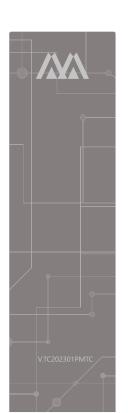
MODENA 摩德娜[®]

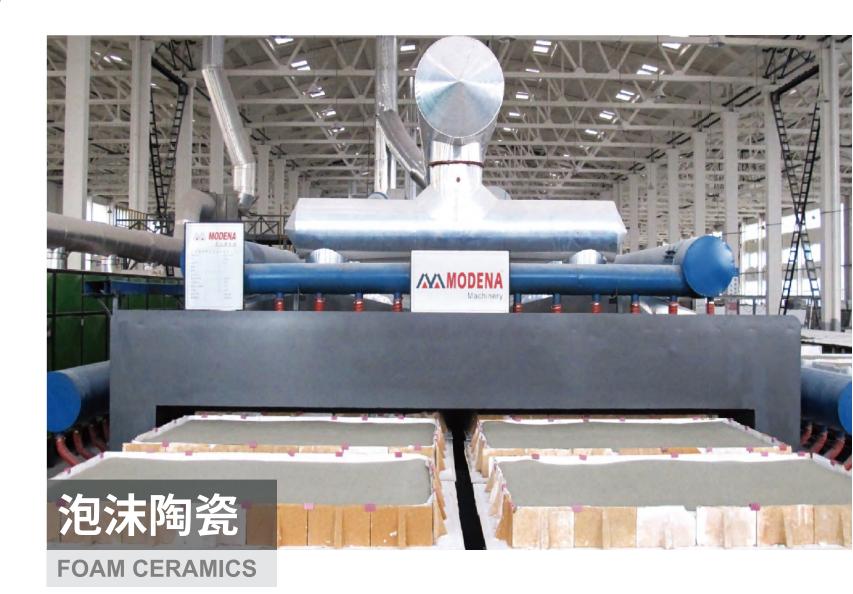




广东摩德娜科技股份有限公司 MODENA TECHNOLOGY LIMITED

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国家高新技术企业 欧盟CE安全认证 中国窑炉协会理事长单位

National High-Tech Enterprise CE Safety Certificate of European Union Presidential Unit of China Kiln Association







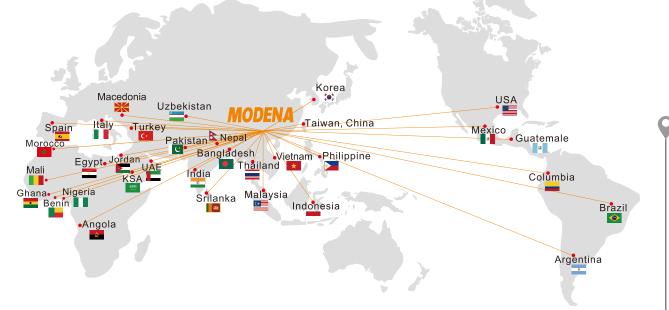


广东摩德娜科技股份有限公司

Defining the highest standard 定义高标准

增加中.....

来自世界各地的肯定 APPROVAL FROM ALL **OVER THE WORLD**



佛山市摩德娜机械有

限公司(广东摩德娜

科技股份有限公司前

Modena Machinery

Co.,Ltd.(predecess

身) 注册成立。

Foshan City

or of Modena

Technology Itd.)

was established.

摩德娜全资子公司新 兴县摩德娜机械有限 公司(占地150亩)在 广东省云浮市新兴县 新城工业园奠基。

Wholly-owned subsidiary of Modena, Xinxing Modena Machinery Limited, laid its foundation in Xincheng Industrial Park in Xinxing

Guang-dong

Province, covers

100,000sqm area.

佛山市摩德娜机械有

限公司通过CE认证,

同年获评定为"广东

省高新技术企业"。

Modena qualified fo

Provincial new hi-

ech enterprise"

CE certification

and ranked as

3000平方米的新办公

New office building

of 3,000 m² put into

大楼投入使用。

operation

awarded as "National Key and New Product" by Town, Yunfu City

摩德娜 MFS-305型大规 格抛光砖用高效节能 🔾 宽体窑获国家科学技 摩德娜自主研发辊道器 术部评定为"国家重 新型节能系统RCH获得 点新产品" 国家技术专利 (ZL201510927025.0) Modena's MFS-305 high-efficiency wide-body kiln for polished tiles was

the Ministry of

Science and

Technology

The very first Doubledecker kiln for largeformat sintered slab production line in Asia supplied by Modena to LIOLI, was put into production successfully

摩德娜成功研发并推出 新型电子空燃比(ADC)系 统并获得国家专利 (ZL201711461351. 2) 。 极大程度地赋予辊道窑 以更大的生产弹性和更 高程度的自动化水平, 并在能耗上达到了 390kcal/kg(瓷质砖), 为国际先进水平。

Modena researched

and developed its all-

new Air/Gas Smart

Control system (ADC) and obtained National Patent (No. ZL201711461351.2). The ADC system empowers the roller kiln with more productivity and higher level of automation. gas consumption eaches 390kcal/kg (for vitrified products) which is at the international leading

level.

亚洲首条双层大规格岩板 窑炉生产线在印度LIOLI工 厂一次性投产成功,整线 热工设备由摩德娜提供。

The very first Doubledecker kiln for largeformat sintered slab production line in Asia supplied by Modena to LIOLI, was put into production successfully

有双层岩板窑炉(超过9 条)均为摩德娜制造。 The year of 2020 is the year of Sintered Slab in

> China, Modena's **INFINITY** series thermal equipment (the Double-decker kilns and multilayer dryers) enjoyed the most popularity from the top brands (Monalisa Donapena, Goldmedal etc.). Till September 2020 all the Double-decker kilns for sintered slab in Asia are provided by Modena (more than 9 lines).

在中国岩板爆发的元年,

摩德娜得到多家国内陶瓷

头部企业(蒙娜丽莎, 东鹏

和金牌等)的青睐,供应多

条INFINITY系列双层岩板窑

2020年9月,亚洲区域的所

炉和多层干燥器。截止

かり 炉火纯青 Mastered Fire

氢能应用战略合作,共 同开发陶瓷行业低碳燃 烧技术。此举不仅响应 国家"双碳"目标,更 推动窑炉清洁能源结构 的革命性突破, 为全球 陶瓷产业低碳发展提供 了创新解决方案。

Modena and Honeywell

established a strategic

摩德娜与霍尼韦尔达成 🍳

自成立以来,摩德娜已为海内外市场客户提供了过千条陶瓷生产线,均得到了客户的认可。数字还在继续

More than 1,000 production lines have been successfully supplied by Modena in both domestic and

overseas market and approved by the customers. And the counting still goes on

在后疫情时代, 摩德娜整

体营业收入创下历史记

录。在出口市场尤为突

出,3352个货柜的年度出

货量冠绝行业,覆盖全球

各大陶瓷产区,且以"全

窑型"的全面数据回答了

In the post epidemic era,

It is particularly prominent

in the overseas market.

The annual shipment of

3,352 containers is the

largest in the industry.

covering all major ceram

zones in the world, and

guestionnaire of the new

era with the a Full Slam of

has answered the

kiln models

Modena set a historical

新时代的问卷。

partnership in hydrogen energy applications to jointly develop lowcarbon combustion technologies for the ceramic industry. This initiative not only aligns with China's "Dual Carbon" goals but also drives a revolutionary breakthrough in the clean energy structure of kilns, providing innovative solutions fo the global ceramic industry's low-carbon

development.

摩德娜与新玻尔合作的 10万m²/天超大产量中板 窑炉生产线成功实现规 模化量产,通过创新的 生产架构和优化的热工 系统, 提供了更高效 率、更稳定的生产解决 方案, 创下全球窑炉单 线产能新纪录!

Engineered Excellence

Modena and XinBoer successfully achieved mass production with their groundbreaking 100,000 m²/day porcelain tile kiln production line Featuring an innovative production architecture and optimized thermal system, this project delivers unprecedented efficiency and production stability, setting a new world record for single-line kiln capacity in the

ceramic industry

摩德娜与赣锋锂业合作 的碳酸锂项目成功启 动,通过独特的连续煅 烧方式实现矿物中锂元 素的释放与转化, 展现 了摩德娜技术的跨界应 用,标志着摩德娜向多 元化热工装备服务商的 转型迈出关键一步。

Modena and Ganfeno Lithium successfully launched their lithium carbonate project. The innovative continuous calcination technology enables efficient lithium extraction and conversion demonstrating Modena's cross-industry technological capabilities. This milestone marks a crucial step in Modena's transformation into a diversified thermal equipment solutions provider.

2003 2008 2010 2011 2012 2015 2017 2018 2020 2021 2022 2023 2024

定义高标准



广东摩德娜科技股份有限公司(原佛山市摩德娜机械有限公司,以下简称"公司")成立于2003年,是一家专业从事陶瓷机械设备研发、生产、销售和售后服务的高新技术企业。摩德娜是中国领先的陶瓷生产整厂设备供应商,以干燥和烧成设备为核心,同时配套施釉输送设备,带动整线成套陶瓷生产装备出口。产品除了销往全国中高端市场外,还远销印度、越南、美国、泰国、韩国、台湾地区、印尼、马来西亚、孟加拉国、巴基斯坦、土耳其、沙特阿拉伯、尼泊尔、约旦、加纳、阿联酋、埃及、墨西哥、哥伦比亚等国家和地区,为中国陶瓷机械,尤其是烧成设备在国际市场上赢得了良好的品牌和声誉,连续多年成为中国最大的窑炉和陶瓷整线生产装备出口企业。

公司国际化的专业队伍、先进的核心技术、良好的运作管理和服务、高性价比的产品,在国际市场上具有很强的竞争能力。公司始终不忘企业在社会中的责任,一直以节能减排、绿色环保为发展方向,通过节能减排技术推动行业发展和产业升级,努力推动中国陶机走向国际市场,成为世界一流的节能环保建材成套装备企业。



Modena Technology Limited (formerly Foshan City Modena Machinery Co., Ltd.) was founded in 2003 as a high-tech enterprise specializing in the R&D, manufacturing, sales and after-sale service of ceramic machinery and equipment. Being a leading supplier of ceramic kilns in China, our main products include drying and firing equipment, with the glazing and conveying equipment as supporting products, both of which have promoted the exports of complete plants for ceramic manufacturing. Besides the domestic middle & high-end markets, Modena also exports its products to India, Vietnam, the U.S., Thailand, Taiwan, Indonesia, Malaysia, Bangladesh, Pakistan, Turkey, Saudi Arabia, Nepal, Jordan, Ghana, the U.A.E, Egypt, Mexico, Colombia, etc. Thus we have won a reputable brand name in the international market for Chinese ceramic machinery, especially the firing equipment. We are the largest Chinese enterprise exporting kilns and complete plants for years.

The international and professional team equipped with advanced core technology, combined with excellent operational management and service as well as the cost-effective products have made Modena highly competitive in the international market. Modena has been focusing on the social responsibility, being energy-saving and green-oriented. We drive the industrial development and evolution by our energy-saving technology and we are committed to promote Chinese ceramic machinery in the international markets. Modena has now become a first-class company supplying energy-saving building materials outfits.



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MODENA

| ■■■■■ FOAM CERAMICS INTRODUCTION /产品简介

世界上多孔陶瓷的发展始于二十世纪七十年代,是陶瓷材料的一个类别,是一种含有较多空气孔洞的无机非金属固体材料。它是通过利用材料的空洞结构,表面结构,以及本身材质特性来达到应用所需的力、热、声、光、电、磁等物理和化学性能。一般来说,气孔在多孔陶瓷体中所占的比例在20%~95%之间。根据气孔类型划分,又可将其分为开孔型和闭孔型。在性能上,它不仅具有普通陶瓷固有的化学稳定性好,刚度高、硬度大、耐高温、耐腐蚀、耐磨损、机械强度高、易再生等优异性能。还因其特有的孔洞结构,而具有比普通陶瓷更胜一筹的应用价值。如密度低、重量轻、比表面积大、导热系数低、韧性强等。

相比较而言,陶瓷多孔材料,在理性化技术性能和经济性方面所显现出的综合性能优势,是金属材料与有机高分子材料所形成的多孔体无法相比的。

由于多孔泡沫陶瓷材料具有十分突出的经济技术优势,因此成为一类具有巨大应用潜力的材料,市场开发应用前景广阔,在世界范围内成为众多科研机构和生产企业相继开发的热点和对象,并广泛应用于化工、环保、能源、治今、电子、石油、建筑、军工等领域,具有十分显著的经济社会效益。

Foam ceramics began its development from 1970s. It's a category of ceramic materials which more specifically, is a kind of inorganic non – metallic solid materials with many air holes. It is through the use of material hollow structure, surface structure and its own material properties to achieve the application of the required force, heat, sound, light, electricity, magnetism and other physical and chemical properties. Generally, the proportion of air hole in foam ceramics body is 20%–95%. According to the type of air hole, it can be divided into open–cell and closed–cell. In performance, it has not only the inherent excellent characteristics of normal ceramic like good chemical stability, high stiffness and hardness, high temperature resistance, corrosion resistance, wear resistance, high mechanical strength, and easy regeneration, but also better application value because of its unique vesicular structure such as low density, light weight, large surface area, low thermal conductivity, high toughness, etc..

In contrast, the foam ceramics, as demonstrated in the overall performance advantage in rational technical performance and economic performance, is the metal material with organic polymer material formed by the porous body cannot be compared.

Since the foam ceramics material has a very prominent economic and technical advantages, it became a kind of material with great potential in market development and application prospects and a hot spot and object in the worldwide for lots of scientific research institutions and production enterprises. And it's widely used in many industry areas like chemical, environmental protection, energy, metallurgy, electricity, petroleum, construction and military etc., with very significant economic and social benefits.

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IIIIIII FEATURES AND VALUE

/产品特性及推广价值

经济效益显著/Remarkable economic benefits

闭孔泡沫陶瓷材料应用范围广,市场潜力巨大,生产成本低,性价比突出。明显的和潜在的应用前景光明,持续时间长,具有永续经营的美好前景,会为经营者带来丰厚的经济效益。

Closed-cell Foam Ceramics has wide application range, great market potential, low production cost and outstanding performance to price ratio. Obvious and potential application prospects, long duration, good prospects for sustainable management, which will bring great economic benefits for operators.

泡沫陶瓷材料的优异性能/Excellent properties of foam ceramics materials

(01)轻质、高强、高硬

Light, Strong and Hard

(02)高效、可靠的保温与绝热性能

Efficient and reliable heat preservation and insulation properties

(03)突出的防火阻燃及耐高温性能

Outstanding fire retardant and high temperature resistance

(04)防水、防潮、抗渗漏----可靠的刚性防水材料

Waterproof, moisture-proof, anti leakage - reliable rigid waterproof material

(05)优异的化学稳定性

Excellent chemical stability

(06) 耐冻融、耐老化、耐候性强----自然使用寿命无上限

Resistance to freeze-thaw, resistance to aging, resistance to tough weather -- -- Natural life without limit

(07)显著的吸声隔音降噪性能

Significant sound absorption noise reduction performance

(08)加工性能优异,尺寸稳定性一致性好,与其它材料的和易性强 Excellent processing performance, good consistency of dimensional stability, strong easiness with other materials

(09) 宽泛的温度使用范围

Extensive temperature range

(10)优异的安全性、卫生性、防护性、高度绿色环保型材料

Excellent safety, wholesomeness, protective, properties highly green and environmental friendly materials



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闭孔泡沫陶瓷与国内外同类相关产品的比较

Comparison between Closed – cell Foam Ceramics and Related Products at Home and Abroad

闭孔泡沫陶瓷与相关材料经济技术及环保性能比较:

Closed-cell foam ceramics and related materials, economic and environmental performance comparison:

序 号 No.	材 料 Material 项 目 Project	聚氨酯 Polyurethane	玻璃棉 Glass wool	加气 混凝土 Aerated concrete	泡沫玻璃 Foam glass	闭孔 泡沫陶瓷 Closed cell foam ceramic	说 明 Remark
01	密度(容量)	低 /Low	低 /Low	中 /Medium	较低 /Lower	较低 /Lower	
	kg/m³ Density(Volume) kg/m3	30~300	80~150	300~800	100~500	190~520	
02	抗压强度	低 /Low	低 /Low	较高 /Higher	较低 /Lower	较高 /Higher	
02	Compressive strength Mpa	0.196~	0.01~0.06	3.5~10	0.3	3~9.4	
03	吸水率 Water	高 /High	高 /High	很高 / Very high	低 /Low	低 /Low	
	absorption%	1.5~6	0.07~4	70~80	0.7(Average)	0.8	
04	导热系数 Thermal	低 /Low	较低 /Lower	高 /High	较低 /Lower	较低 /Lower	泡沫玻璃建筑 用指标 /Foam
	Conductivity W/(m.k	0.024~0.035	0.05~0.58	0.14~0.3	0.058~0.062	0.048~0.057	glass building indicators
05	使用温度范围 temperature	很窄 /Very narrow	较宽/Wide		宽 /Wide	很宽 /very Wide	
	range ℃	-20~110	< 4 00		270~450	270~1000	
06	燃烧性能 Combustion performance	易燃 /Flammable	不燃 /Not flammable	不燃 /Not flammable	不燃 /Not flammable	不燃 /Not flammable	
	periormance			Α	Α	Α	
07	防火性能 Fire performance	极差 /Worst	较好 /Better 〈400° C 时材料塌缩 /Materia collapses	较好/Better	较好 /Better 便用温度低 /Low operating temperature	很强 /High 便用温度高 /High operating temperature	
08	防水性能 Waterproof performance	较差 /worse	差 /Bad	差 /Bad	强 /Better	强 /Better	
09	抗光辐射 (紫外线) Anti-light radiation (UV)	差 /Bad	良 /Good	良/Good	优/Better	优 /Better	

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10	耐老化 Resistance to aging	差 /Bad	良 /Good	良 /Good	优 /Better	优 /Better	
11	耐候性 Resistance to tough weather	差 /Bad	良 /Good	良 /Good	优/Better	优/Better	
12	抗冲击能力 Impact resistance	差 /Bad	良 /Good	差 /Bad	良/Good	优/Better	抗外界 破坏能力 Resistance to external damage
13	抗裂性 Crack resistance						
14	燃烧烟密度 Density of burning smoke	较强 /Better	无 /NO	无 /NO	无 /NO	无 /NO	燃烧产生有机 毒烟致人死亡 The burning of the smoke causes death
15	化学稳定性 Chemical stability	差 /Bad	优 /Better	良/Good	优 /Better	优/Better	
16	耐化学性 Chemical resistance	不耐酸、酮 /Not acid, copper	良 /Good	差 /Bad	优 /Better 不耐氢氟酸 /Not Hydrofluoric acid	优 /Better	耐化学品及 化学溶剂性能 Resistant chemicals and chemical solvents
17	性能 可靠性 Performance reliability	衰减 /attenuation 180天后 丧失30% /30% lost after 180 days	衰减 /attenuation 不稳定 /Not stable	衰减 /attenuation 不稳定 /Not stable	高 /High	高 /High	服务期内,技术 指标是否一致 During the service period, whether the technical indicators are consistent
18	寿命(年) 理论值 Life theoretical value(Year)	短 /Short	短 /Short	较长	长 /Long	超长,无理 论上限值 Super long without limit	除陶瓷材料外, 很少有材料能与建 筑物同寿命或超长
		20	10~15	/Longer			In addition to ceramic materials, very few materials with the building with the same life or long
19	材料和易性 Material workability	良/Good	差 /Bad	良 /Good	优 /Better	优/Better	与其它材料 的粘接性能 Adhesive properties with other materials
20	施工工艺 Construction technology	复杂 施工工艺 /complex	复杂 /complex	简单容易 掌握	简单容易 掌握	极简单 掌握	施工的难易程度 技术、质量要求 The ease of
		很难掌握 /Different to handle	很难掌握 /Different to handle	/Easy to handle	/Easy to handle	/very easy to handle	construction. Technical, quality requirements
21	应用条件 Application conditions	干燥、低温 /Dry,low temperature	干燥、低温 /Dry,low temperature	干燥 /Dry	全天候 全地域 All-weather and everywhere	全天候 全地域 All-weather and everywhere	

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22	材料明显 缺陷 Material obvious defects	易燃、易老化寿命短不耐热 可靠性低 /Flammable, easy aging, short life, not heat, low reliability	吸水率高 松垮、脱落 指标衰減 /High water absorption, loose, fall off, indicators of attenuation	裂、吸水率高 渗漏、寿命短 抗冻差 /Easy to crack, high water absorption, leakage, short life, frost resistance	易裂 强度低 /Easy to crack, low strength	尚无/No		
23	保温体系 缺陷 Insulation system defects	造价高、难度大 火灾可靠性 稳定性差 /High cost, difficulty, fire reliability and poor stability	造价高 难度大 可靠性性低 /High cost, difficulty, low reliability	易裂、空鼓 渗透墙体厚 /Easy to crack, hollowing through the wall thick	造价较高 裂、剥落 /High cost Cracked, peeling off	尚无/No		
24	保温结构 组成 Insulation structure	复杂 /Complex	复杂 /Complex	简单 /Easy	较复杂 /complex	较简单 /Easy		
25	卫生性 安全性 /Health, safety	火灾 有害挥发物 /Fire harmful volatiles	有害纤维粉尘 对人有严重危害 /Harmful fiber dust has serious harm to people	优 /Better	优 /Better	优 /Better	对人身安全 的影响 /The impac on persona safety	
26	对环境影响 Impact on the environment	有污染、难将解 难回收 有生态危害 /There are pollution, difficult to degradation, difficult to recover, thereare ecological hazards	有污染、难将解 难回收 有生态危害 /There are pollution, difficult to degradation, difficult to recover, thereare coological hazards	无/No	无/No	无/No		
27	产品生产 工艺 /Product production process	复杂 /Complex	复杂 /Complex	简单 /Easy	较复杂 /complex	简单 /Easy		
0.0	产品生产成本 (元/㎡) Product	高 /High	高 /High	低 /Low	高 /High	低 /Low		
28	production costs (CNY/m2)	costs		150~200	100 / = 0 11	150~200	25~30	
	生产高耗 (kgce) Production energy consumption (kgce)	生产高耗 (kace)	高 /High	很高 / Very high	二次耗能	较高 /Higher	较低 /Lower	
29		三次耗能产品 /Three time energy consumption products	64.6~609.5	/Secondary energy consumption	二次耗能 120 /Secondary energy consumption 120	一次耗能58 /Secondary energy consumption 58		
30	保温体系 造价 Insulation system cost	高 /High	高 /High	低 /Low	高 /High	低 /Low		
31	保温体系 寿命维修率 Maintenance system life maintenance rate	远低于建筑 寿命维修率高 /Much lower than the construction life of high maintenance rate	远低于建筑 寿命维修率高 /Much lower than the construction life of high maintenance rate	寿命短 维修率高 /Life off the high maintenance rate	同寿命 维修率低 /Low maintenance with the same life	超寿命 维修率低 /Long life maintenance rate is low		

序 号 No.	材料 Material 项目 Project	聚氨酯 Polyurethane	玻璃棉 Glass wool	加气 混凝土 Aerated concrete	泡沫玻璃 Foam glass	闭孔 泡沫陶瓷 Closed cell foam ceramic	说 明 Remark
32	文化内涵 潜质 Cultural connotation potential	低 /Low	低 /Low	低 /Low	尚可/Good	深厚 /Best	
33	循环再 利用程度 Recycling degree	低 /Low	低 /Low	低 /Low	极高 /Very High	极高 /Very High	

通过与上述4种常用材料综合性能比较, "专利闭孔泡沫陶瓷"具有下述明显的单项比较优势。

- (01)相同容量(密度)条件下,本材料机械强度较高,硬度最大。
- (02)相同强度条件下,本材料密度最低。
- (03)任何环境条件下,吸水率、吸湿率、含水率最低。
- (04)使用温度最高,防火阻燃能力最强。
- (05)化学稳定性,温度稳定性最好。
- (06) 耐久性, 耐候性最好。
- (07)材料寿命(设计使用时间)最长。

Compared with the above four kinds of commonly used materials, the performance of "patented closed-cell foam ceramics" has the following obvious advantages of a single comparison.

- (01) In the same capacity (density) conditions, the mechanical strength of this material is higher, the hardness is the highest.
- (02) In the same strength conditions, density of material is the lowest.
- (03) Under any environmental conditions, water absorption, moisture absorption, moisture content are lowest.
- (04) The highest working temperature and the strongest fire retardant.
- (05) Chemical stability, temperature stability are the best.
- (06) The best durability, weather ability.
- (07) The longest material life designed using time.

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- (08)保温隔热性能可靠性最好,即使用于北方寒冷地区保温,又适用于南方,夏热冬暖隔热。
- (09)环境适应能力最强。
- (10)最具安全性,无毒、无害。
- (11)各项使用性能的一致性最好。
- (12)现场施工性和施工适应性最好。
- (13)性价比最突出。
- (14)质量事故发生几率最低。
- (15)系统综合造价最低,整体性好。
- (16)环境友好特点最显著,全寿命周期高度绿色化。
- (08) Thermal insulation performance and reliability are the best, not only for heat preservation in the cold area in the north, but also hot summer heat insulation for the south.
- (09) The strongest environmental adaptability.
- (10) The most secure, non-toxic, harmless
- (11) The best consistency of use performance.
- (12) The best adaptability of site construction and construction.
- (13) The most prominent price.
- (14) The lowest probability of occurrence of quality accidents.
- (15) The system cost is the lowest cost, good overall.
- (16) Environmentally friendly features are most noticeable and the life cycle is highly green.



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/泡沫陶瓷项目投资和回报

1、整线生产成本分析

1.1原料选择

a. 劣质原料: 抛光废渣、红泥、页岩、粉煤灰、煤渣、玻璃碎片、稀土尾矿、钨矿尾矿;

b. 辅助原料: 钠长石、钾长石、高温砂、滑石、锂长石、 发泡剂、稳泡剂、有机添加剂;

1.2 设备选择:

摩德娜公司提供全套设备及技术服务

1.3 原料成本

产品容重: 150Kg~300Kg/m³;

产品合格率: 80~90%;

一吨料配方原料成本:74~268(元/吨):

最终成品:每吨可生产3~6 m³;

一立方原料成本价格: $28 \sim 51$ 元 / m^3 ;

1.4 制造成本

a. 人工成本: 25元 / m³

b. 燃料成本

(日产合格品 100m^3 耗燃气 7500m^3 ,**燃气**单价3.8元,7500*3.8/100= 285 (元/m 3) 此为2012年江苏某厂的成本,据2013年广西某厂的成本核算,耗气 $45~60~\text{m}^3$ / m 3 产品

c. 水/电/维修成本

总装机容量约500KW, 此项约需150~200元/m³

d. 总生产成本: 538元 / m³

1.5 经济效益

生产制造成本: 538元/m³*330天*100平方米/天=1775.4(万元)

年产值: A、330天*100立方米/天*2500元/m³=8250(万元)

B、330天*400立方米/天*1500元/m³=1.98亿(万元)

生产制造成本占A年产值的21.5%

50%盈利(以A为例): 8250万元*0.5=4125(万元)



MODENA

1. Production Cost Analysis For The Entire Line

1.1 Raw material selection

A. Poor raw materials: polishing waste, red mud, shale, fly ash, cinder, glass debris, rare earth tailings, tungsten ore tailings;

B. Auxiliary raw materials: Sodium feldspar, potassium feldspar, high temperature sand, talc, lithium feldspar, foaming agent, foam stabilizer, organic additives;

1.2 Equipment selection:

Modena offers a full range of equipment and technical services

1.3 Raw material costs

Product bulk density: 150Kg ~ 300Kg / m³;

Product qualification rate: 80 ~ 90%;

Raw materials cost: 74 ~ 268 (RMB / ton);

Final product: can produce 3 ~ 6 m³ per ton;

A cubic raw material cost price: 28 ~ 51 RMB / m³;

1.4 Manufacturing Costs

A. Labor costs: 25 RMB/ m³

B. Fuel costs

(Daily output: 100m^3 , gas consumption: 7500m^3 , gas unit price: 3.8RMB/m^3 , $7500*3.8/100=285\text{RMB/m}^3$)

This is the cost of a factory in Jiangsu in 2012, according to the cost of a factory in Guangxi in 2013, gas consumption $45 \sim 60 \text{ m}^3/\text{ m}^3 \text{ product}$

C. Water / electricity / maintenance costs

The total installed capacity is about 500KW, means about 150 to 200 RMB / m^3

D. Total production cost: 538 RMB / m³

1.5 Economic benefits

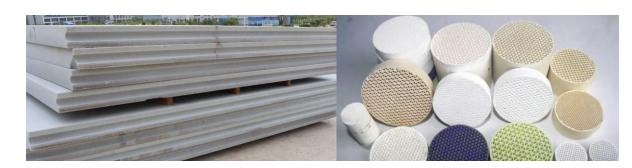
Production costs: 538 RMB / m³* 330 days * 100 square meters / day = 1775.4 (million

Annual output: A, 330 days * 100 cubic meters / day * 2,500 RMB / m³ = 8250 (million RMB)

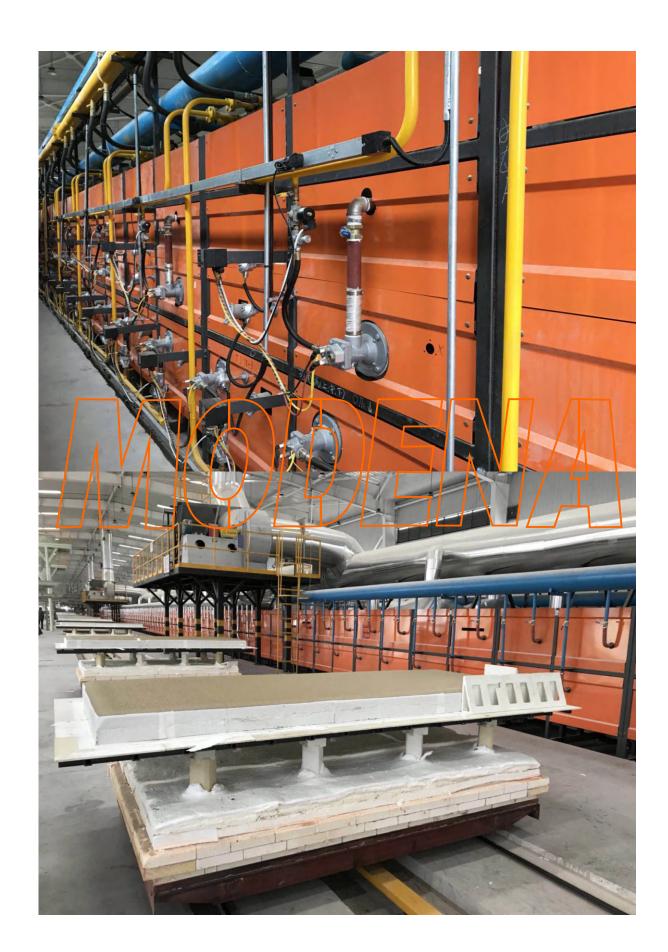
B, 330 days * 400 cubic meters / day * 1500 RMB / m³ = 1.98 (billion RMB)

Production costs accounted for 21.5% of annual production value,

50% profit (A for example): 82.5 million RMB * 0.5 = 4125 (million RMB)



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IIIIIII PRODUCTION PROCESS

/生产工艺

泡沫陶瓷利用工业废料(如抛光废料、粉煤灰、矿渣)、页岩、废泥、长石等原料混 合、球磨、喷雾后经过粉体烧结而成。

Foam ceramics is sintering by powder after process of mixing, ball milling, spraying, by taking use of the industrial waste (i.e. polish waste, fly ash, slag), shale, waste mud, feldspar, and other raw materials.

抛光废料生产泡沫陶瓷工艺

Process for producing foam ceramics by polishing waste materials:

1.湿法 Wet Process















Industrial Waste

Ball Mill (wet) Spray

机械布料 Automatic Granulation Charging

隧道窑烧成 Firing

机械卸板 Tunnel Kiln Automatic Cutting Unloading Sizing

2.干法 Dry Process



工业废渣 Industrial Waste



混料

Mixture (dry)





Mechanical Tunnel Kiln Charging Firing



Mechanical Unloading



Cutting Sizing





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PROJECTS/工程案例

1、江苏一方科技发展有限公司 - 年产保温、防腐板5万立方米生产线 Jiangsu Yifang Technology devlopment Ltd

– Annual Production for Insulation and Anticorrosive panel–50,000 SQM



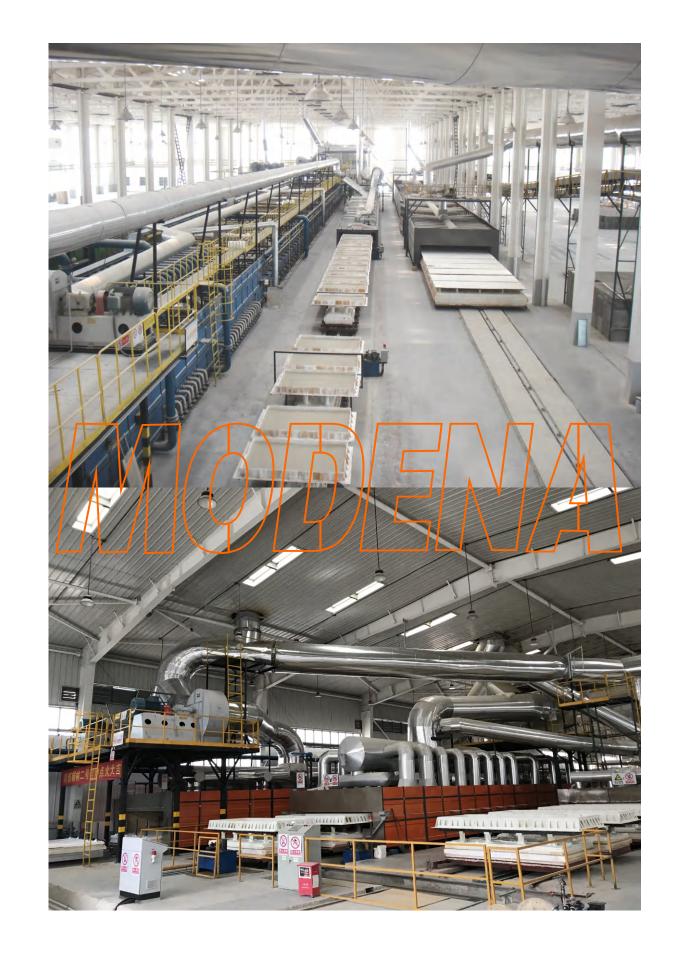
2、广西碳歌环保新材料股份有限公司-年产隔墙板50万平方米生产线 Guangxi TOCO New Environmental Protection Material Co., Ltd. –Annual Production for partition wall panel – 500,000 SQM



3、广西超超新材科技发展有限公司-年产隔墙板50万平方米生产线 Super New Material (Guangxi) Co. Ltd.

- Annual Production for partition wall panel-500,000 SQM





泡沫陶瓷应用案例

APPLICATION OF FOAM CERAMICS





泡沫陶瓷是具有三维空间网架结构的高气孔率的多 孔陶瓷体,其造型犹如钢化了的泡沫塑料或瓷化了 的海绵体。由于它具有气孔率高、比表面积大、抗 热震、耐高温、耐化学腐蚀及良好的机械强度和过 滤吸附性能,可广泛应用于热交换材料,布气材料 汽车尾气装置,净化冶金工业过滤熔融态金属, 热能回收,轻工喷涂行业,工业污水处理,隔热隔 音材料,用作化学催化剂载体,电解隔膜及分离分 散元件等。

Foam ceramic is a high porosity porous ceramic body with a three-dimensional spatial grid structure, its shape is like tempered foam plastic or porcelain sponge body. Due to its high porosity, large specific surface area, thermal shock resistance, high temperature resistance, chemical corrosion resistance and good mechanical strength and filtration adsorption performance, it can be widely used in heat exchange materials, gas distribution materials, automobile exhaust devices, purification metallurgy industry filter molten metal, heat recovery, light industry spraying industry, industrial sewage treatment, heat insulation and sound insulation materials, as a chemical catalyst carrier. Electrolytic diaphragm and separation catalyst carrier. Electrolytic diaphragm and separation dispersion element, etc







稀土尾矿为主料泡沫陶瓷 Rare Earth Tailings Foamed Ceramics



钢铁炉渣为主料泡沫陶瓷 **Steel Furnace Slag Foamed Ceramics**



抛光渣为主料泡沫陶瓷 **Polishing Slag Foamed Ceramics**



双层复合泡沫陶瓷 **Double Layer Composite Foamed Ceramics**

荣誉见证品质 **HONORS WITNESS QUALITY**

























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微孔泡沫陶瓷

Microcellular Foam Ceramics

页岩为主料研发的泡沫陶瓷

Shale Foamed Ceramics