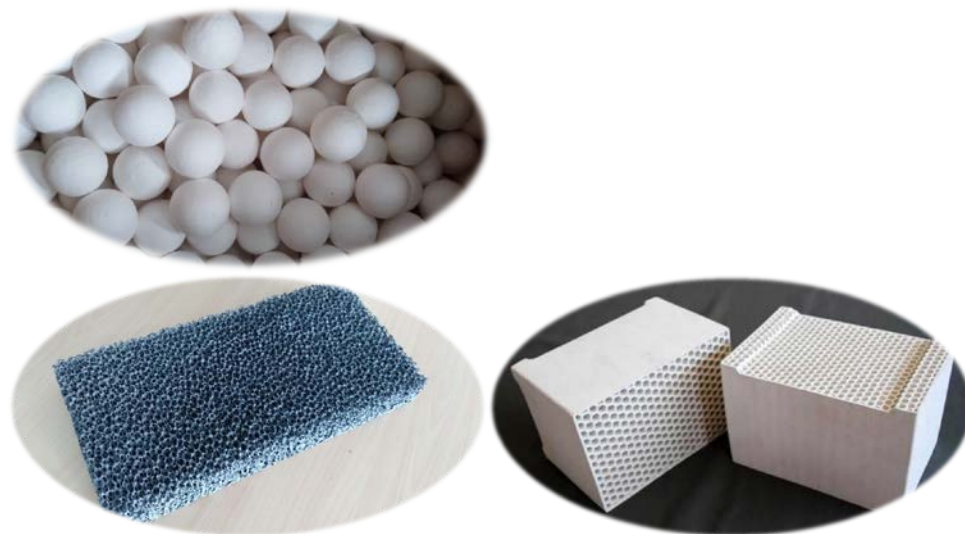
高性能换向阀 CV500 系列:

- ✓ 坚固耐用的球铁阀体
- ✓ 不锈钢阀板（碳钢可选）
- ✓ 进口双接近开关（打开/关闭）
- ✓ 进口双行程气动执行器
- ✓ 进口自润滑阀轴密封填料
- ✓ 有效换向寿命 ≥ 500 万次
- ✓ 尺寸规格：DN150-600
- ✓ 适用于：空气换向、烟气换向或其他任何需要自动开/闭控制的管路

High performance cycle valve CV500:

- ✓ Rugged casting valve body
- ✓ Stainless steel valve disc (optional for Carbon steel)
- ✓ Two proximity switches (open/close)
- ✓ Two stroke pneumatic actuator
- ✓ Available working life ≥ 5 million cycles
- ✓ Available size : DN150-600
- ✓ Suitable for air cycling, exhaust gas cycling and any other similar applications

10. 蓄热体 Heat Exchanging Media



刚玉级蓄热小球 MB560 系列:

- ✓ 烧结刚玉, $\text{Al}_2\text{O}_3 \geq 99.7\%$
- ✓ 高密度: $3.6\text{kg}/\text{cm}^3$, 低开口气孔率: 1.5%
- ✓ 球形尺寸规则, 表面平滑
- ✓ 优良的耐腐蚀性能
- ✓ 优良的抗热振性能
- ✓ 年破碎流损率 $\leq 10\%$
- ✓ 最大适用温度 1800°C
- ✓ 根据加热工艺不同, 可另提供 SIC 泡沫陶瓷、蜂窝体蓄热体

High purity media ball MB560:

- ✓ Tabular alumina, $\text{Al}_2\text{O}_3 \geq 99.7\%$
- ✓ High density : $3.6\text{kg}/\text{cm}^3$, lower apparent porosity: 1.5%
- ✓ Smooth surface and regular size
- ✓ Excellent corrosion stability
- ✓ High thermal shock resistance
- ✓ Yearly crush loss $\leq 10\%$
- ✓ Maximum use temperature : 1800°C
- ✓ Other alternative media : Honeycomb, SIC foamed ceramics

11. 燃气阀组 Gas Valve Train



- 点火预混阀组 PGT610 系列:
 - ✓ 自动实现点火空气、燃气的预混合
 - ✓ 自动调节点火空燃比例
 - ✓ 进口比例阀及电磁阀, 运行安全可靠
 - ✓ 功率规格: 15KW, 30KW
- Pilot premix gas train PGT610:
 - ✓ Air-Gas premixing is done automatically
 - ✓ Air-gas ratio is regulated automatically
 - ✓ Imported ratio balance valve, more reliable
 - ✓ Capacity: 15KW, 30KW



- 主燃气阀组 MGT620 系列:
 - ✓ 自动压力调节
 - ✓ 高低压力安全联锁
 - ✓ 自动过压放散
 - ✓ 双安全自动切断阀
 - ✓ 符合 NFPA86-2011 和 EN746-2 安全设计规范
 - ✓ 功率规格: 1000-10000KW
- Main gas valve train MGT620:
 - ✓ Automatic pressure regulation
 - ✓ Pressure high/low switch
 - ✓ Automatic gas relief when overpressure
 - ✓ Double automatic safety shutoff valve
 - ✓ Compliance with NFPA86-2011 or EN746-2
 - ✓ Capacity: 1000KW-10000KW

12. 集成燃烧控制系统 Integrated Control System





新一代集成燃烧控制系统 CS9110 系列:

- ✓ 首次将燃烧安全控制和 PLC 合为一体
- ✓ 单平台，模块化设计
- ✓ 基于网页浏览器模式编程的触摸屏
- ✓ 支持多种通讯协议：BACNET、MODBUS、IP
- ✓ 全球安全认证：UL 证书，SIL3
- ✓ 快速针对任何加热工艺应用量身定制解决方案
- ✓ 基于 HONEYWELL SLATE 技术

New generation of integrated combustion control system CS9110:

- ✓ Revolutionary integration of combustion safety and PLC
- ✓ In a single, modular platform
- ✓ Touch screen based on web editor technology
- ✓ Support multiple communication protocols BACNET、MODBUS、IP
- ✓ Global security certification : UL, SIL3
- ✓ Quickly customizing application solution for various heating process
- ✓ Based on HONEYWELL SLATE

● 我们客户 Our Customer:



● 诚邀加盟 Invitation

斯世燃烧®全国范围内诚招低NO_x烧嘴和蓄热式烧嘴区域代理商和项目代理商，品质至上、诚信为重、科技领先，我们期待与您共同演绎精彩！

明天的绿水青山，让我们携手斯世燃烧®共同去实现！



You are invited to market for our lower NO_x burner and regenerative burner together with Sword combustion. Let us share the future success together!

● 联系我们 Contact us



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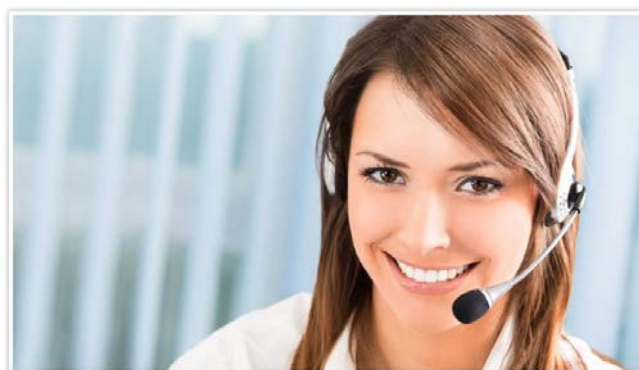
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