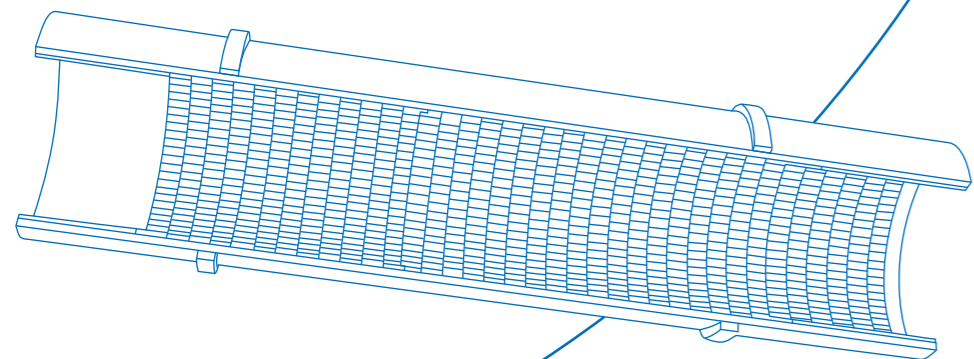
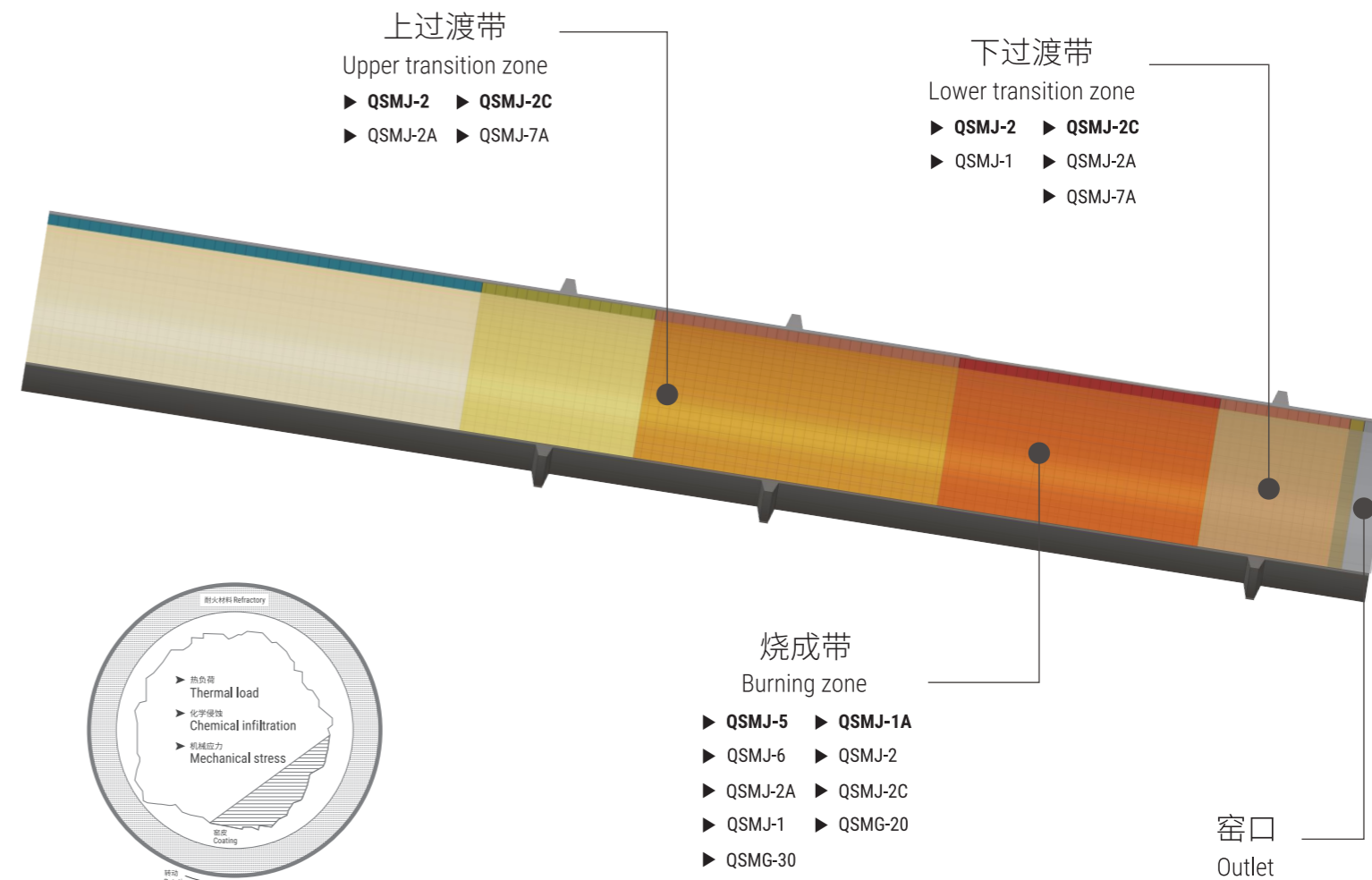


水泥窑用耐火材料

REFRACTORIES FOR CEMENT



1 水泥回转窑 Cement Rotary Kiln



2

产品系列 Product Line



镁铝尖晶石砖

Magnesia-alumina spinel bricks

Grade	MgO	Al ₂ O ₃	Fe ₂ O ₃	CaO	SiO ₂	ZrO ₂	AP	BD	CCS	RUL (T _{0.6})	TSR (950°C air)
材质	%	%	%	%	%	%	%	g/cm ³	MPa	°C	cycle
QSMJ-1	83.1	13.0	0.75	1.4	0.7	0.8	17.0	2.94	45	1700	100
QSMJ-1A	91.1	5.8	0.75	1.4	0.7	--	16.0	2.95	60	1700	100
QSMJ-2	84.7	12.2	0.75	1.4	0.7	--	17.2	2.90	55	1700	100
QSMJ-2A	85.9	11.0	0.75	1.4	0.7	--	16.6	2.95	65	1700	100
QSMJ-2C	86.5	11.0	0.65	1.1	0.5	--	16.0	2.95	65	1700	100
QSMJ-7	81.4	15.5	0.75	1.4	0.7	--	17.0	2.93	55	1700	100
QSMJ-7A	81.4	15.5	0.75	1.4	0.7	--	16.5	2.95	60	1700	100

Apparent porosity 显气孔率 % Bulk density 体积密度 g/cm³ Cold crushing strength (CCS) 常温耐压强度 MPa Refractoriness under load (RUL) 0.2MPa荷重软化开始温度 °C Thermal shock resistance(TSR) 950°C air 热震稳定性 (950 °C风冷) 次

The above properties are typical values based on the production averages and should not be used as the guaranteed specification. Qinghua may make the modification upon the production request. 以上数据为基于长期的生产统计数据得出的典型值，不作为保证值，青花耐火可根据实际生产状况进行调整。

镁铝尖晶石砖QSMJ-2采用高纯镁砂（杂质含量低，C/S≥2）和高档镁铝尖晶石配料，具有良好的高温性能和抗化学侵蚀性，同时较高的尖晶石配入量提高产品韧性和抗热震性。非常适合在水泥窑过渡带使用。国外水泥窑广泛使用二次燃料，窑内化学侵蚀严重，高温区域广，温度波动及氧化还原气氛交替频繁。镁铝尖晶石砖QSMJ-2在烧成带和过渡带使用取得了良好的使用效果。

Made from high purity magnesia (low impurity, C/S≥2) and high-grade magnesia alumina spinel, so it gives excellent high temperature performance and excellent resistance against chemical attack. Higher spinel content improves flexibility and thermal shock resistance. Therefore, it is suitable to be used in transition zones of cement rotary kiln. Cement kilns in Europe widely use alternative fuels which bring about severe chemical erosion, large high temperature area, frequent temperature fluctuation, and frequent conversion between oxidizing and reducing atmosphere in the kiln. QSMJ-2 has achieved good performance in the transition zone and burning zone.



3

产品系列 Product Line



镁铁尖晶石砖

Pleonaste brick

Brand	MgO	Al ₂ O ₃	Fe ₂ O ₃	CaO	SiO ₂	ZrO ₂	AP	BD	CCS	RUL (T _{0.6})	TSR (950°C air)
牌号	%	%	%	%	%	%	%	g/cm ³	MPa	°C	cycle
QSMJ-5	82.3	12.3	2.6	1.4	1.1	--	17.2	2.95	70	1680	150
QSMJ-6	86.5	7.2	3.1	1.5	1.4	--	16.5	2.97	55	1650	100

Apparent porosity 显气孔率 % Bulk density 体积密度 g/cm³ Cold crushing strength (CCS) 常温耐压强度 MPa Refractoriness under load (RUL) 0.2MPa荷重软化开始温度 °C Thermal shock resistance(TSR) 950°C air 热震稳定性 (950 °C风冷) 次

The above properties are typical values based on the production averages and should not be used as the guaranteed specification. Qinghua may make the modification upon the production request. 以上数据为基于长期的生产统计数据得出的典型值，不作为保证值，青花耐火可根据实际生产状况进行调整。

镁铁尖晶石砖QSMJ-5是水泥窑烧成带无铬化产品，不同于国内外其它厂家生产的镁铁尖晶石砖，QSMJ-5采用含铁镁砂和镁铝尖晶石砂为主要原料制成，特殊的合成机理不仅保证产品具有良好的挂窑皮性能，而且还使产品在抗热震性、抗碱性以及导热性能等方面更加突出。尤其在水泥窑次烧成带使用能够达到与主烧成带同步的使用效果。产品自2010年推出至今，经过10多年的历练，数百条窑的使用经验，验证了产品的稳定性和良好的使用效果。

QSMJ-5 is a chrome free product for cement kiln different from hercynite brick produced by other domestic and foreign manufacturers. QSMJ-5 uses magnesia containing high iron and magnesia alumina spinel as the main raw materials. The special mechanism of prefabrication not only ensures a good coating behavior, but also improves the resistance against thermal shock, alkali, and thermal conductivity. Especially in the sub burning zone, QSMJ-5 can reach the same lifetime as it does in the central burning zone. Since the launch in 2010, QSMJ-5 has been used in hundreds of cement kilns and achieved consistent and ideal performance.



4

产品系列 Product Line



水泥窑用镁白云石砖

Magnesia dolomite brick

Grade	MgO	CaO	ZrO ₂	AP	BD	CCS	RUL (T _{0.2})	TSR (950°C air)
材质	%	%	%	%	g/cm ³	MPa	°C	次
QSMG-20	74.0	21.0	1.30	14.0	2.94	60	1700	50
QSMG-30	67.0	29.0	1.35	13.0	2.95	70	1700	50

Apparent porosity 显气孔率 % Bulk density 体积密度 g/cm³ Cold crushing strength (CCS) 常温耐压强度 MPa Refractoriness under load (RUL) 0.2MPa荷重软化开始温度 °C Thermal shock resistance(TSR)950°C air 热震稳定性 (950°C风冷) 次

The above properties are typical values based on the production averages and should not be used as the guaranteed specification. Qinghua may make the modification upon the production request. 以上数据为基于长期的生产统计数据得出的典型值，不作为保证值，青花耐火可根据实际生产状况进行调整。

镁白云石砖以优质镁白云砂为主要原料，加入适量的ZrO₂，在适宜的温度下高温烧成。本产品拥有良好的挂窑皮性能和抗侵蚀性能，适合在高化学负荷的苛刻窑况烧成带使用。

This product series is based on high quality magnesia dolomite clinker, with an addition of zirconia, and burned under proper firing curves. It has excellent coating ability, resistance to chemical attack, and recommended for burning zone of severe chemical infiltration condition.

镁质火泥

Cement mortar

Grade	MgO	Al ₂ O ₃	RSK	BT	GS	GS	Water	BSM	BSM
材质	%	%			%+0.5mm	%-0.088mm	%	110°C × 24h	1400°C × 3h
QN-6	80	10	37	2	0.5	70	28-33	5-20	25-40

RSK (Refractories SK) 耐火度 BT(Binding Time/min) 粘结时间 / 分 GS (Grain Size) %+0.5mm 粒度 GS(Grain Size) % -0.088mm 粒度 BSM(Binding Strength Mpa) 110 °C × 24h 粘结强度 Water % 加水量

The above properties are typical values based on the production averages and should not be used as the guaranteed specification. Qinghua may make the modification upon the production request. 以上数据为基于长期的生产统计数据得出的典型值，不作为保证值，青花耐火可根据实际生产状况进行调整。

5

公司简介 About Us



青花耐火材料股份有限公司，是集科、工、贸一体化的亚太地区大型碱性耐火材料生产企业。耐火材料年生产能力200万吨以上，其中各种定型制品约45万吨。青花耐火是目前国际上在优质镁质资源储量、设施装备水平、加工制造规模、科技研发实力、产品质量及服务水平均处于世界前列的，服务于冶金、建材行业的碱性耐火材料生产企业之一；公司能够根据客户的需求，为各种规格的水泥窑，提供烧成带和过渡带使用的各种碱性耐材产品。并为100多家国内、外水泥建材行业客户长期稳定供货；有口皆碑的水泥窑使用业绩以及不断提升的综合服务能力，为客户创造持续增长的价值，被很多国内外大型水泥集团选定为战略供应商和可信赖的合作伙伴。

Qinghua Refractories Co., Ltd is a leading basic refractory manufacturer in the Asia-Pacific region integrated with research, industry and trading. The annual production capacity exceeds two million tons of refractory materials, of which 450,000 tons are shaped refractory products. Based on its rich resources of high quality magnesite, advanced facilities and equipment, large processing and manufacturing scale, strong research and development capability, consistent product quality, and high service level, Qinghua has become one of the leading refractory manufacturers devoting to metallurgy and building materials industries. Being completely customer-oriented, our company offered various basic bricks applied in the burning zone and transitional zone on different types of cement rotary kilns. We have been supplying bricks to over 100 domestic and overseas cement customers. With excellent performance in cement kilns and high level service, Qinghua Refractories contributes increasing value to customers and thus has become the strategic supplier and reliable partner of many large cement groups in the world.

Since 1984



Qinghua Group

6

生产基地
Manufacturing facilities



矿产储量约15500万吨
菱镁石约13200万吨
镁白云石约2300万吨
Mineral reserves: 155,000,000 tons
Magnesite: 132,000,000 tons
Mangesia dolomite: 23,000,000 tons



金桥镁砖厂
Jinqiao Complex



自动称量系统
Automatic weighing cars

7

生产基地
Manufacturing facilities



德国强力混砂机
German Intensive Mixers



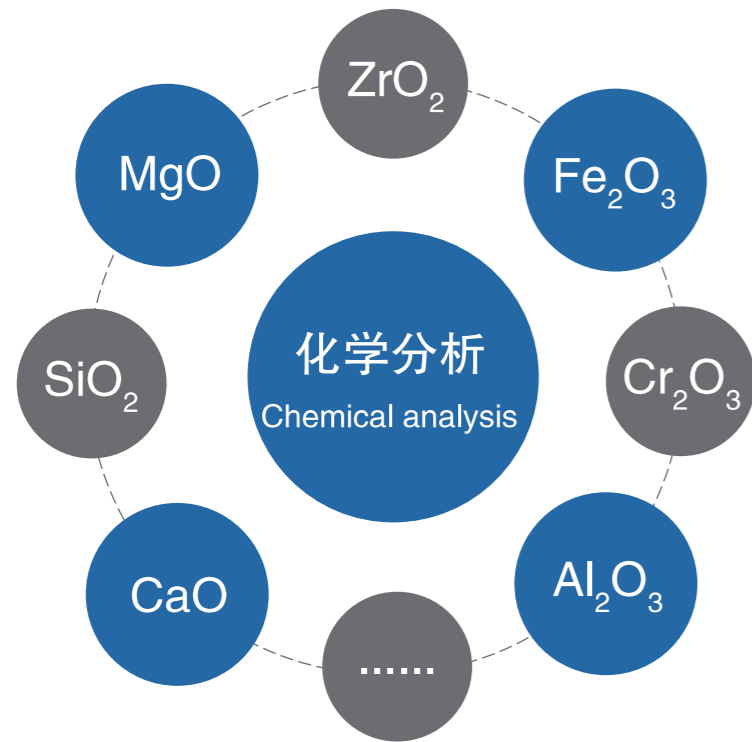
德国2000-2500吨液压机
German 2000-2500 ton Hydraulic Presses

日本2000吨液压机
Japanese 2000 ton Hydraulic Presses

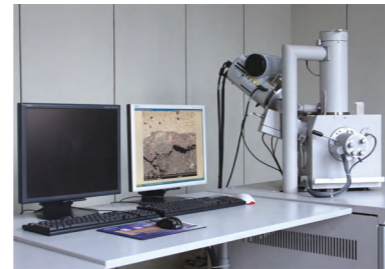


22条超高温隧道窑
22 Ultra-high temperature Tunnel Kilns

青花研究院的检验中心可以检验耐火砖、不定形和耐火原材料所要求的各种理化性能。
The test center of Qinghua R & D Institute makes all necessary tests on raw materials, refractory bricks and monolithics.



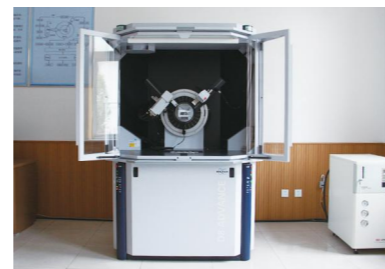
物理分析：
体积密度、显气孔率、荷重软化温度、常温耐压强度、高温抗折强度、抗热震性、透气度、加热永久线变化、抗氧化性、导热系数、热膨胀、SEM微观结构分析等。
Physical analysis:
Bulk Density, Apparent Porosity, Refractoriness under Load, Cold Crushing Strength, Modulus of Rupture at high temperature, Thermal Shock resistance, Air permeability, Linear changes on reheating, Anti-oxidation, Thermal conductivity and Thermal expansion ,micro structure analysis by SEM.....



扫描电子显微镜 SEM
Scanning Electron Microscope



X-射线荧光光谱仪 XRF
X-ray Fluorescence Spectrometer



X-射线衍射仪 XRD
X-Ray Diffractometer



ISO9001:2015 质检管理体系认证证书
ISO9001:2015 Quality Inspection Management System Certification

ISO14001:2015 环境管理体系认证证书
ISO14001:2015 Environmental Management System Certification

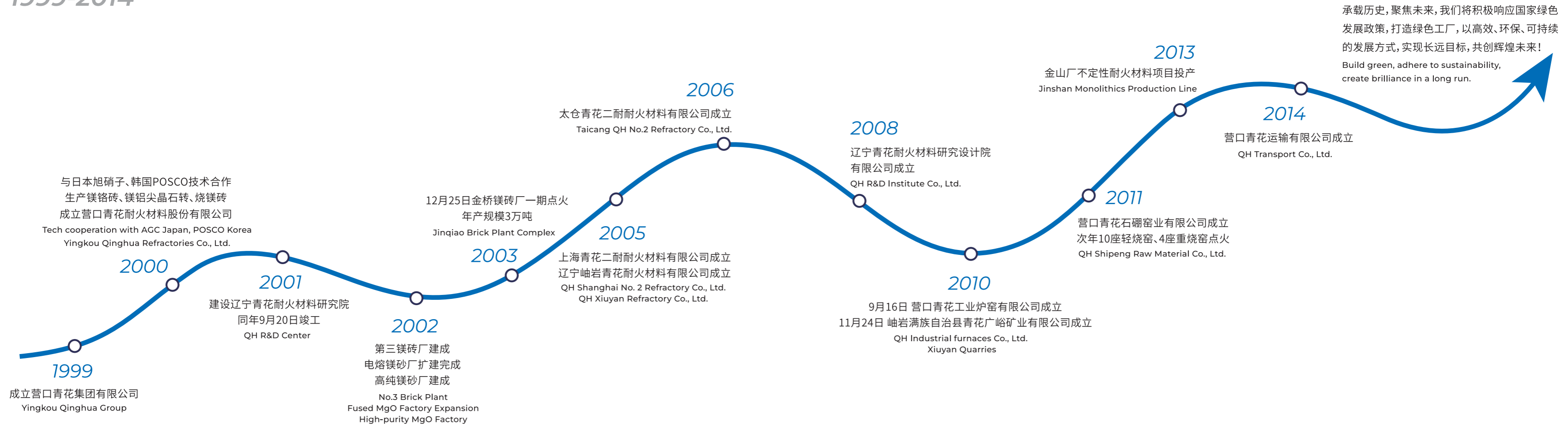
ISO145001:2018 职业健康安全管理体系认证证书
ISO145001:2018 Occupational Health and Safety Management System Certification

10

发展历程 Development course



1999-2014



1984-1995



典型客户 Main Customers

北方水泥
Northern Cement
西南水泥
Southwest Cement
南方水泥
Southern Cement
中国联合水泥
China United Cement
新疆天山水泥
Xinjiang Tianshan Cement
金隅冀东水泥
BBMG Jidong Cement
华润水泥
China Resources Cement
华新水泥
Huaxin Cement
豪瑞(四川)
Holcim (Sichuan)
吉林亚泰
Jilin Yatai
江苏金峰
Jiangsu Jinfeng Cement
江苏盘固水泥
Jiangsu Pangu Cement
河南同力水泥
Henan Tongli Cement
河北曲寨水泥
Hebei QuZhai Cement
西藏高争
Tibet Gaozheng
内蒙古天皓水泥
Inner Mongolia Tianhao Cement
烟台三菱水泥
Yantai Mitsubishi Cement
...

由于版面有限, 以上仅部分客户名录, 排名不分先后. 欲了解更多信息, 请联系我们。
Due to the limited space, the above list only shows partial customers in no particular order. For more information, please contact us.



海德堡材料
Heidelberg Materials
豪瑞(含拉法基)
Holcim (incl. Lafarge)
墨西哥水泥
Cemex
迪克霍夫
Dyckerhoff
爱尔兰CRH水泥
CRH
现代水泥
Hyundai Cement
东洋水泥
Tayoi Cement
双龙水泥
Ssang Yong Cement
星信水泥
Sungshin Cement
...



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