

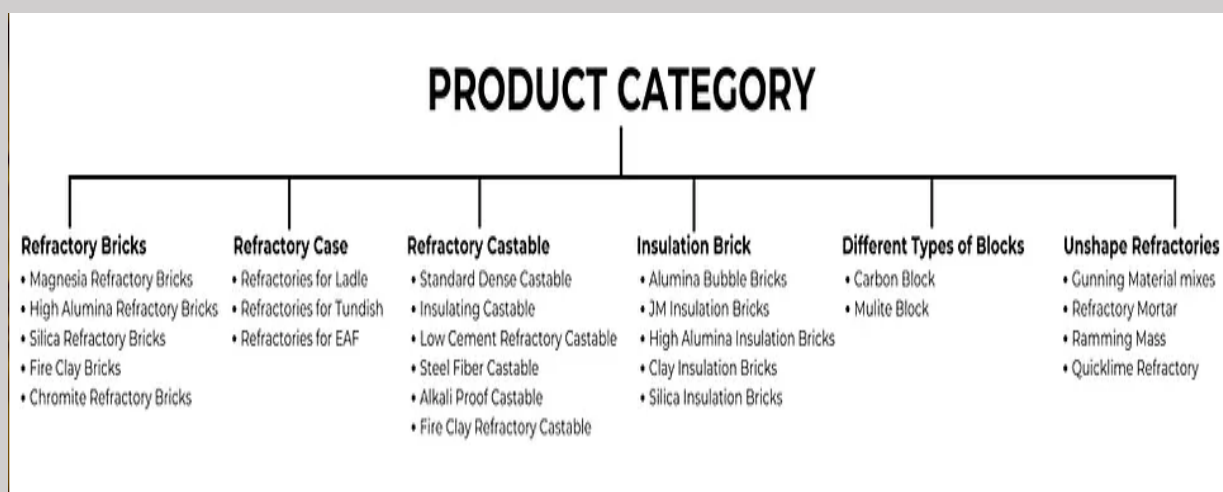


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COMPANY PROFILE

Refractory materials are resistant to decomposition by heat, pressure, or chemical attack, retains strength and form at high temperatures. Refractories are polycrystalline, polyphase, inorganic, non-metallic, porous, and heterogenous. They are typically composed of oxides or carbides, nitrides etc. of the following materials: silicon, aluminium, magnesium, calcium, boron, chromium and zirconium.

Refractory materials are used in furnaces, kilns, incinerators, and reactors. Refractories are also used to make crucibles and moulds for casting glass and metals and for surfacing flame deflector systems for rocket launch structures. Today, the iron and steel industry and metal casting sectors use approximately 70% of all refractories produced.



OREX MINING COMPANY DMCC was established in the year 2014 as a free zone entity registered in DMCC free zone, Dubai, United Arab Emirates.

The refractory division of Orex Mining Company DMCC has entered a joint venture with m/s Benxi Weir High Temperature Materials Co. Ltd., Benxi, China to act as a sole distributor partner for refractory products in India and the Middle East.

Benxi Weir High temperature Materials Co. Ltd. Is situated on the beautiful mountains of Benxi. This has abundant availability of raw materials especially magnesite mines which is the major component for refractories. The company has two manufacturing facilities of 18,000 and 32,000 MTPA of refractory bricks and gunning material along with other refractory products. The nearest port for shipment is the port of Dalian which is around 380km away from the company.

Our company has Limestone and Pyroxenite Mining operations in the Fujairah region of UAE. We are exporting low silica limestone and high grade pyroxenite to integrated steel plants in India, Limestone to Bangladesh and Kuwait for cement plants.

OUR CERTIFICATIONS

رخصة تجارية

Trading Licence

حكومة دبي
Government of Dubai



تفاصيل الرخصة

Licence Details		تفاصيل الرخصة	
Licence Number	DMCC-087492	رقم الرخصة	DMCC-087492
Account Number	133466	رقم الحساب	133466
Registration Number	DMCC20890	رقم التسجيل التجاري	DMCC20890
Licencee	OREX MINING COMPANY DMCC	صاحب الرخصة	أوريكس مينينج كومباني ج.د.م.س
Operating Name	OREX MINING COMPANY DMCC	الإسم التجاري	أوريكس مينينج كومباني ج.د.م.س
Legal Status	Free Zone Company	الشكل القانوني	شركة منطقة حرة
Country of Origin	United Arab Emirates	بلد المنشأ	الإمارات العربية المتحدة
Issue Date	26-Nov-2014	تاريخ الإصدار	26-Nov-2014
Expiry Date	25-Nov-2023	تاريخ الانتهاء	25-Nov-2023
DUNS Number		الرقم العالمي	

Company Manager

Manager Name: NABARUN PATNAIK
إسم المدير: نابارون باتنايك

مدير الشركة

اسم المدير: نابارون باتنايك

Licence Primary Address

Unit No: 905
HDS Business Center
Plot No: JLT-PH1-M1A
Jumeirah Lakes Towers
Dubai
UAE

العنوان الرئيسي للرخصة

وحدة رقم 905
التي هي من تيمس سنتر
أرضي رقم 111-أ1
إم جي
الإمارات العربية المتحدة

Company Contact Details

+971506315830
npatnaik@orexuae.com

تفاصيل الاتصال بالرقعة

Activities

- Raw Materials Trading
- Computer & Data Processing Requisites Trading
- Software Trading
- Marble & Natural Stones Trading

الأنشطة

- تجارة المواد الخام الأولية
- تجارة متطلبات الحاسب الآلي ومعالجة البيانات
- تجارة البرامج والبرامج الحاسوبية
- تجارة الرخام والجرانيت الطبيعي

ISO 9001:2015

Certificate of Registration

This is to Certify that
Quality Management Systems of

OREX MINING COMPANY DMCC

Unit No: 905, HDS Business Center, Plot No: JLT-PH1-M1A
Jumeirah Lakes Towers, Dubai, UAE

has been assessed and found to conform to the requirements of

ISO 9001:2015

for the following scope:

**Raw Materials Trading, Computer & Data Processing Requisites Trading
Software Trading, Marble & Natural Stones Trading
Metal Ore Trading, Chemical Fertilizers Trading**

Certificate No. : 179AG00101
Initial Registration Date : 07.12.2020 Issuance Date : 18.12.2021
Date of Expiry * : 13.12.2023 2nd Surve. Due : 13.12.2022


Director
 Accurate Global Ltd.
Address: 27, Old Gloucester Street, London, WC1N 3AX, United Kingdom


 Accurate Global
Management Certification


 ACCREDITED





营业执照

(副本)

统一社会信用代码
91210521686619341N

注册号: 1-1-1

名称: 本溪威尔高温材料有限责任公司
类型: 有限责任公司

注册资本: 人民币贰佰万圆
成立日期: 2009年04月10日

法定代表人: 熊开泰

住所: 本溪满族自治县草河川镇陈家堡村

经营范围: 高温耐火材料的生产、销售; 高温耐火材料工程的设计、维修; 五金、机械、化工材料销售。(依法须经批准的项目,经相关部门批准后方可开展经营活动)

登记机关: 本溪满族自治县市场监督管理局
2022年10月31日

国家企业信用信息公示系统网址: <http://www.gsxt.gov.cn>

市场主体应当于每年1月1日至3月31日通过
国家企业信用信息公示系统报送公示年度报告

国家市场监督管理总局监制



CERTIFICATE OF REGISTRATION

Certificate No.: 117 09 Q1 0439 R05

This is to Certify the Quality Management Systems of

Benzi Weier High Temperature Material Co., Ltd.

Location Qijiabao Village, Caohekou Town, Manzu
Borough, Benxi, Liaoning

has been assessed and registered as meeting the requirements of
GB/T19001-2008/ISO9001:2008

Scope of approval

**Production & Service of Fireproof Material Series Products
(Including Carbonaceous Series, Non Carbonaceous Series,
Slip Nozzle Series, Zirconic Products Series and Ventilated
Bricks used in Steel Industry; Varies Fireproof Material
Products and Unshaped Series)**

Signed by: 

Approval Date: 23 Dec. 2009
Expiry Date: 23 Dec. 2012

This certificate must remain valid unless the quality system of the certificate holder has been subjected to surveillance audits at regular intervals as certification body required within the valid 3 years

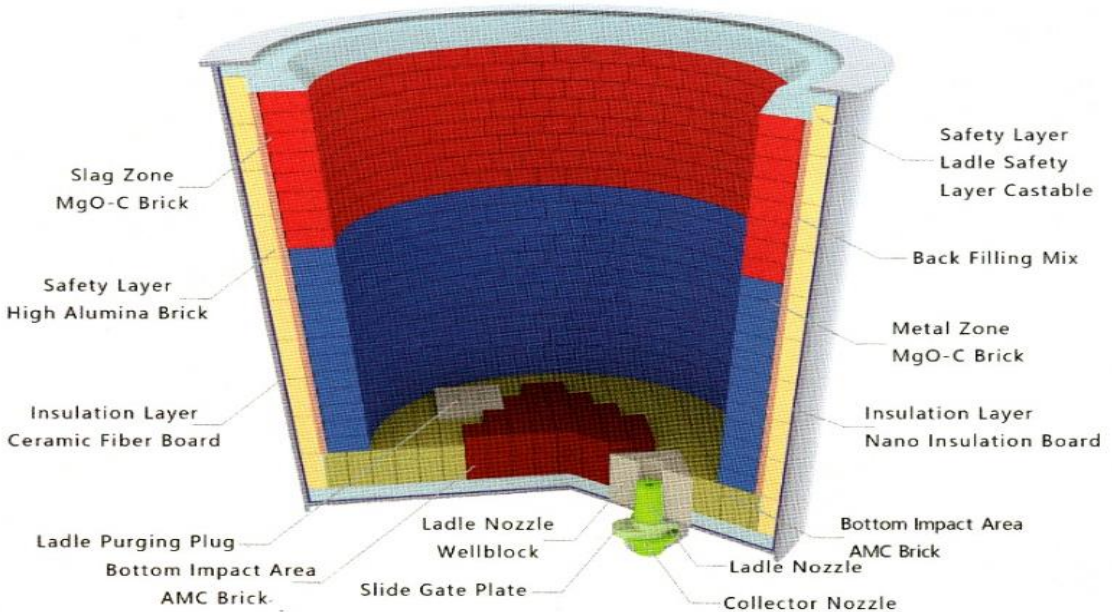
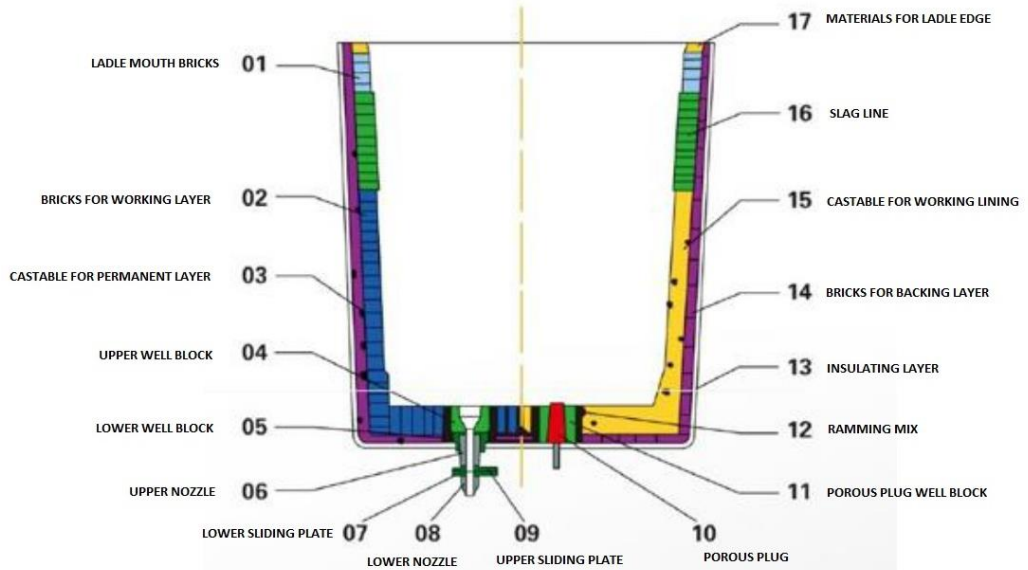

China National Accreditation Administration of Conformity Assessment


International Accreditation Forum


China National Accreditation Administration of Conformity Assessment

The validation of the certificate can be obtained through www.ingeer.com.cn or by calling INGEER Client Services Dept.
The Certificate remains the property of INGEER, to whom it must be returned if the system fails.

LADLE FURNACE



LADLE MATERIALS



Magnesia Carbon Brick



Alumina Magnesia
Carbon Brick



Slide Gate Plate



Ladle Nozzle



Collector Nozzle



Ladle Nozzle Wellblock



Ladle Purging Plug



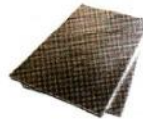
Purging Wellblock



High Alumina Brick



Magnesia Alumina
Carbon Brick



Nano Insulation Board



Ladle Slide Gate



Ladle Safety
Layer Castable



Corundum
Self-flow Castable

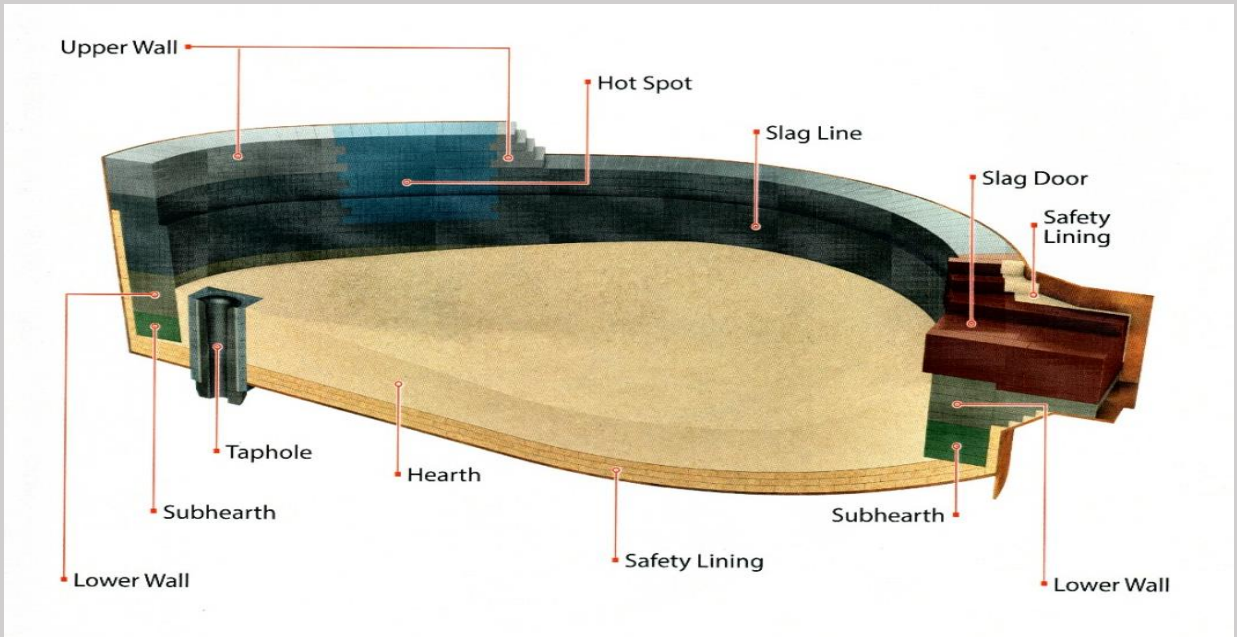
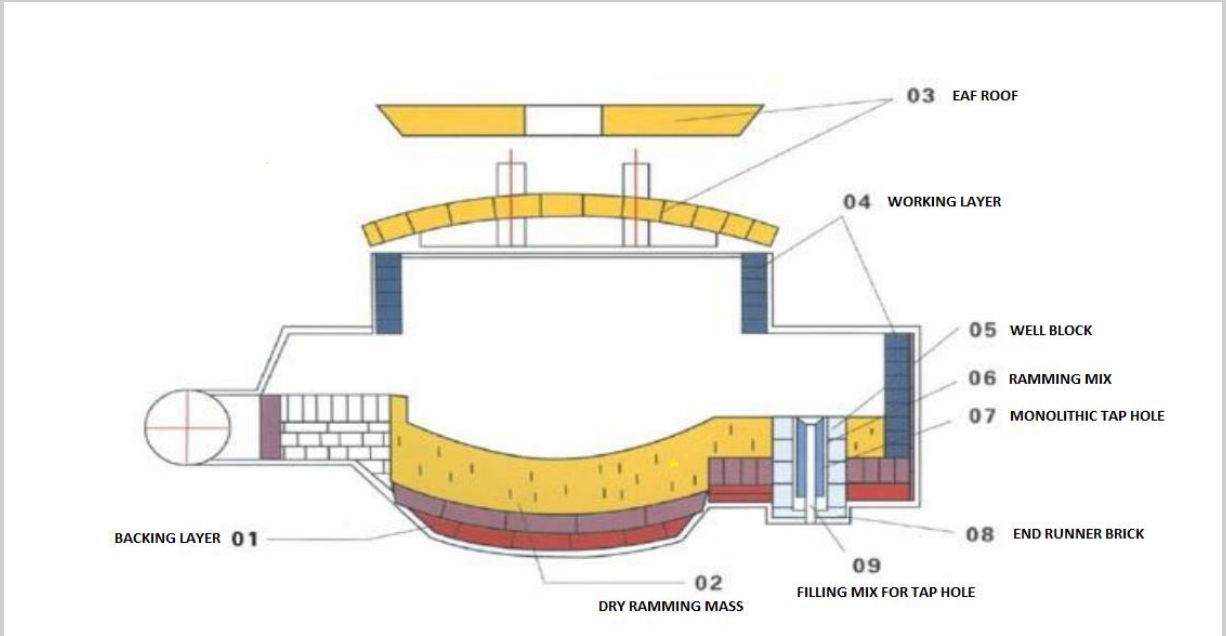


Ladle Gunning Mix



Mortar

ELECTRIC ARC FURNACE



EAF MATERIALS



Magnesite Carbon Brick



EAF Tap Hole Brick



EBT Filling Mass



Hearth Ramming Mix



Prefab-Roof



Magnesite Brick

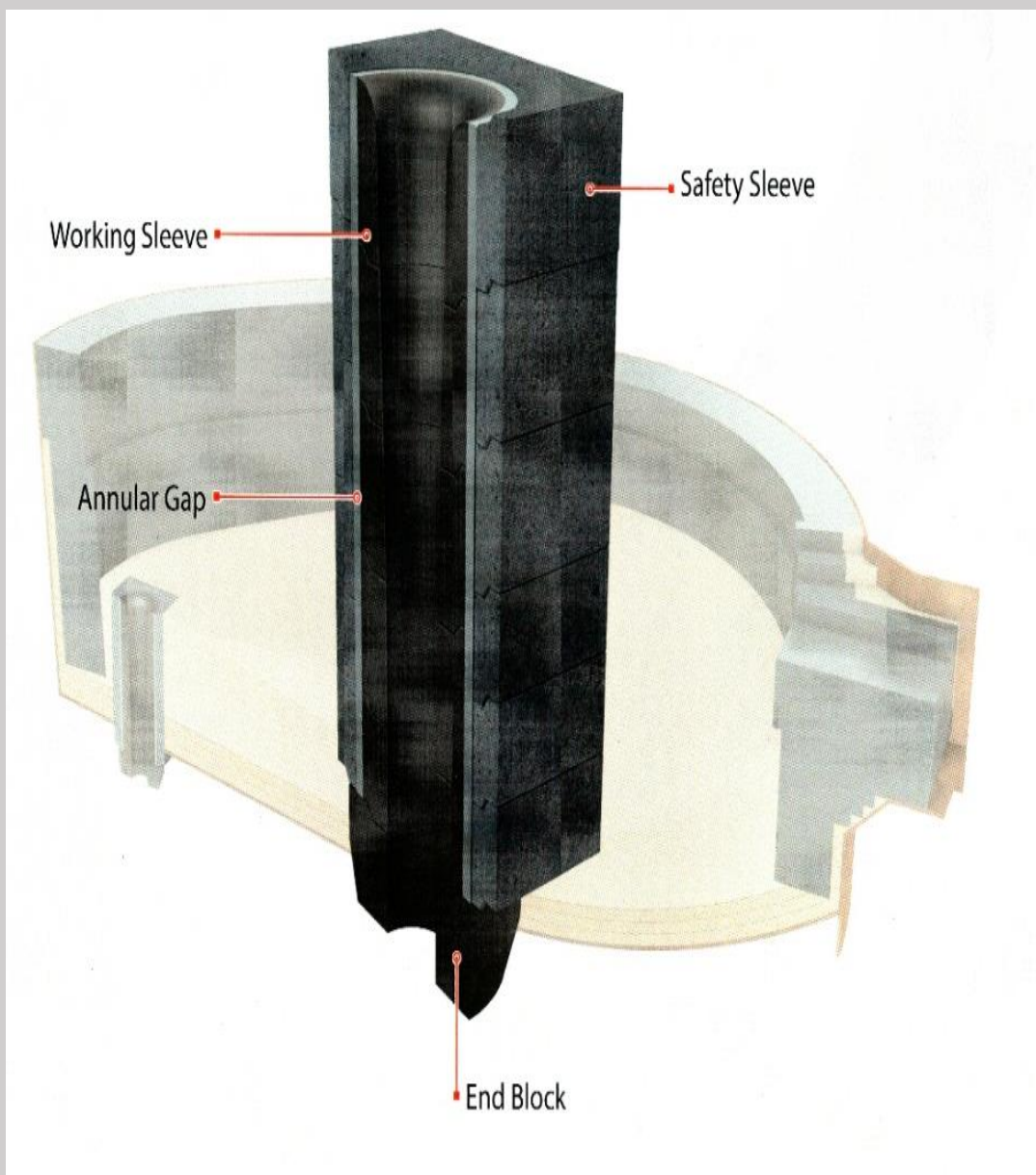


Back Filler

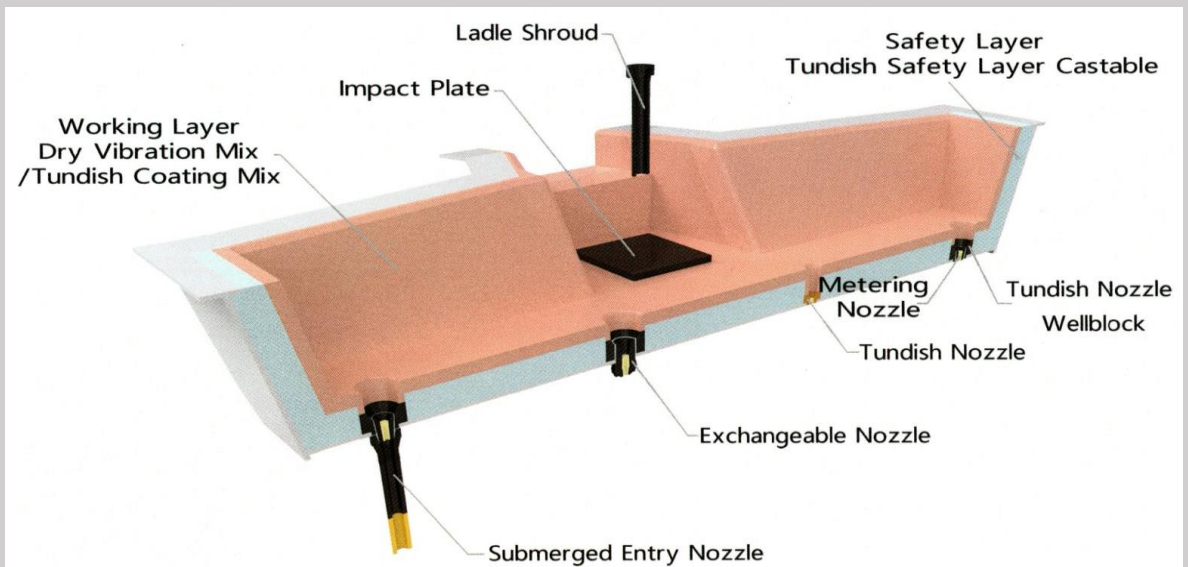
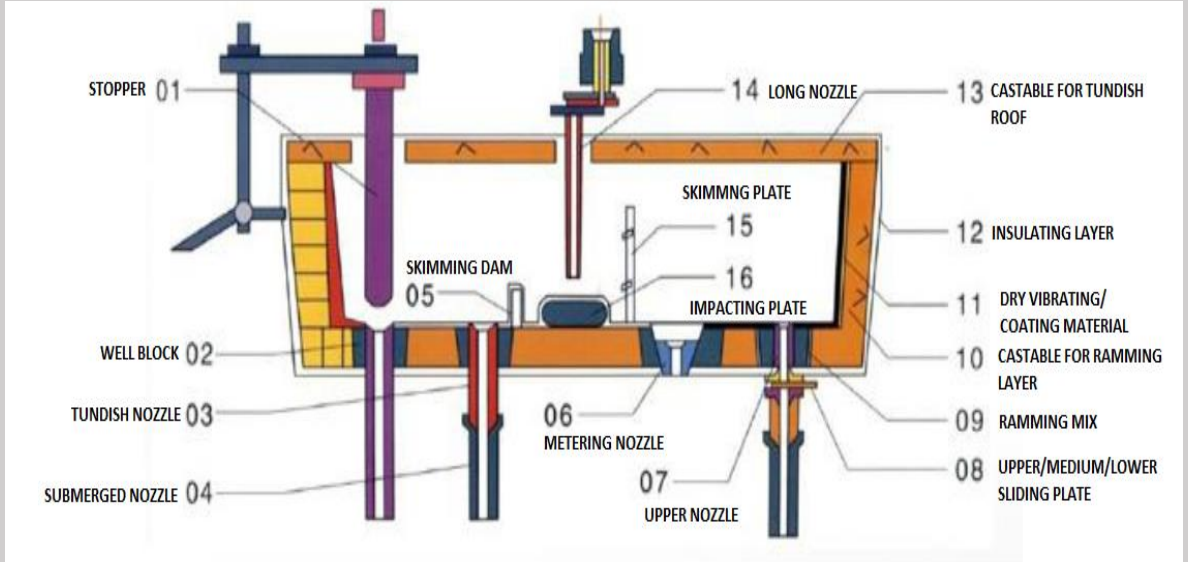


EAF Gunning Mix

TAPHOLE BLOCK FOR EBT



REFRACTORY TUNDISH



TUNDISH MATERIALS



Silica Dry Vibration Mix



Magnesia Dry Vibration Mix



Tundish Safety Layer Castable



Tundish Nozzle Wellblock



Exchangeable Upper Nozzle



Exchangeable Lower Nozzle



Casting Powder



Flying Nozzle



Metering Nozzle



Impact Plate



Submerged Entry Nozzle



Ladle Shroud

WORKING LINING FOR LADLE

Properties of MgO-C bricks

Index Item	Brand	MgO-C bricks						
		HGR-MT 10A	HGR-MT 10B	HGR-MT 10C	HGR-MT 14A	HGR-MT 14B	HGR-MT 14C	HGR-MT 16
MgO, % ≥		80	78	76	76	74	74	74
C, % ≥		10	10	10	14	14	14	16
(AP), % ≤		4	5	6	4	5	6	6
(BD), g/cm ³ ≥		2.90	2.85	2.80	2.90	2.82	2.77	2.80
(CCS) MPa ≥		40	35	30	40	35	25	35
(HMOR) MPa ≥ 1400°C × 30min		6	5	4	12	8	5	7

Properties of Carbon-free Al₂O₃-Mgo bricks

Index Item	Brand	HGR-WTA	HGR-WTB	HGR-WTC
		Al ₂ O ₃ , % ≥	70	70
MgO+Cr ₂ O ₃ , % ≥		10	12	15
(AP), % ≤		16	16	16
(BD), g/cm ³ ≥		30	30	30
(CCS) MPa ≥		60	60	60
(LCR) 1500°C × 30 %		-0.1 - +0.5	+0.2 - +0.6	+0.2 - +0.6

MGO-C BRICK FOR LINING FURNACE

Properties of MgO-C bricks for lining of furnace

	MgO-C bricks						
	HGR-MT14A	HGR-MT14B	HGR-MT14C	HGR-MT16	HGR-MT18A	HGR-MT18B	HGR-MT18C
MgO, % \geq	76	74	74	74	72	70	70
C, % \geq	14	14	14	16	18	18	18
l(AP), % \leq	4	5	6	6	3	4	5
(BD), g/cm ³ \geq	2.90	2.82	2.77	2.80	2.90	2.82	2.77
(CCS), MPa \geq	40	35	25	35	40	35	25
(HMOR) MPa, 1400°C \times 30min \geq	12	8	5	7	12	7	4

Properties of EAF roof

Item	Index	Brand	HGR-DLG-1	HGR-DLG-2
	Al ₂ O ₃ , % \geq		88	85
	Cr ₂ O ₃ , % \geq		1.8	—
	(BD), g/cm ³ \geq		3.10	3.00
	(CCS), MPa \geq		60	50
	(AP), % \leq		16	18
	(MOR), MPa 110°C \times 24h \geq		10	8

Properties of refined furnace roof

Item	Index	Brand	HGR-JLLG-1	HGR-JLLG-2
	Al ₂ O ₃ , % \geq		80	88
	Cr ₂ O ₃ , % \geq		—	1.8
	(BD), g/cm ³ \geq		2.85	3.10
	(CCS), MPa \geq		40	60
	(AP), % \leq		20	16
	(MOR), MPa 110°C \times 24h \geq		6	10

TUNDISH SPECIFICATION

Properties for coating mix for Tundish

Index		Brand			
Item		HGR-ZBTM-1	HGR-ZBTM-2	HGR-ZBTM-3	HGR-ZBTM-4
MgO, % \geq		80	80	65	80
CaO, % \geq		--	--	10	--
(BD), g/cm ³ \geq	110°C x 16h	2.1 ± 0.2	2.1 ± 0.2	1.8 ± 0.3	1.9 ± 0.2
(CS)MPa \geq	110°C x 16h	4	5	5	4
	1500°C x 3h	6	8	8	8
(LCR), %	1500°C x 3h	-2.0 ± 0.5	-2.0 ± 0.5	-2.0 ± 0.5	-2.2 ± 0.55
(Water requirement for installation), %		27 ± 3	20 ± 3	18 ± 3	20 ± 3

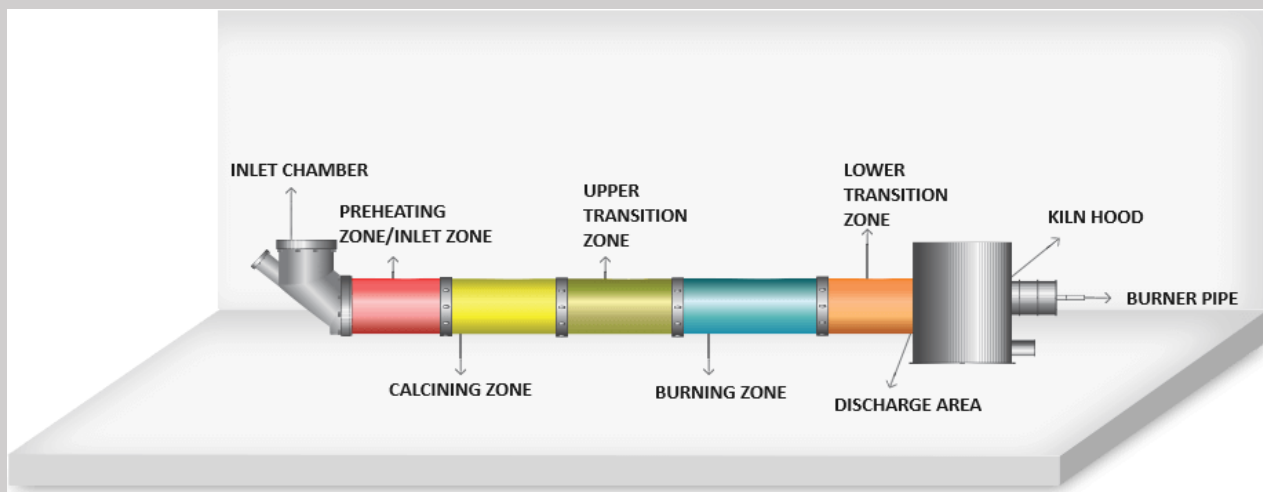
Properties of dry vibration mix for Tundish

Index	Brand
Item	HGR-ZBGZ
(Initial sintering temp), °C	1000
(Max. service temp), °C	1700
MgO, % \geq	79
CaO, % \geq	17
(BD), g/cm ³ \geq	2.59
(LCR), %	± 0.13
(MOR), MPa \geq	3.9



REFRACTORY LINING FOR ROTARY KILN & SHAFT KILN

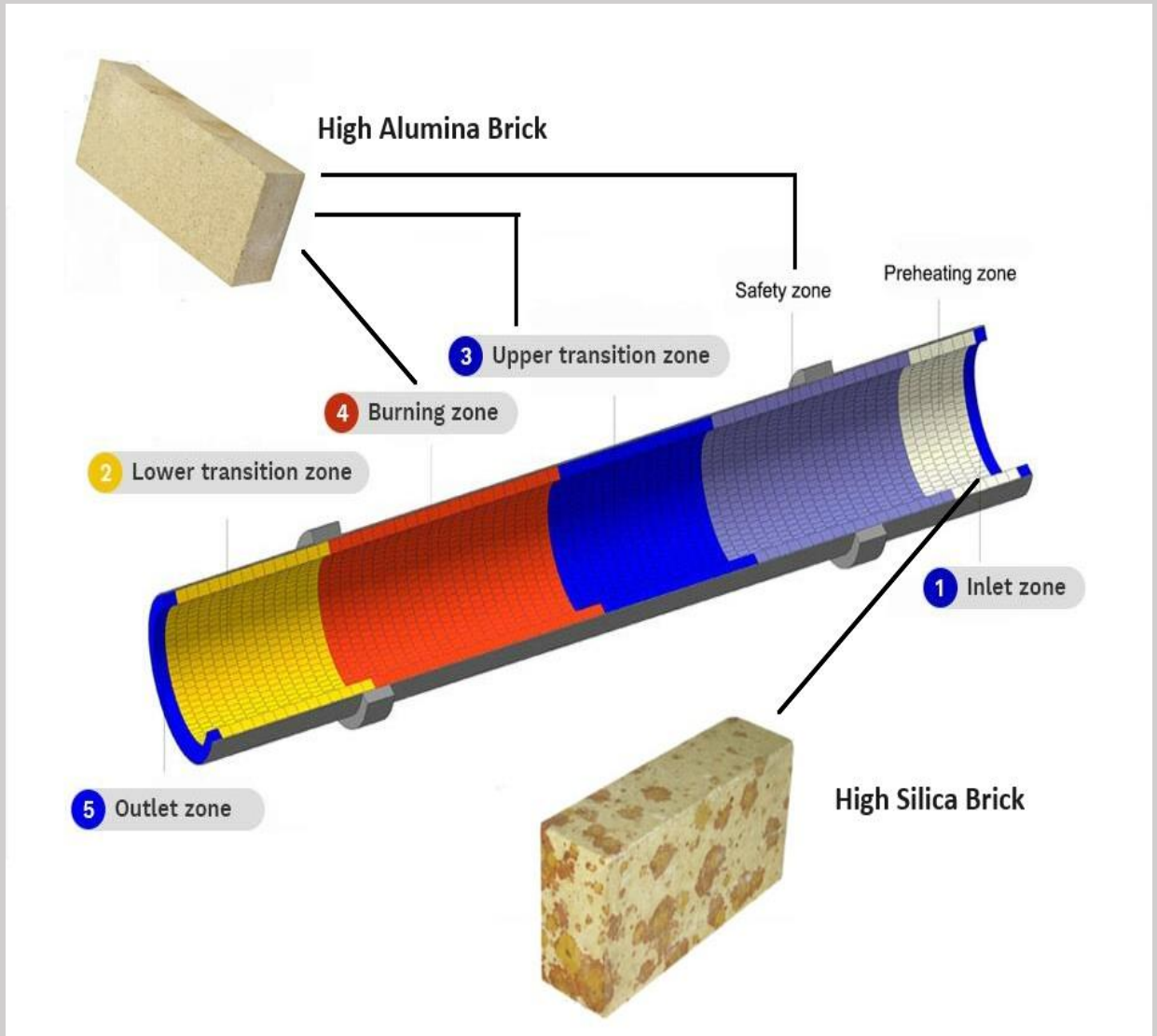
REFRACTORY ROTARY KILN ZONES



REFRACTORY LINING

The purpose of the refractory lining is to insulate the steel shell from the high temperatures inside the kiln, and to protect it from the corrosive properties of the process material. It may consist of refractory bricks or cast refractory concrete, or may be absent in zones of the kiln that are below approximately 250 °C. The refractory selected depends upon the temperature inside the kiln and the chemical nature of the material being processed. In some processes, such as cement, the refractory life is prolonged by maintaining a coating of the processed material on the refractory surface. The thickness of the lining is generally in the range 80 to 300 mm. A typical refractory will be capable of maintaining a temperature drop of 1000 °C or more between its hot and cold faces. The shell temperature needs to be maintained below around 350 °C to protect the steel from damage, and continuous infrared scanners are used to give early warning of "hot-spots" indicative of refractory failure.

TYPE OF BRICK FOR ROTARY KILN



WHAT ARE THE BASIC COMPONENTS OF ROTARY KILN?

1. SHELL
2. REFRACTORY LINING
3. SUPPORT TYRES (riding rings)
4. ROLLERS
5. DRIVE GEAR
6. INTERNAL HEAT EXCHANGES

WHAT ARE THE DIFFERENT ZONES IN ROTARY KILN?

LOWER TRANSITION (HIGH ALUMINA BRICKS)

Temperature in this area comes down from 1510°C to 1300°C. This is another very critical area of the kiln which is subjected to tremendous abrasion from clinker balls and also axial thrust at the retainer area.

BURNING ZONE (HIGH ALUMINA BRICKS)

The final stage of clinker compound formation occurs in this zone where some of the reactions are exothermic. Temperature in this zone varies from 1400°C to 1510°C. Clinker liquid phase is predominantly present in this area and the kiln lining is under coating. Most important property for refractory in this area is coating friendliness, which indicates the ease with which the coating can form on its surface and stick on it.

CALCINING ZONE (HIGH ALUMINA BRICKS)

This is the zone within the kiln system where the raw materials undergo calcination. Temperature in this zone varies from 800°C to 1200°C . Here CaCO₃ (calcium carbonate) gets converted into free lime and CO₂ (carbon-dioxide) is driven off.

PREHEATING ZONE/ INLET ZONE (HIGH ALUMINA BRICKS)

The first reaction zone of rotary kiln system is known as the preheating zone. Here the charge gets heated up to about 800°C before entering the calcining zone. Bricks in this area are prone to chemical attack from gases containing alkali and sulphur. Thermal insulating property of the refractories in this area results in substantial fuel savings.

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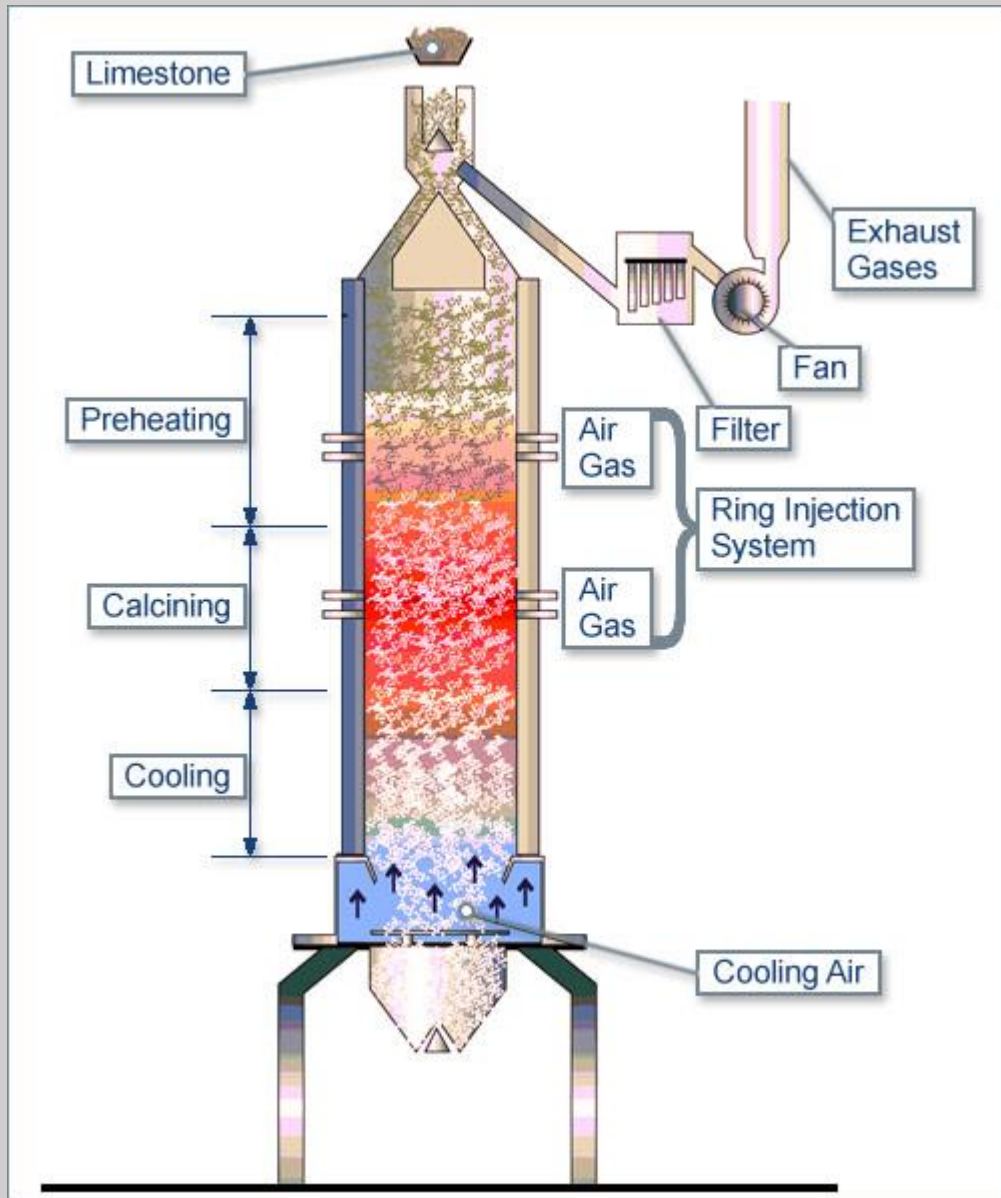
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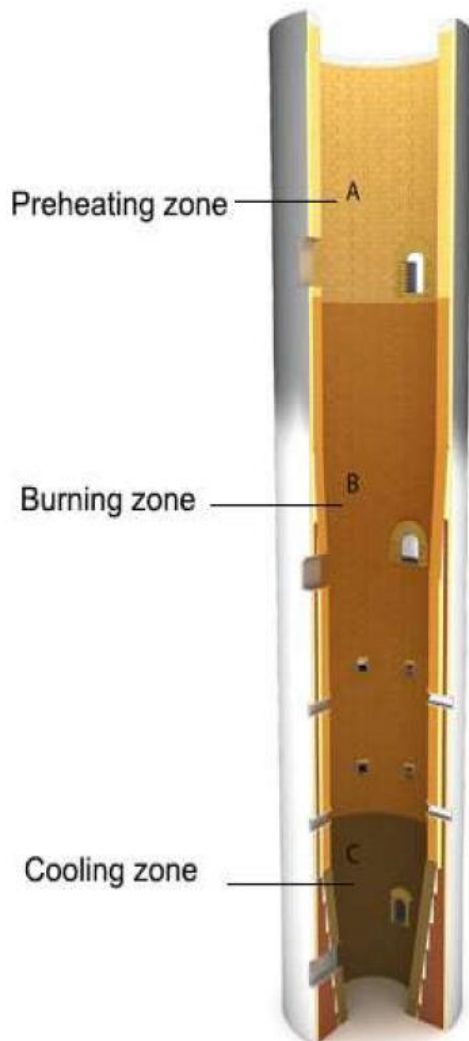
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THE DIAGRAM REPRESENTS THE LIME in SHAFT KILN



TYPE OF BRICK FOR SHAFT KILN



High Alumina Brick



High Silica Brick



STANDARD ROTARY KILN BRICK SHAPES

Standard Rotary Kiln Brick Shapes (selection)

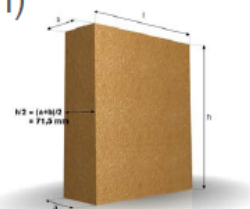
SHAPE	DIMENSIONS [mm]				DIAMETER [mm] D ¹⁾	VOLUME [dm ³]	MARKING (Basic Bricks) Colour
	a	b	h	l			

VDZ-Shapes

B220	78	65	200	198	2400	2,83	White
B320	76,5	66,5	200	198	3060	2,83	Violet
B420	75	68	200	198	4286	2,83	Yellow
B620	74	69	200	198	5920	2,83	Red
B222	78	65	220	198	2640	3,11	White
B322	76,5	66,5	220	198	3366	3,11	Violet
B422	75	68	220	198	4714	3,11	Yellow
B622	74	69	220	189	6512	3,11	red

ISO-Shapes

220	103	82	200	198	2000	3,66	White
320	103	98	200	198	3000	3,80	Violet
420	103	92,5	200	198	4000	3,87	Yellow
620	103	96,2	200	198	6176	3,94	Red
222	103	80	220	198	2009	3,99	White



SPECIFICATION OF HIGH ALUMINA BRICKS FOR ROTARY KILN AND SHAFT KILN

ITEM	INDEX
Al ₂ O ₃ (%) ≥	75
COLD CRUSHING STRENGTH (Mpa) ≥	54
APPARENT POROSITY (%) ≤	23
REFRACTORINESS UNDER LOAD (°C) ≥	1520
REHEATING LINEAR CHANGE (1500°C, 2H)	±0.1-0.4
REFRACTORINESS /°C ≥	1790

QUICKLIME KILN (CALCIUM OXIDE)

Calcium oxide (formula: CaO), commonly known as quicklime or burnt lime, is a widely used chemical compound. It is a white, caustic, alkaline, crystalline solid at room temperature. The broadly used term lime connotes calcium-containing inorganic compounds, in which carbonates, oxides, and hydroxides of calcium, silicon, magnesium, aluminium, and iron predominate. By contrast, quicklime specifically applies to the single compound calcium oxide. Calcium oxide that survives processing without reacting in building products, such as cement, is called free lime.

Quicklime has a wide range of uses, including in the production of iron and steel, paper and pulp production, treatment of water and flue gases and in the mining industry.



ACTUAL PHOTOS OF BRICKS AND PACKING



OUR CLIENTS





MAKES LASTING FRIENDS



OREX MINING COMPANY DMCC

**905 HDS, Business Centre, Cluster M,
JLT, Dubai, UAE**

Telephone: +971 045530420

Email: sales1@orexuae.com