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CNBM International Corporation

REFRACTORIES FOR METALLURGY



CNBM CNBM International Corporation

Company Profile



CNBM (China National Building Material) Group is the largest comprehensive building materials group in China that integrates scientific research, manufacturing and logistics into one entity. CNBM is also the largest building materials and equipment specialists in China. Upon the State Council's approval, CNBM owns more than 300 subordinate manufacturing factories and servicing companies till now. There are 6 fully owned public listed companies and 11 partially owned with substantial shares public listed companies. In many such of these fields, CNBM is playing a leading role in the building industry in the country.



CNBM International Corporation is the most important import and export platform of CNBM group. With its advantages, CNBM International are mainly concentrate on Iron and Steel, Nonferrous, Cement, Glass, Ceramics industries and devotes herself for supplying high quality series of refractories as well as technical consultancies and logistics solution.



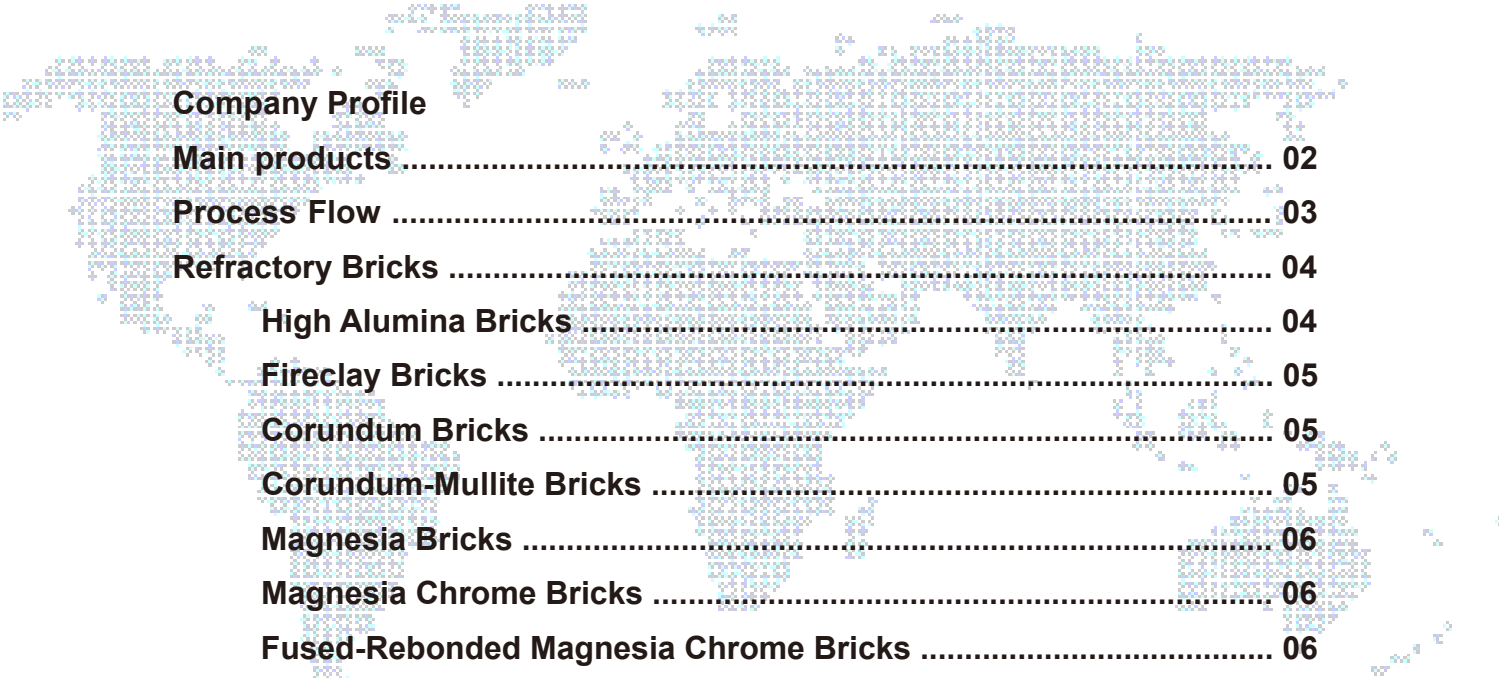
EMMA Score: 1

D&B Rating: 4A1

CNBM International is highly recognized by its business partners and clients all over the world and has obtained rapid development under the spirit of win-win. Depending on the support of production divisions and its active staff, CNBM international reached a turnover of USD one billion in 2012. We will carry on the mutual beneficial, create value for our employees, share holders and clients and benefit the whole society in our future development.

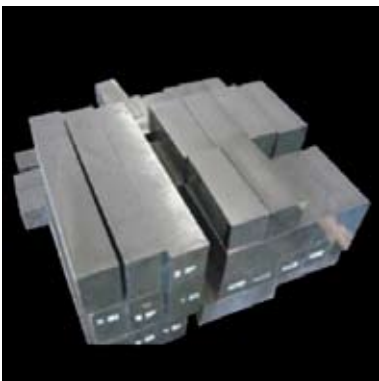
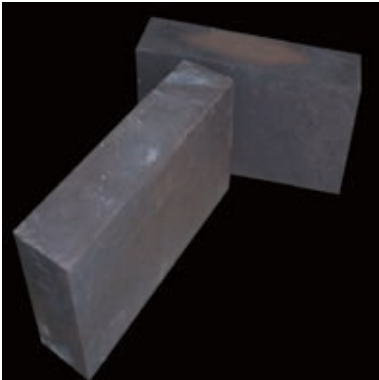
Thanks you for your interest in our company products and services. Your valuable comments are most welcome.

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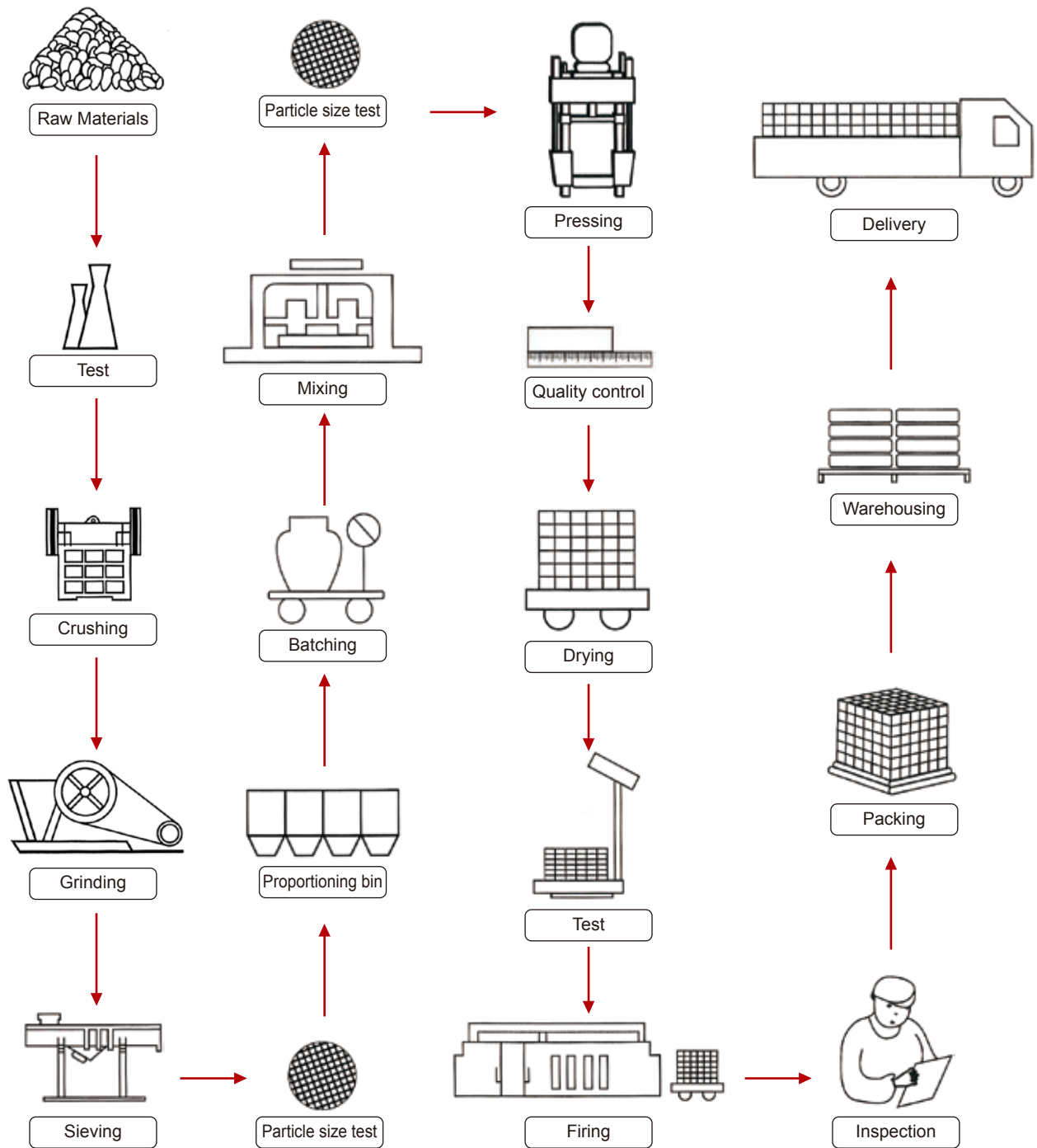


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Process Flow



Refractory Bricks

High Alumina Bricks

Item	GL-48	GL-55	GL-65	GGL-65	GLS-70	RL-48	RL-55	RL-65	DRL-130	DRL-140	DRL-150
Al ₂ O ₃ (%) ≥	48	55	65	65	70	48	55	65	60	65	75
Fe ₂ O ₃ (%) ≤	2	2	2	1.5	2	—	—	—	—	—	—
Refractoriness (°C) ≥	1750	1770	1790	1790	1790	1750	1770	1790	—	—	—
Apparent Porosity (%) ≤	18	19	19	19	17	24	24	24	22	22	21
Bulk Density (g/cm ³) ≥	—	—	—	—	2.6	—	—	—	2.3	2.46	2.65
Cold Crushing Strength (Mpa) ≥	49	49	58.8	60	60	39.2	44.1	49.0	55.0	55.0	60.0
Refractoriness Under Load (°C) ≥	1450	1480	1500	1550	1600	1420	1470	1500	—	—	—
Permanent Linear Change (%)	1500°C X2h					1450°C X2h	1500°C X2h		1450°C X2h		1550°C X2h
	0~ -0.2	0~ -0.2	0~ -0.2	0~ +0.2	0~ +0.4	0.1~ -0.4	0.1~ -0.4	0.1~ -0.4	0.1~ +0.4	0.1~ +0.2	0.1~ +0.2
Application	Blast Furnace and Hot-Blast Stoves										

Item	JLZ-75	JHL-75	SHA-60	DL-80	DL-75	BDL-80	BDL-75	AL60	AL70	AL75
Al ₂ O ₃ (%) ≥	75	75	60	80	75	80	75	60	70	75
Fe ₂ O ₃ (%) ≤	—	0.8	1.5	—	—	—	—	1.6	1.6	1.5
Refractoriness (°C) ≥	1790	1790	1790	—	—	—	—	—	—	—
Apparent Porosity (%) ≤	20	18	20	21	21	20	20	19	20	19
Bulk Density (g/cm ³) ≥	—	2.65	2.4	—	—	—	—	2.3	2.45	2.6
Cold Crushing Strength (Mpa) ≥	65	90	50	75	65	60	55	45	55	60
Refractoriness Under Load (°C) ≥	1550	1650	1640	—	—	—	—	1480	1500	1550
Permanent Linear Change (%)	1500°C X2h		—	1500°C X2h					1530°C X2h	1600°C X2h
	0.1~ -0.4	0.1~ +0.3	—	0~ 0.3	0~ 0.3	-0.2~ +0.2	-0.2~ +0.2	-0.1~ 0	-0.1~ 0	-0.1~ 0
Application	Coke Oven, Electric Furnace Steel Making									

Fireclay Bricks

Item	ZGN-42	GN-42	ZGN-42	RN-42	RN-40	DRL-130	DRL-125	DRL-120	JNLA	JN40-A	JN40-B	CN-42	CN-40
Al ₂ O ₃ (%)≥	42	42	45	42	40	44	42	39	30~36	40	40	42	40
Fe ₂ O ₃ (%)≤	1.6	1.7	1.2	—	—	—	—	—	2.5	2.0	2.0	—	—
Refractoriness (°C)≥	1750	1750	1750	1750	1730	—	—	—	1690	1730	1730	1760	1740
Apparent Porosity (%)≤	15	16	13	24	24	18	20	22	24	20	24	18	19
Bulk Density (g/cm ³)≥	—	—	—	—	—	2.3	2.15	2.1	2.0	2.0	2.0	—	—
Cold Crushing Strength (Mpa)≥	58.8	49	58.8	29.4	24.5	40	35	35	25	35	30	39.2	34.3
Refractoriness Under Load (°C) ≥	1450	1430	1500	1400	1350	1340	1300	1260	—	1450	1400	1430	1400
Permanent Linear Change (%)	1450°CX3h			1350°CX2h		1400°CX2h			—	—	—	1400°CX2h	
	0~-0.2	0~-0.3	0~-0.2	0~-0.4	0~-0.3	0.1~0.2	0.1~0.2	0.1~0.2	—	—	—	0~-0.3	0~-0.3
Application	Blast Furnace, Hot-Blast Stoves, Coke Oven, Ladle, Refining Furnace and Reheating Furnace												

Corundum Bricks

Item	GY-90	GY-94	GY-98
Al ₂ O ₃ (%)≥	90	94	98
Fe ₂ O ₃ (%)≤	1	1	0.3
Refractoriness(°C) ≥	1790	1790	1790
Apparent Porosity(%)≤	16	16	20
Bulk Density(g/cm ³)≥	2.95	3.1	3.1
Cold Crushing Strength(Mpa)≥	80	80	80
Refractoriness Under Load(°C)≥	1620	1650	1700
Permanent Linear Change(%)	1500°CX3h		1500°CX3h
	±0.2		±0.1
Application	Blast Furnace		

Corundum-Mullite Bricks

Item	GM-65	GM-65a	GM-75	GM-85
SiO ₂ (%)≤	30	—	20	13
Al ₂ O ₃ (%)≥	65	65	75	85
Fe ₂ O ₃ (%)≤	1	1	0.5	—
Refractoriness(°C)≥	1790	—	1790	1790
Apparent Porosity(%)≤	19	22	22	—
Bulk Density(g/cm ³)≥	2.5	2.4	2.6	3
Cold Crushing Strength(Mpa)≥	90	80	70	—
Refractoriness Under Load(°C)≥	1650	1600	1700	1650
Permanent Linear Change(%)	1500°CX2h	1400°CX2h	1500°CX2h	1500°CX2h
	0~ 0	0~ 0	0~0	-0.5~ +0.5
Application	Hot-Blast Stoves			Blast Furnace

Magnesia Bricks

Item	MZ-97A	MZ-97B	MZ-95A	MZ95B	MZ-93	MZ-91	MZ-89	DMZ98	DMZ97	DMZ96
Density(g/cm ³) \geq	2.96	2.96	2.94	2.94	2.94	850	900	3.1	3.1	3
Cold Crushing Strength (Mpa) \geq	60	60	60	60	60	60	50	90	90	90
Reheating Linear Change (%)	1650°C x 2h 0~ -0.2		1650°C x 2h 0~ -0.3		1650°C x 2h 0~ -0.4		1650°C x 2h 0~ -0.6		—	—
Refractoriness Under Load (°C) \geq	1700	1700	1650	1650	1620	1560	1550	1700	1700	1700
Apparent Porosity (%) \leq	16	18	16	18	18	18	20	14	14	15
MgO(%)	97.0	96.5	95.0	94.5	93.0	91.0	89.0	97.7	97.1	96.3
SiO ₂ (%)	1.0	2.0	2.0	2.0	3.5	—	—	0.58	0.97	1.2
CaO(%)	—	—	2.0	2.0	2.0	3.0	3.0	0.63	0.97	1.3
Application	Kiln Lining in Iron and Steel, Copper, Lead, Tin and Zinc Industries							The Tap Hole of Steel Furnace; Tap Hole and Slag Line in Non-Ferrous Industry		

Magnesia Chrome Bricks

Item	QZHGe4	QZHGe8	QZHGe10	QZHGe12	QZHGe16	QZHGe18	QZHGe20
Density(g/cm ³) \geq	3.02	3.04	3.05	3.06	3.08	3.1	3.12
Cold Crushing Strength (Mpa) \geq	50	50	55	55	55	55	55
Refractoriness Under Load(°C) \geq	1700	1700	1700	1700	1700	1700	1700
Apparent Porosity(%) \leq	20	19	19	18	18	18	18
MgO(%)	85.0	77.0	75.2	74.0	69.0	58.0	89.0
Cr ₂ O ₃ (%)	5.5	9.1	11.5	12.0	16.0	18.0	20.0
SiO ₂ (%)	1.3	1.2	1.3	1.2	1.5	1.5	1.5
Application	Electric Furnace Lining, RH Furnace Upper Vessel, Safety Lining of RH Furnace Lower Vessel, VOD Furnace Lining and Non-Ferrous Furnace						

Fused-Rebonded Magnesia Chrome Bricks

Item	QBDMGe12	QBDMGe14	QBDMGe16	QBDMGe18	QBDMGe20	QBDMGe22	QBDMGe26
Density(g/cm ³) \geq	3.00	3.05	3.08	3.10	3.15	3.20	3.25
Cold Crushing Strength (Mpa) \geq	50	50	50	50	50	50	50
Reheating Linear Change (%) (1650°C x 2hrs)	0~ -0.2		0~ -0.3		0~ -0.4		0~ -0.6
Refractories Under Load (°C) \geq	1700	1700	1650	1650	1620	1560	1550
Apparent Porosity(%) \leq	16	18	16	18	18	18	20
MgO(%)	68.0	65.0	60.0	58.0	55.0	50.0	50.0
Cr ₂ O ₃ (%)	12.0	14.0	16.0	18.0	20.0	22.0	26.0
SiO ₂ (%)	1.2	1.4	1.4	1.5	1.5	1.5	1.5
Application	AOD, RH Furnace Lower Vessel and Snorkels, Slag Line of VOD and Tuyere of Non-Ferrous Converter						

Magnesia Carbon Bricks

Item	MT-8			MT-10			MT-14		
	A	B	C	A	B	C	A	B	C
Bulk Density (g/cm ³) \geq	3.12	3.08	2.98	3.1	3.05	3	3.03	2.98	2.95
Cold Crushing Strength(MPa) \geq	45	45	40	40	40	40	40	35	35
Pure Rate of Magnesia Raw Material (%)	97.9	96.8	96.1	97.9	96.8	96.1	98.1	98	97.9
MgO(%)	82	81	79	80	79	77	76	74	72
C(%)	—	—	—	—	—	—	—	—	—
Apparent Porosity(%) \leq	4.5	5	6	4	4.5	5	3.5	3.5	4
Hot Temperature Bending (1400°C*30min)(Mpa) \geq	6	5	4	6	5	4	12	8	6
Application	The Lining of Converter and Electric Arc Furnace, and Slag Line of Ladle								

Item	MT-16			MT-18		
	A	B	C	A	B	C
Bulk Density (g/cm ³) \geq	3	2.95	2.9	2.97	2.92	2.87
Cold Crushing Strength(MPa) \geq	35	35	30	35	30	30
Pure Rate of Magnesia Raw Material (%)	97.9	96.8	96.1	98	97	96
MgO(%)	74	72	70	72	70	69
C(%)	16	16	16	18	18	18
Apparent Porosity(%) \leq	3.5	3.5	4	3	3.5	4
Hot Temperature Bending (1400°C*30min) (Mpa) \geq	12	8	6	12	8	6
Application	The Lining of Converter and Electric Arc Furnace and Slag Line of Ladle.					

Item	MA-AL-C Bricks			AL-MA-C Bricks		MA-CA-C Bricks		
	MAT60	MAT70	MAT74	AMT65	AMT70	MGT5	MGT2	MGT13
Density(g/cm ³) \geq	3.00	2.90	3.00	3.00	3.05	2.90	2.85	3.00
Cold Crushing Strength(Mpa) \geq	40	35	30	40	35	40	35	25
Modules of Rupture(Mpa) \geq	6	5	4	10	8	9	7	4
Apparent Porosity(%) \leq	4	5	6	4	5	3	4	5
MgO(%)	55	68	71	10	10	70	75	70
Al ₂ O ₃ (%)	23.0	8.0	6.0	65.0	68.0	—	—	—
C(%)	8	10	10	7	7	5	2	8
CaO(%)	—	—	—	—	—	12	8	12
Application	The Sidewall and Bottom of Ladle					VOD, AOD and LF		

Silica Bricks

Item	MRG-94	MRG-95A	MRG-95B	MRG-95C	MRG-96
Density(g/cm ³) \geq	2.3	2.32	2.33	2.34	2.34
Cold Crushing Strength(Mpa) \geq	29	35	40	35	35
Creeping Rate (1500°Cx50hrs)(0.2MPa)(%) \leq	-	0.8	0.8	0.8	0.8
Refractories Under Load(°C) \geq	1650	1650	1650	1650	1660
Thermal Expansion(1000°C)(%) \leq	130	1.25	1.28	1.30	1.26
Apparent Porosity(%) \leq	24	24	22	24	22
SiO ₂ (%)	94	95.0	94.5	94.5	96.0
Fe ₂ O ₃ (%)	1.5	1.3	1.5	2.0	1.0
Application	Hot Blast Stove and Coke Oven				

Silicon Nitride Bonded SiC Bricks

Item	DZT-1	DZT-2	DZT-3	DZT-4	DZT-5	
Bulk Density(g/cm ³)	2.68	2.65	2.6	2.65-2.70	2.68	
Cold Crushing Strength(Mpa) \geq	180	160	150	150	180	
Hot Modulus of Rupture(Mpa) \geq	at 1000°C	55	50	45	45	55
	at 20°C	45	45	40	42	45
Thermal Conductivity (1000°C)(W/m.K)	17.2	16	15.5	15-18	16	
Apparent Porosity(%) \leq	16	17	19	18	16	
SiC(%)	72.0	72.0	70.0	72.0	72.0	
Si ₃ O ₄ (%)	22.0	21.0	20.0	21.0	21.0	
Fe ₂ O ₃ (%)	0.3	1.5	2.0	0.5	0.3	
Application	The Sidewalls and The Bottom of Blast Furnace, Cooling Wall and Refuse Incinerator and Boiler			Lining and Outlet Bricks for Aluminum Electrolytic Cell, Reaction Pot of Chemical Industry and Melting Chamber of High Temperature Furnaces and Pipes for Molten Aluminum Transferring etc		

Monolithic Refractories

Monolithic Refractories for Blast Furnace

Item	Al ₂ O ₃ -SiO ₂ -C Castable				Alumina-spinel Castable		High-alumina Plastic Castable		
	CTG-11	CTG-12	CTG-13	CTG-14	CAM-70	CAM-85	CJS-1500	CJS-1600	
Al ₂ O ₃ (%) ≥	60	50	45	45	70	85	55	65	
SiO ₂ +C (%) ≥	12	30	7	12	—	—	—	—	
CaO (%) ≤	1.5	1.5	1.5	1.5	—	—	—	—	
MgO (%) ≥	—	—	—	—	12	10	—	—	
SiO ₂ (%) ≤	—	—	—	—	—	—	40	30	
Bulk Density (g/cm ³) ≥	110°C×24h	2.7	2.6	2.4	2.4	2.8	3.0	2.3	2.4
	1000°C×3h	—	—	—	—	2.7	2.9	—	—
	1450°C×3h	2.6	2.5	2.35	2.35	—	—	—	—
	1500°C×3h	—	—	—	—	2.9	3.1	—	—
C.C.S. (MPa) ≥	110°C×24h	30	20	30	20	40	40	—	—
	1450°C×3h	40	30	40	30	60	60	—	—
M.O.R. (MPa) ≥	110°C×24h	5	4	5	4	5	6	5-7	5-8
	1000°C×3h	—	—	—	—	8	8	—	—
	1450°C×3h	5	5	6	5	—	—	—	—
	1500°C×3h	—	—	—	—	10	12	10	12
Permanent Linear Change (%)	110°C×24h	—	—	—	—	0~ -0.1	0~ -0.1	-0.2~ 0	-0.2~ 0
	1000°C×3h	—	—	—	—	0~ +0.2	0~ +0.2	—	—
	1450°C×3h	±0.5	±0.5	±0.6	±0.6	—	—	—	—
	1500°C×3h	—	—	—	—	0~ +0.8	0~ +0.8	0~ +0.5	0~ +0.5
Max. Service Temperature (°C)	—	—	—	—	1760	1800	1500	1600	
Application	Main Ditch of Molten Iron Line	Main Ditch of Slag Line	Iron Trough	Slag Trough	Linings of Ladle (Vibration Casting Method Construction)		Linings of Heating Furnace of Steel Rolling, Incinerator (Ramming Construction Method)		

Monolithic Refractories for Hot Blast Stove

Item	Fireclay Mortar				Mullite Mortar	High Alumina Mortar
	CLN55A	CNM13P	CNM12P	CNM11P	CHM01P	CHM12P
$Al_2O_3(\%) \geq$	42	45	50	55	85	70
M.O.R. (MPa) \geq	110°C×24h	1	2	2	3	4
	1200°C×3h	3	6	—	—	—
	1300°C×2h	—	—	6	—	6
	1400°C×2h	—	—	—	6	—
	1500°C×2h	—	—	—	—	6
Grain Size(%)	110°C×24h (\leq)	1	1	1	1	1
	1200°C×3h (\geq)	50	50	50	50	50
Refractoriness (°C) \geq	1710	1730	1750	1790	1790	1790
Refractoriness Under Load(°C) \geq	1200	1200	1250	1350	1650	1550
Adhesive Time(min)	1-2	1-2	1-2	1-2	1-2	1-2
Application	Same Material Masonry					

Monolithic Refractories for Ladle and Refining Furnace

Item	Alumina Magnesia Castable	Alumina Spinel Castable	Magnesium Calcium Gunning		Painting Material for Tundish	Alumina Magnesium Drying Vibrating Castable for Tundish		Current Regulator	
			CPL-1	CPL-2		CD	CGD		
$Al_2O_3(\%) \geq$	70	72	—	—	—	—	—	—	
$MgO(\%) \geq$	9	10	75-80	70-80	60-85	50-85	50-70	75	
$CaO(\%) \leq$	—	—	5-10	2-10	—	—	—	6.0	
$SiO_2(\%) \leq$	10	9	4	10	—	—	—	—	
$SiO_2 + Fe_2O_3 + Al_2O_3(\%) \geq$								10	
Bulk Density (g/cm ³) \geq	—	—	—	—	2.0	—	—	2.85	
C.C.S. (MPa) \geq	110°C×24hrs	60	90	—	—	5.0	—	—	80
	1500°C×3hrs	80	100	—	—	8.0	8.0	8.0	—
M.O.R.(MPa) \geq	110°C×24hrs	8	11.5	—	—	—	—	—	—
	1500°C×3hrs	13	11.5	—	—	—	—	—	—
Refractoriness (°C) \geq	—	—	1790	1790	—	—	—	—	
Grain Size (mm) \leq	—	—	—	—	3	—	—	—	
Permanent Linear Change(%)	1500°C×2hrs	-0.1~0.2	-0.2~0.35	—	—	—	—	—	—
	1500°C×3hrs	—	—	—	—	-2.5~ -1.0	—	—	—
Life Time (hr)	—	—	—	—	10-40	10-60	10-40	—	

Monolithic Refractories for Heat Treatment Furnace

Item	High Alumina Castable			Insulating Castable		
	HAC50	HAC58	HAC62	IFC30A	IFC30B	IFC45
Bulk Density(g/cm ³) \geq	2.4	—	—	0.75	1.1	1.35
Cold Crushing Strength(Mpa)	110°C×24h	30	20	35	—	—
	1100°C×3h	90	33	33	1.8	6
Refractoriness(°C)		1790	1790	—	—	—
Continual Working Temperature(°C)		1500	1400	1200	1100	1400
Permanent Linear Change(%)	± 0.3 (1370°C×3h)	-0.04 (1370°C×3h)	0.11 (1260°C×4h)	-0.4 (1000°C×3h)	-0.5 (900°C×3h)	-0.3 (1100°C×3h)
Thermal Conductivity(W/m.k)	1.5 (350°C)	—	—	-0.24 (1000°C×3h)	-0.24 (600~800°C)	-0.24 (1000°C×3h)
Al ₂ O ₃ (%)	50	58	62.41	30	30	45
CaO(%)	1	3	5.03	—	—	—
Fe ₂ O ₃ (%)	—	3	1.59	3	5	1.5

Item	Aluminum Chrome Castble						
	STL-1	STL-2	STL-3	STL-4	STL-5	STL-6	
Bulk Density(g/cm ³)	110°C×24hrs	3	3	3	3	3	3.05
	1500°C×3hrs	2.9	2.95	2.95	2.95	2.95	3
Modulus of Rupture (Mpa)	110°C×24hrs	8	8	9	9	10	13
	1500°C×3hrs	14	14	15	16	17	18
Working Temperature(°C)		1700	1700	1700	1700	1700	1750
Permanent Linear Change(%)	1500°C×3h 0 ~ +0.5	1500°C×3h 0 ~ +0.5	1500°C×3h 0 ~ +0.5	1500°C×3h 0 ~ +0.5	1500°C×3h 0 ~ +0.5	1500°C×3h 0 ~ +0.5	1500°C×3h -0.1 ~ +0.5
Water Amount(%)		5~7	5~7	5~6	5~6	5~6	—
Al ₂ O ₃ (%)		80	82	83	85	86	90
CaO(%)		2.5	2.5	2.5	2.5	—	—
Cr ₂ O ₃ (%)		10	10	3	5	5	3
Application	Industrial Furnaces for Iron and Steel, Nonferrous Metal smelting, Chemical Lines etc.						

Monolithic Refractories for EAF

Item		Top Triangle Castable	Precast Roof	Tap Hole Fillers	Bottom Dry Ramming Mix
Al ₂ O ₃ (%)≥		82	82	—	—
MgO(%)≥		—	—	50	80
CaO(%)≤		2	2	—	4~10
SiO ₂ (%)≤		—	—	35~40	2
Fe ₂ O ₃ (%)≥		—	—	—	4~10
Cr ₂ O ₃		—	—	—	—
Bulk Density (g/cm ³) ≥	110°C×24h	2.9	2.9	—	2.3(Packing Density)
	1600°C×3h	2.9	—	—	—
C.C.S. (MPa)≥	110°C×24h	30	30	—	—
	1600°C×3h	40	—	—	80
M.O.R.(MPa)≥	110°C×24h	6	6	—	—
	1600°C×3h	8	—	—	—
Grain Size Distribution (%)		—	—	>6mm≤10	—
Heavy Burn Line Rate (1300°C×3h)(%)		0.2~0.6	—	—	—
Application		Fill The Tap Hole of EBT			

Monolithic Refractories for RH Furnace

Item	Corundum-Spinel Castable	Corundum Castable	Magnesia Chrome Qualitative Castable		Magnesia Ramming Mix		
	MGS-1	MGS-2	MGS-3	MGS-4	MGS-5	MGS-6	
Bulk Density(g/cm ³)	2.9	2.9	2.95	2.8	2.5	2.7	
Cold Crushing Strength(Mpa)	110°C×24h	30	60	50	45	40	38
	1600°C×3h	60	70	55(at 1300°C)	50(at 1300°C)	40	38
Modulus of Rupture(Mpa)	110°C×24h	5	6	—	—	—	—
	1500°C×3h	7	10	—	—	—	—
Working Temperature(°C)	1700	1700	—	—	—	—	
Permanent Linear Change(%)	1500°Cx 3h 0 ~ +1	1500°Cx 3h ±0.3	1300°Cx 3h ±0.1	1300°Cx 3h ±0.2	—	—	
Al ₂ O ₃ (%)	80	90	—	—	—	—	
MgO (%)	8	—	75	65	95	90	
Cr ₂ O ₃ (%)	—	—	8	8	2	2	
Application	RH,AOD,LF Refining Furnaces		Tundish Metallurgy and Other Parts of The Copper Trench.		Packed for Open-Hearth Bottom, BOF Maintenance.		

Monolithic Refractories for Nonferrous Metals

Item	Magnesia Chrome Castable			Steel Fiber Reinforced Castable		
	TJ-A	TJ-B	TJ-C	CDQ-A	CDQ-B	
Bulk Density(g/cm ³)	2.95	2.80	2.85	1.85	2.5	
Cold Crushing Strength(Mpa)	110°C×24h	50	60	25	4	7
	1300°C×3h	55	50	—	8	9
Permanent Linear Change(%)	1300°C×3h ±0.1	1300°C×3h ±0.2	—	1200°C×3h -0.5	1200°C×3h -0.3	
Al ₂ O ₃ (%)	—	—	—	40	45	
MgO(%)	75	65	45	—	—	
Cr ₂ O ₃ (%)	8	8	20	—	—	
Application	Nonferrous Metals			Rotary Kiln		

Note: Technical Data are typical results from test pieces. This information, subject to change, is offered solely for your consideration. Users of our products should make their own tests to determine the suitability of each product for their particular purposes.

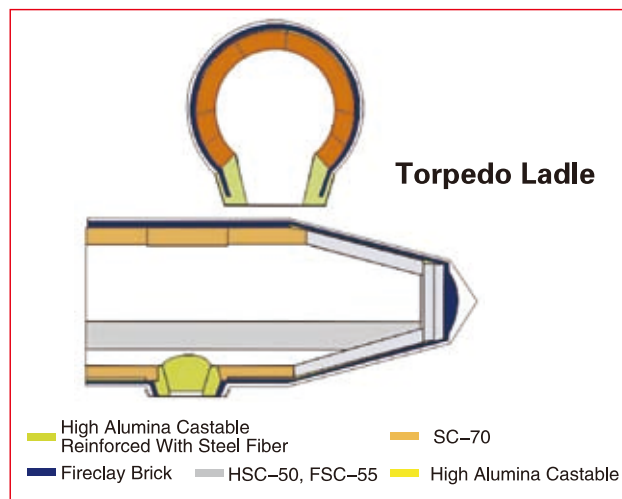
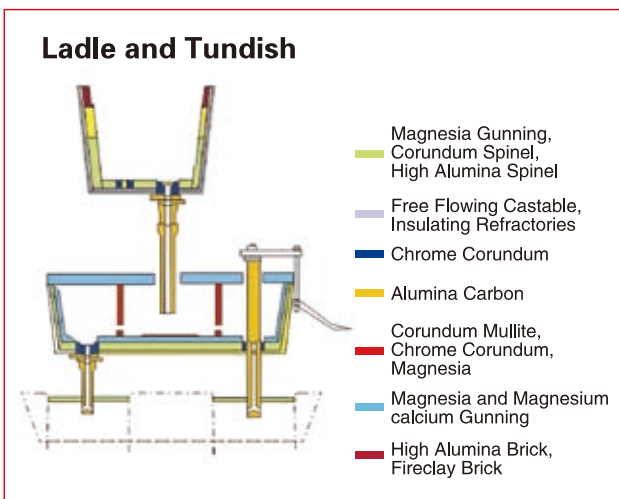
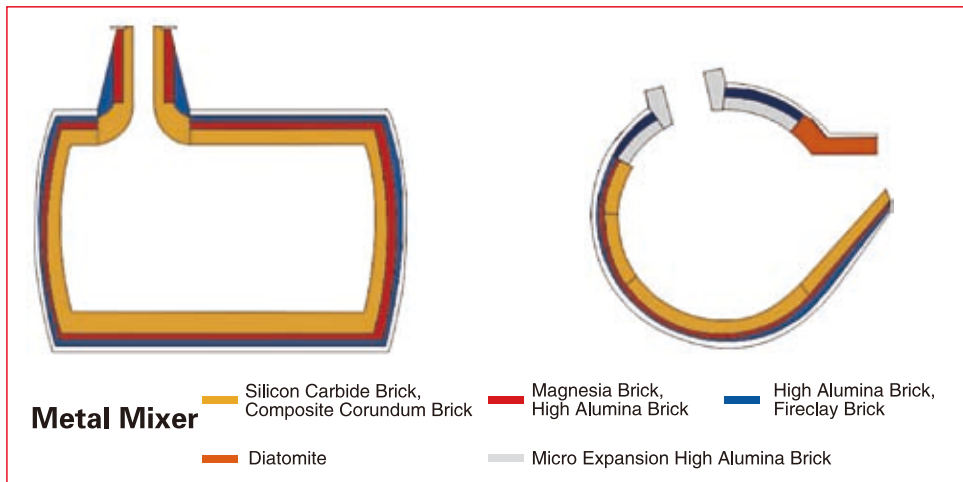
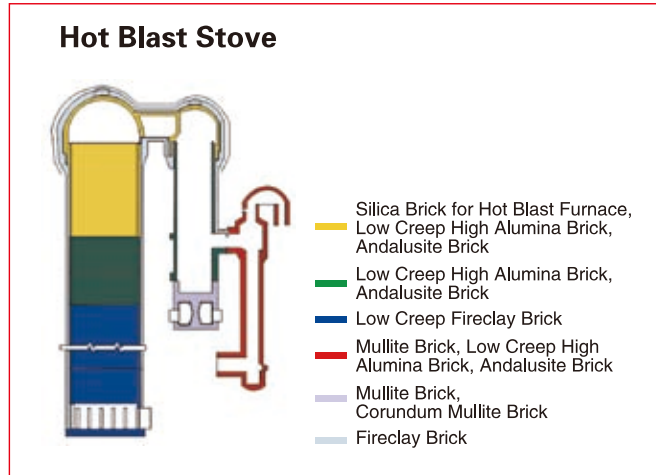
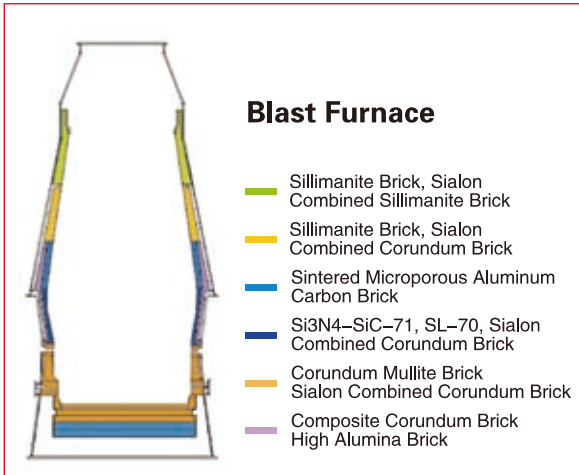
Insulation Materials

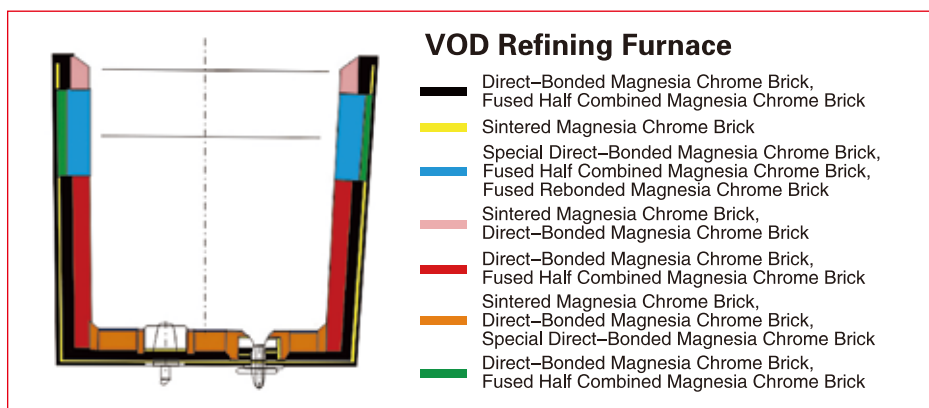
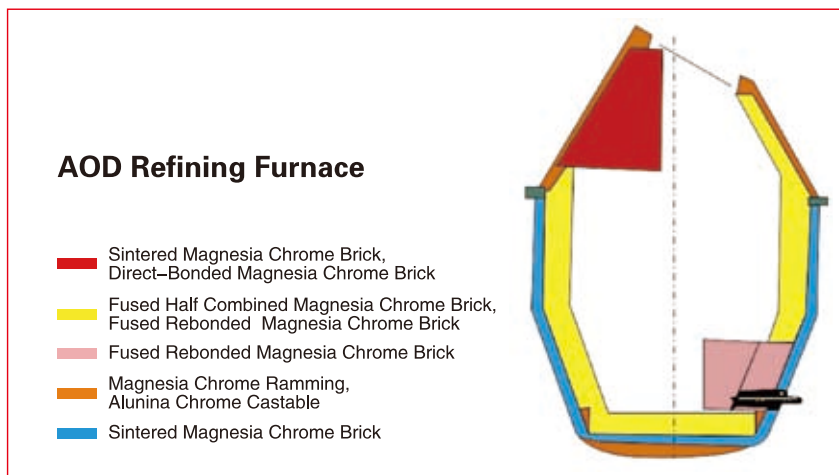
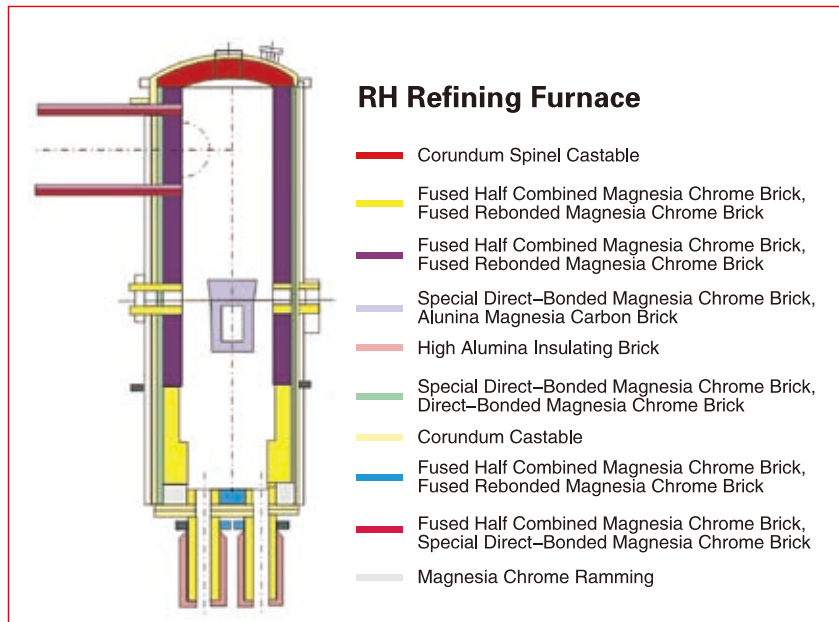
Please you can also request the full range of auxiliary and insulating products, such as calcium silicate boards and pipes, ceramic fiber products:

- Blankets
- Boards
- Papers
- Modules
- Textiles
- Others

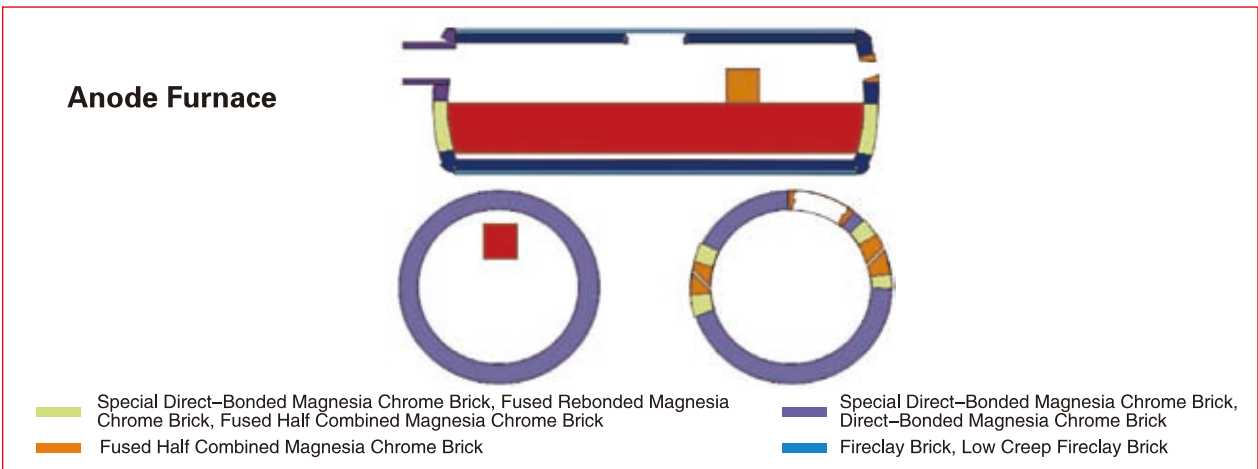
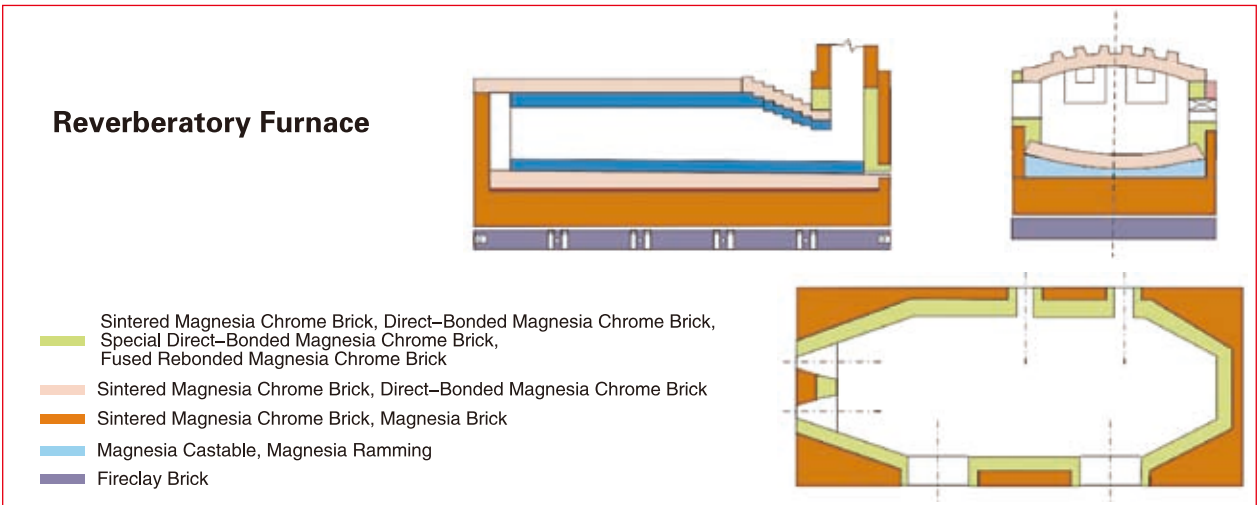
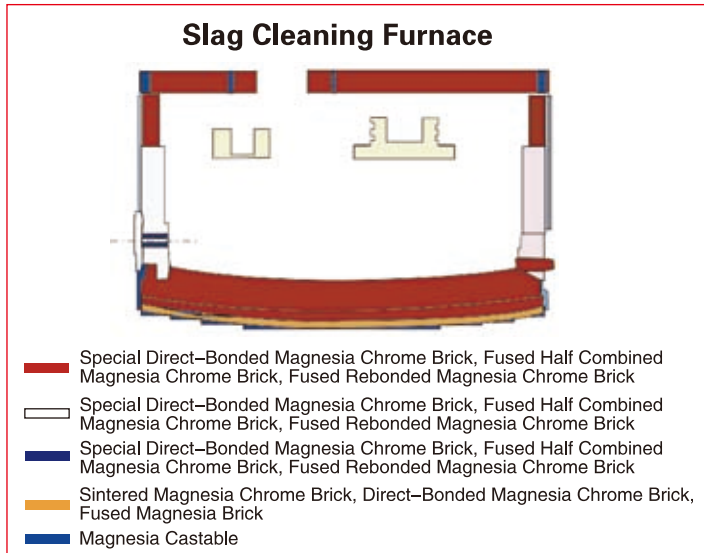
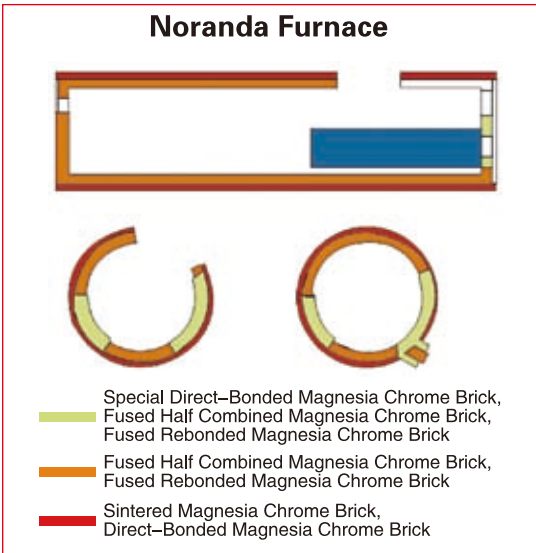
In addition, all kinds of metallic and ceramic anchors are also available.

Typical Configuration

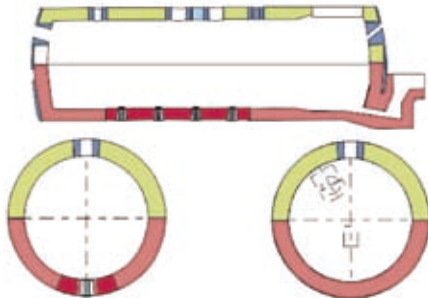




Typical Configuration

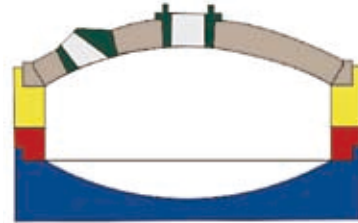


Oxygen Enrichment of Lead Smelting Furnace



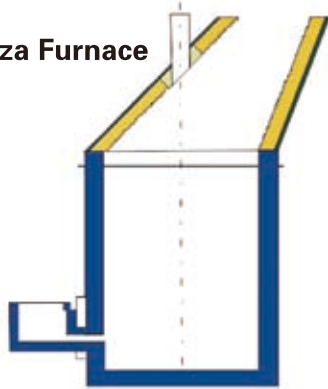
- Special Direct-Bonded Magnesia Chrome Brick, Direct-Bonded Magnesia Chrome Brick
- Special Direct-Bonded Magnesia Chrome Brick, Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick
- Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick
- Magnesia Castable

Secondary Lead Smelting Furnace



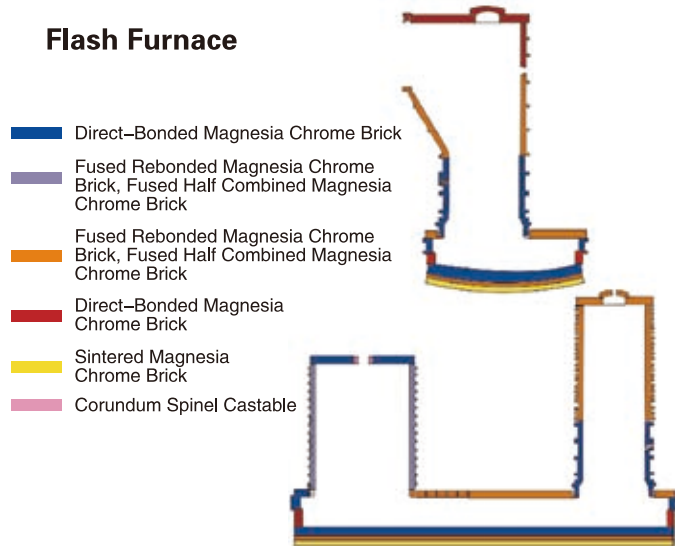
- Chrome Corundum Precasting
- Special Direct-Bonded Magnesia Chrome Brick, Direct-Bonded Magnesia Chrome Brick
- Micro Expansion High Alumina Brick
- Special Direct-Bonded Magnesia Chrome Brick, Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick
- Chrome Corundum Castable

Ai Gaza Furnace



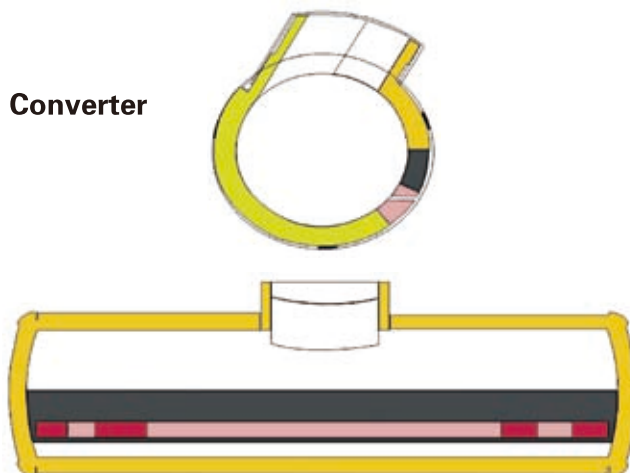
- Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick
- Special Direct-Bonded Magnesia Chrome Brick, Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick
- Alumina Chrome Castable, Magnesia Chrome Castable

Flash Furnace



- Direct-Bonded Magnesia Chrome Brick
- Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick
- Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick
- Direct-Bonded Magnesia Chrome Brick
- Sintered Magnesia Chrome Brick
- Corundum Spinel Castable

Converter



- Special Direct-Bonded Magnesia Chrome Brick, Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick
- Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick
- Fused Rebonded Magnesia Chrome Brick, Fused Half Combined Magnesia Chrome Brick



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