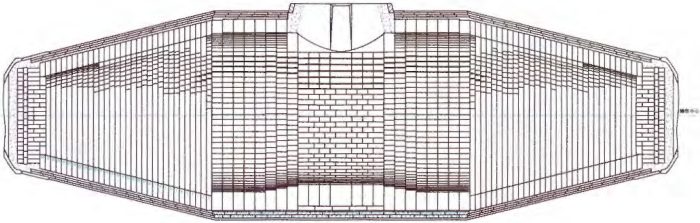
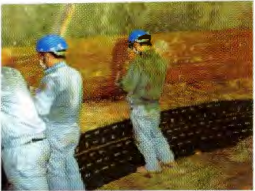
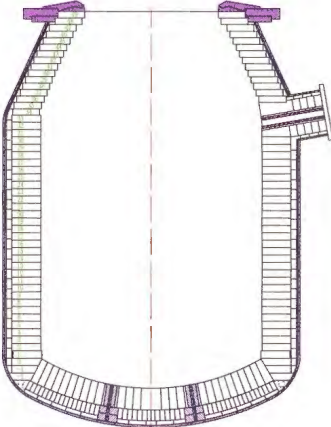


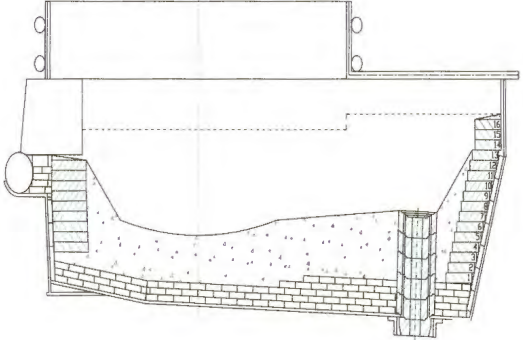
Select refractories/Design



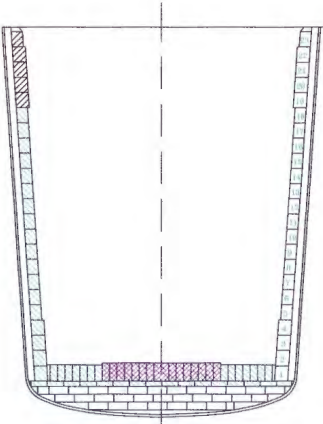
Torpedo ladle



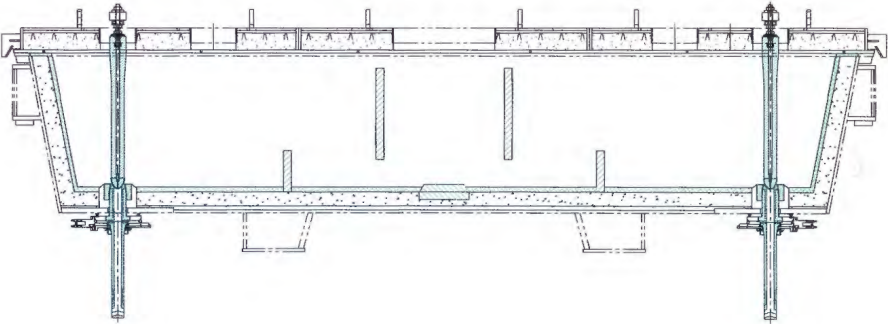
Converter



EAF

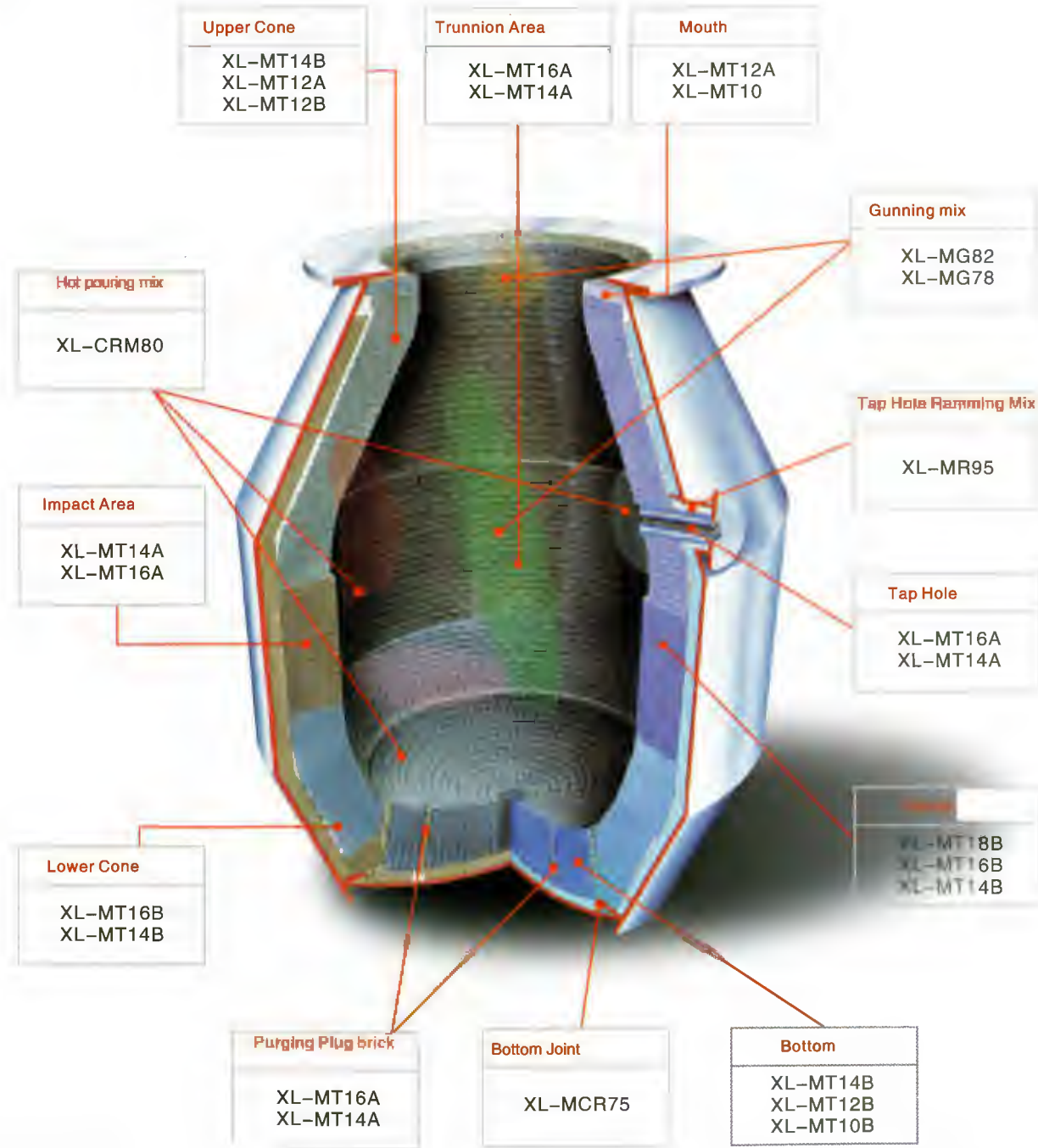


Ladle



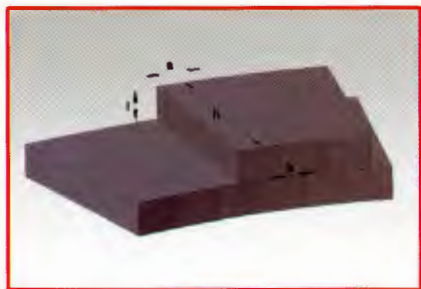
Tundish

Converter Lining



Magnesia carbon birck for converter working lining

Item	Brand		XL-MT18B	XL-MT16A	XL-MT16B	XL-MT14A	XL-MT14B	XL-MT12A	XL-MT12B	XL-MT10
	Index									
Chemical composition (%)	MgO	≥	72	74	74	76	76	78	78	80
	C	≥	18	16	16	14	14	12	12	10
A.P (%)		≤	4	3	4	4	4	5	5	5
B.D (g/cm ³)			2.95±0.05	2.95±0.05	2.95±0.05	3.05±0.05	3.00±0.05	3.10±0.05	3.05±0.05	3.05±0.05
C.C.S (MPa)		≥	35	40	35	40	35	40	40	40
HMOR 1400°C x 30min (MPa)		≥	8	12	10	12	10	10	8	6



Magnesia carbon brick for converter



Taphole birck for converter



Purging plug birck for converter bottom



Preassemble bottom

Unshaped refractories for converter working lining

Item	Name		Large face repairing furnace mix XL-CRM80	Magnesia based gunning mix		Repairing mix tap hole XL-MR95	Ramming mix jointing bottom XL-MCR75
	Brand			XL-MG82	XL-MG78		
Chemical composition (%)	MgO	≥	80	82	78	95	75
	CaO	≤	1-4	2-6	8-12	2	3
	Cr ₂ O ₃		-	-	-	1-3	-
	F.C	≥	8	-	-	SiO ₂ ≤ 1.5	10
Size (mm)			0-10	0-3	0-3	0-5	0-8
Sinter time (min)			30-40	-	-	10-30	-



Stopping-slag ball/Stopping-slag cone



Large-face repair mix for converter

Light-burned magnesia ball

Product name	Brand	MgO (%)	Water ¹	C (%)	I.L (%)	size (mm)
Magnesite ball	XL-MP65	60-68	≤3	-	≤25	30-60
Adjust slag agent	XL-MCP55	55-65	≤3	≥5	≤25	30-60



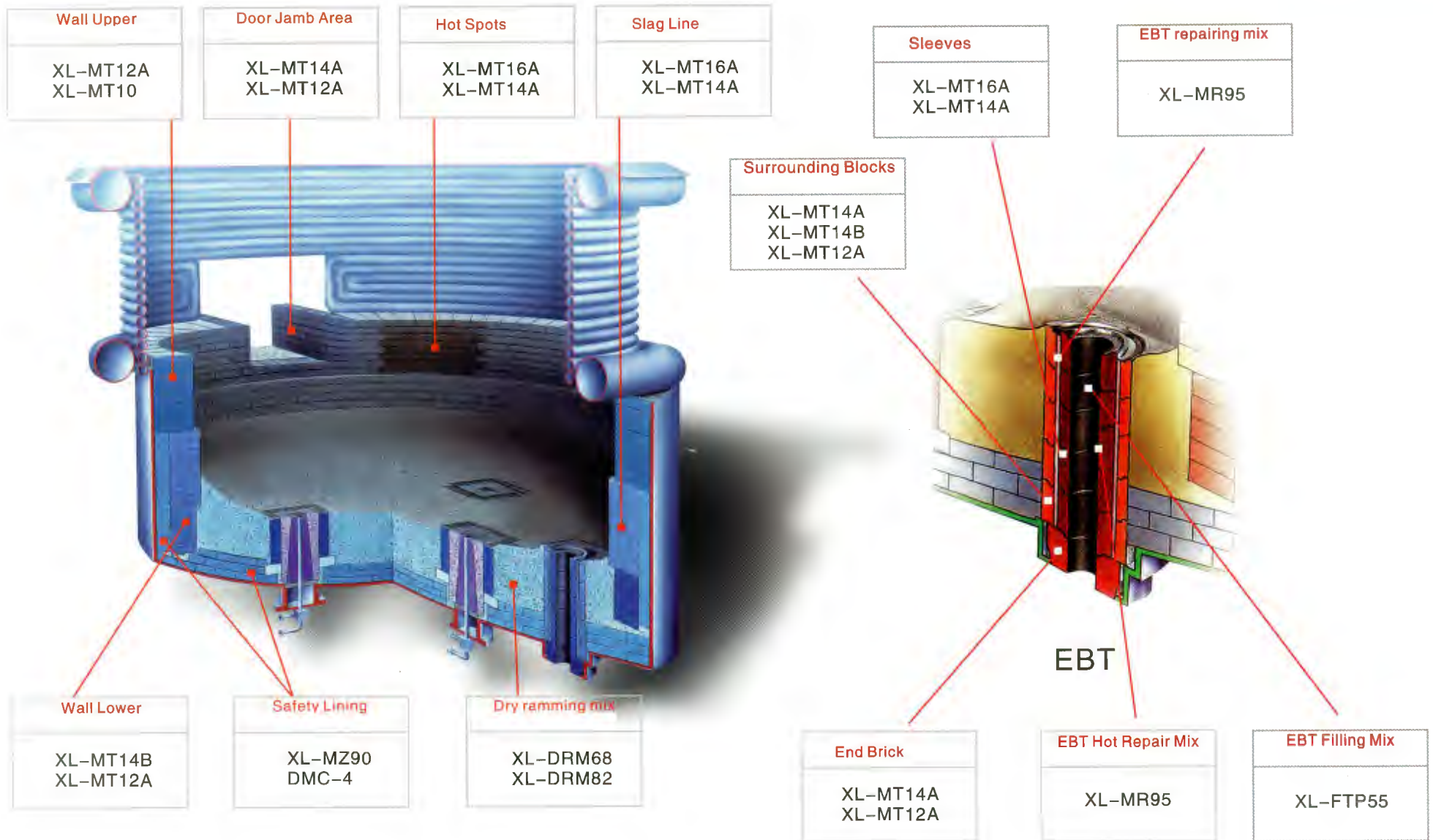
Hot repair mix tap hole

Stopping-slag ball and Stopping-slag cone

Product name	Brand	Al ₂ O ₃ +Fe ₂ O ₃ (%)	(g/cm ³) B.D	(MPa) C.C.S	(°C) Refractoriness
Stopping-slag ball	XL-SSB	81-86	3.90-4.30	≥20	1730
Stopping-slag cone	XL-SSC	80-85	≥3.40	≥30	1730



Light-burned magnesia ball



Magnesia carbon birck for EAF working lining

Item	Brand		XL-MT16A	XL-MT14A	XL-MT14B	XL-MT12A	XL-MT10
	Index						
Chemical composition (%)	MgO	≥	74	76	76	78	80
	C	≥	16	14	14	12	10
A.P (%)		≤	3	4	4	5	5
B.D (g/cm ³)			2.95 ± 0.05	3.05 ± 0.05	3.00 ± 0.05	3.10 ± 0.05	3.05 ± 0.05
C.C.S (MPa)		≥	40	40	35	40	40
HMOR 1400°C x 30min (MPa)		≥	12	12	10	8	6



Gunning mix for EAF



Dry ramming mix for EAF bottom



Magnesia carbon bricks for EAF



Taphole bricks for EAF



Purging plug birck for EAF



Precast-roof for EAF

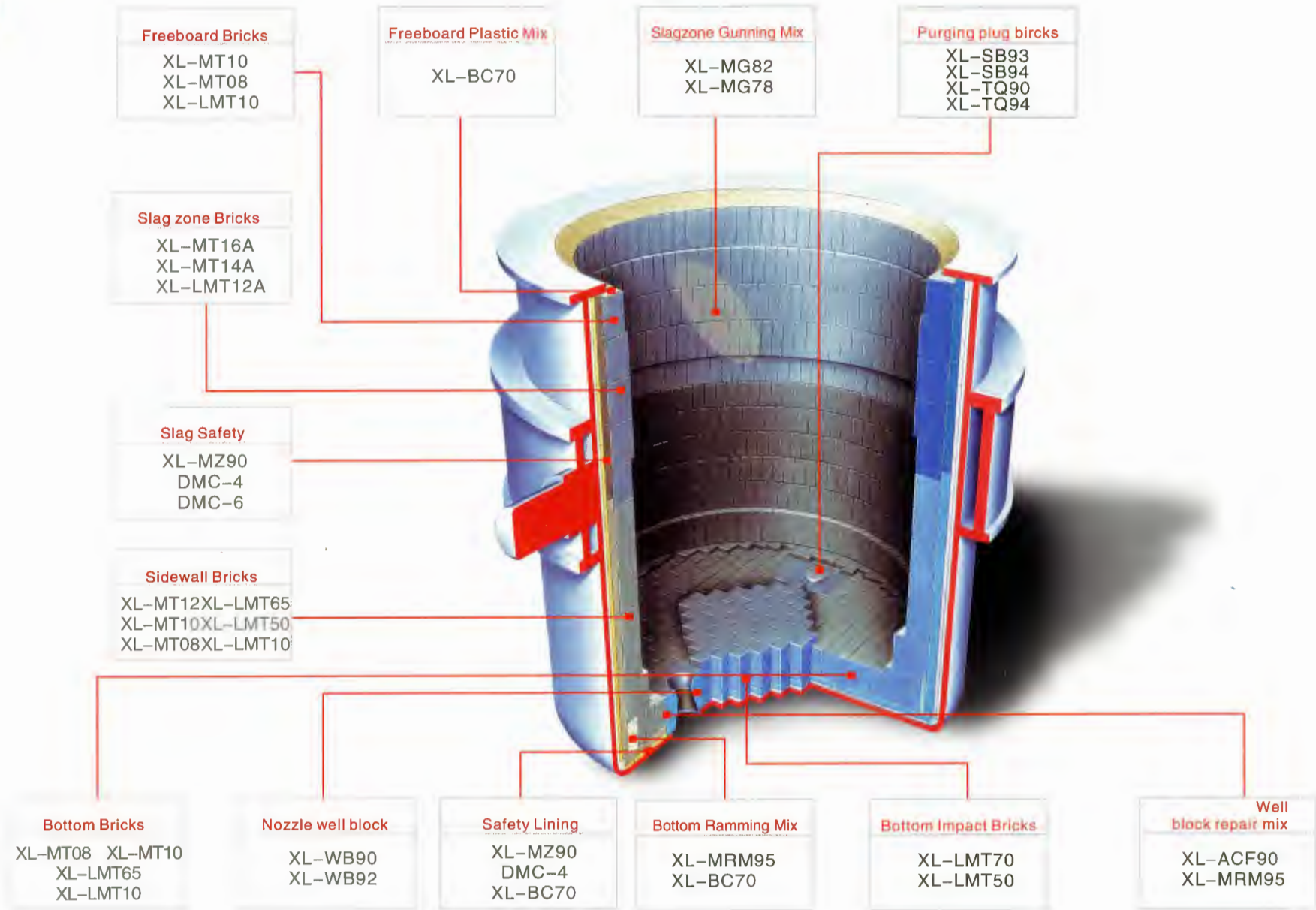
Unshaped refractories for EAF

Name		Drying ramming mix bottom		Hot repair mix bottom	Gunning mix		EBT filling mix
Item	Brand	XL-DRM68	XL-DRM82	XL-HRM80	XL-MG82	XL-MG78	XL-FTP55
Chemical composition	MgO \geq	65-68	82	80	82	78	55-65
	CaO	25-28	6-9	7-9	4-6	8-12	-
	SiO ₂ \leq	1.3	1.5	1.5	-	-	25-35
	Fe ₂ O ₃	3.5-5.5	4.5-6.5	5-7	-	-	-
	I.L \leq	0.5	0.5	2.0	-	-	-
Size (mm)		0-6	0-6	0-6	0-3	0-3	2-5

Corundum-spinel castable mix

Name		castable mix for roof		Precast-roof for EAF	
Item	Brand	XL-ACF90	XL-ACF90H	XL-DLD88	XL-DLD90
Chemical composition	Al ₂ O ₃ \geq	90	90	88	90
	Al ₂ O ₃ +MgO+Cr ₂ O ₃ \geq	-	Cr ₂ O ₃ \geq 2.0	94	96
	CaO \leq	2.5	2.0	2.0	2.0
(g/cm ³) B.D 110°C x 24h \geq		3.10	3.20	3.10	3.15
C.C.S (MPa) \geq	110°C x 24h	50	60	60	60
	1600°C x 3h	80	80	80	100
CMOR (MPa) \geq	110°C x 24h	6	10	10	10
	1600°C x 3h	12	15	12	15
L.C.R (%)	1600°C x 3h	± 0.5	0-1.0	0-1.0	0-1.0

Ladle Lining



Magnesia carbon brick for ladle working lining

Item		Brand	XL-MT16A	XL-MT14A	XL-MT12A	XL-MT10	XL-MT08
Chemical composition (%)	MgO	≥	76	76	78	80	82
	C	≥	16	14	12	10	8
A.P (%)		≤	3	4	5	5	6
B.D (g/cm ³)			2.95 ± 0.05	3.05 ± 0.05	3.10 ± 0.05	3.05 ± 0.05	3.10 ± 0.05
C.C.S (MPa)		≥	40	40	40	40	40
HMOR1400°C x 30min (MPa)		≥	12	12	8	6	6
Application			Slag line		Bottom, Side wall		bottom

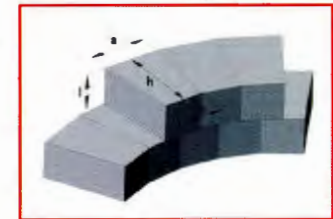
Aluminum magnesia carbon brick for ladle working lining

Item		Brand	XL-LMT70	XL-LMT65	XL-LMT50	XL-LMT10
Chemical composition (%)	Al ₂ O ₃	≥	70	65	50	10
	MgO	≥	9	9	25	70
	C		6-8	6-8	6-8	6-8
A.P (%)		≤	8	8	7	7
B.D (g/cm ³)			3.30 ± 0.05	3.00 ± 0.05	3.10 ± 0.05	3.05 ± 0.05
C.C.S (MPa)		≥	70	50	45	40
0.2MPa R.U.L (°C)		≥	1670	1630	1650	-
Application			Impact zone bottom ,bottom,side wall,throat opening ladle			

General brick types



LW
LW-Shapes



MK
Mini Key-Shapes



SU
SU-Shapes



P
P-Shapes

Unshaped refractories for ladle

Item	Name	Corundum self flow castable mix	Magnesia ramming mix	High aluminum castable mix	Al ₂ O ₃ -MgO mortar	Chrome diversion agent
	Brand	XL-ACF90	XL-MRM95	XL-BC70	XL-LMN	XL-Ge30
Chemical composition (%)	Al ₂ O ₃ ≥	90	-	70	50	SiO ₂ ≤ 40
	MgO+Cr ₂ O ₃ ≥	-	95	-	MgO ≥ 30	Fe ₂ O ₃ ≤ 25
	Cr ₂ O ₃	CaO ≤ 2.5	-	CaO ≤ 2.5	-	25-30
B.D (g/cm ³) ≥	110°C × 24h	3.0	2.95	2.70	-	2.0
CMOR (MPa) ≥	110°C × 24h	12	6.0	6.0	1.5	≤ 0.5%
	1500°C × 3h	15	10	12	5.0	-
C.C.S (MPa) ≥	110°C × 24h	60	30	40	-	-
	1500°C × 3h	80	75	70	-	-
L.C.R (%)	1500°C × 3h	0-+1.0	0-+1.0	± 1.0	-	-
Application		Well block gap for ladle and tundish		Safety lining for ladle and tundish	Construction working lining birck	Filling nozzle well block hole

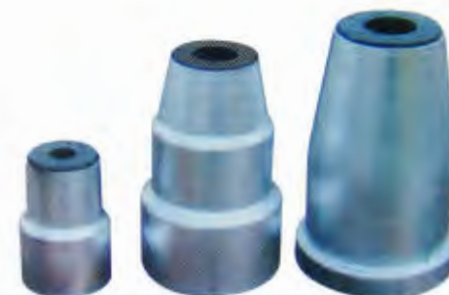
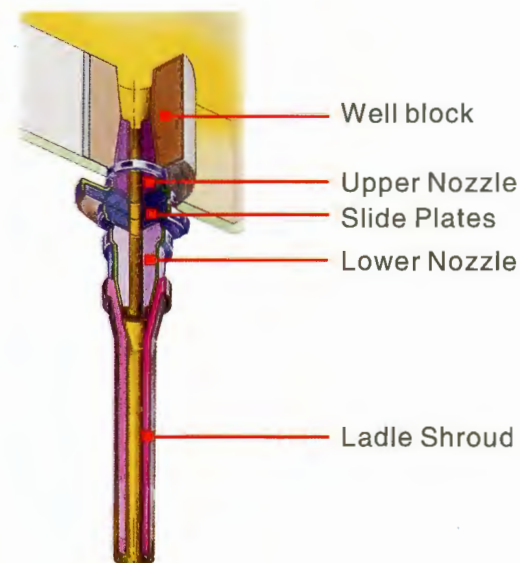
Castable mix for ladle working lining

Item	Brand	XL-LC1	XL-LC2	XL-LC3
		Chemical composition (%) ≥	Al ₂ O ₃ +MgO	90
B.D (g/cm ³) ≥	110°C × 24h	3.15	2.85	2.85
CMOR (MPa) ≥	110°C × 24h	3	4	4
	1550°C × 3h	6	8	8
C.C.S (MPa) ≥	110°C × 24h	20	25	20
	1550°C × 3h	35	50	50
L.C.R (%)	1550°C × 3h	± 0.5	± 0.5	± 0.5
(°C) Safe temp.		1750	1730	1730
(%) Adding water in operation		4.5-5.5	5-6	5-6
Application		Large-sized refining ladle EAF Ladle	Ladle lining and slag line of Small-medium sized	

Nozzle brick for ladle

Name		Upper nozzle			lower nozzle		
Brand		XL-LTN80	XL-LTN70	XL-LTN70M	XL-LTN65	XL-LTN70	XL-LTN75
Chemical composition (%)	Al ₂ O ₃ ≥	80	70	-	65	70	75
	MgO ≥	-	-	70	-	-	-
	C ≤	3	8	4	8	8	4
(g/cm ³) ≥		2.90	2.80	2.75	2.75	2.80	2.85
A.P (%) ≤		14	14	14	14	14	14
C.C.S (MPa) ≥		75	40	45	40	45	65
CMOR 1400°C × 30min (MPa) ≥		12	10	10	10	10	12
Application		More than 60T ladle	More than 40T ladle	High corrosion resistance ladle	Service life 2-4 times large-medium ladle	Service life 3-4 times large-medium ladle	Service life 3-5 times large ladle

Pouring system structure diagram



Sintered sliding plate

name		Aluminum carbon slide plate			Magnesia spinel slide plate	Aluminum zirconium carbon slide plate	
Item	Brand	XL-SSP70	XL-SSP75	XL-SSP85	XL-SSP55M	XL-SSP70Zr	XL-SSP75Zr
Chemical composition (%)	$Al_2O_3 \geq$	70	75	85	35-45	70	75
	$ZrO_2 \geq$	-	-	-	MgO:50-60	5	6
	$C \geq$	7	7	5	2-4	5	5
B.D	$(g/cm^3) \geq$	2.85	2.90	3.00	3.10	3.15	3.15
A.P	$(\%) \leq$	6	6	6	7	6	6
C.C.S	$(MPa) \geq$	90	100	100	120	120	120
MOR	$1400^\circ C \times 30min (MPa) \geq$	10	10	13	15	15	13
Application	大中型钢包 Medium-large ladle						

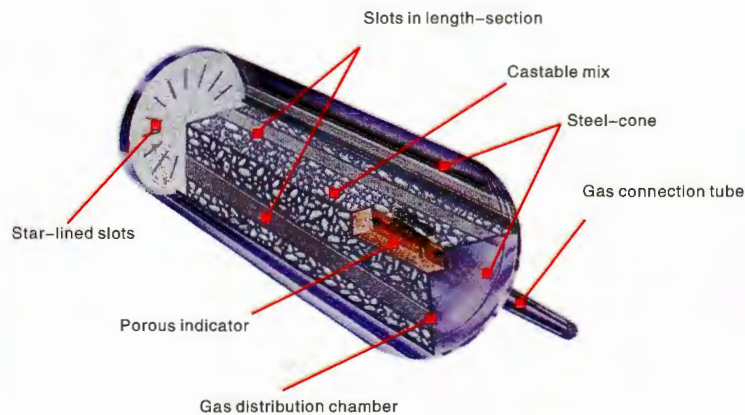
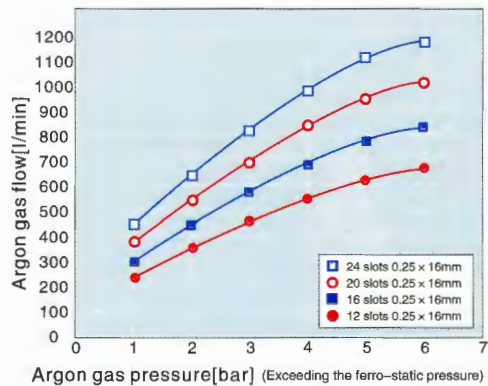
Unsintered aluminum-carbon sliding plate

Brand		XL-SP60AC	XL-SP70AC	XL-SP80AC	XL-SP85AC
Item					
Chemical composition (%)	$Al_2O_3 \geq$	60	70	80	85
	$SiO_2 \leq$	-	-	5	4
	$C \geq$	≥ 4	≥ 4	≤ 5	≤ 4
B.D	$(g/cm^3) \geq$	2.85	2.90	3.00	3.05
A.P	$(\%) \leq$	10	10	10	10
C.C.S	$(MPa) \geq$	70	80	120	120
HMOR	$1400^\circ C \times 30min (MPa) \geq$	6	8	15	15
Application	Small-medium ladle			Low carbon, extra low carbon steel, medium ladle	

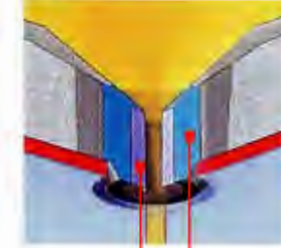
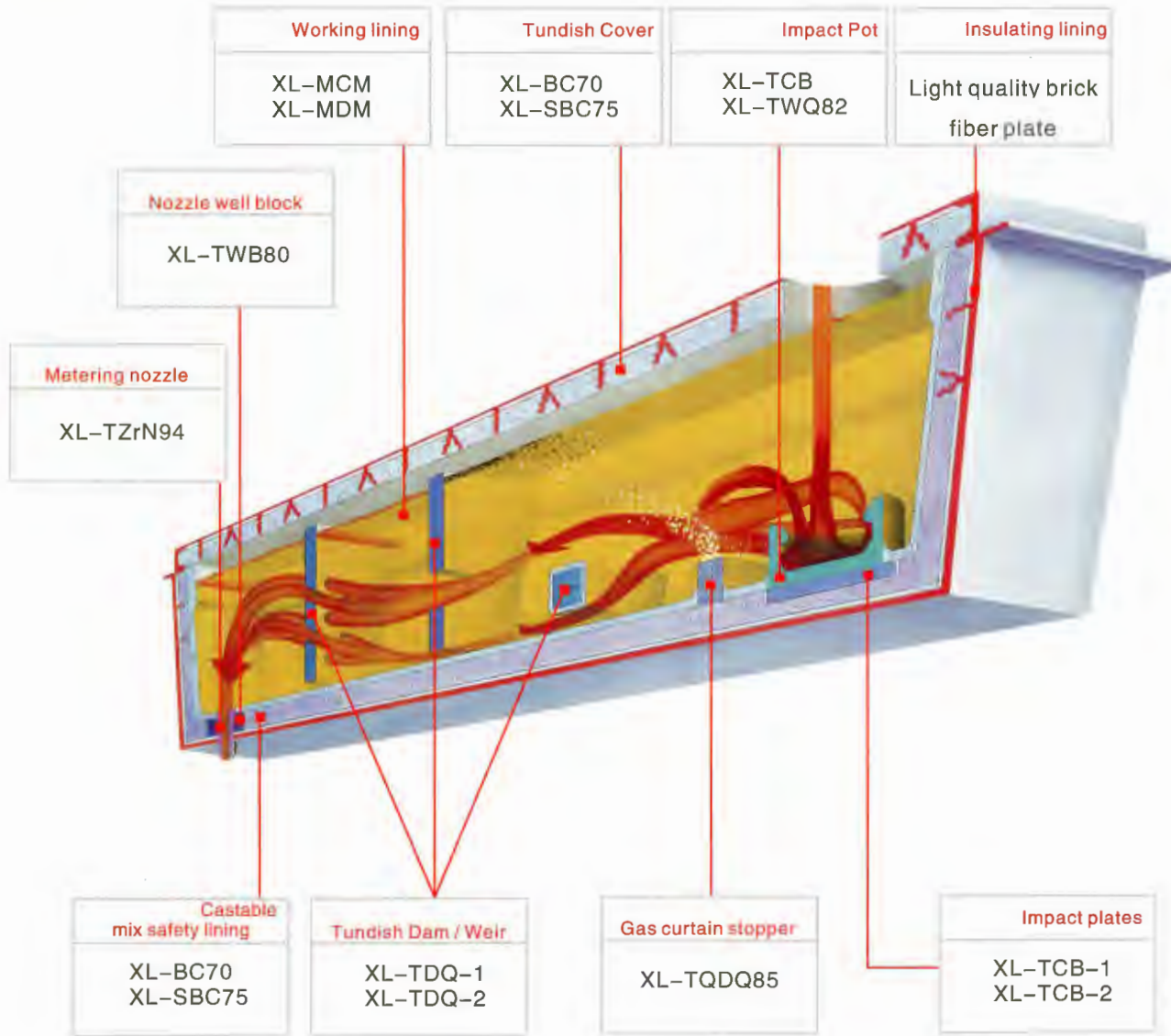
Purging plugs、seating block for ladle

name		Seating block for purging plugs		Purging plugs		Seating block for nozzle	
		XL-SB93	XL-SB94	XL-TQ94	XL-TQ90	XL-WB92	XL-WB90
Index	Brand						
Chemical composition (%)	Al ₂ O ₃ +MgO ≥	93	-	-	-	-	90
	Al ₂ O ₃ +MgO+Cr ₂ O ₃ ≥	-	94	94	90	92	-
B.D (g/cm ³)	≥	3.00	3.20	3.20	3.00	3.20	3.00
C.C.S (MPa)	≥	60	80	80	100	80	60
CMOR (MPa)	≥	12	15	12	15	15	12
Argon gas flow (L/min) (0.3MPa)	≥	-	-	350	350	-	-
Application		Blow argon for refining ladle bottom				Medium-large ladle	Small-medium ladle

Argon gas flow



Tundish lining



Metering Nozzle

XL-TUN45
XL-TZrN94

Well Block

XL-TWB80



Refractories for tundish working lining

Item	Name Brand	Magnesia coating mix		Magnesia drying vibrating mix	
		XL-MCM80	XL-MCM65	XL-MDM85	XL-MDM60
Chemical composition (%)	MgO \geq	80	65	85	60
	CaO \leq	2.5	10	3	10
B.D (g/cm ³)	110°C × 24h	2.10 ± 0.20	1.80 ± 0.20	2.10 ± 0.30	2.10 ± 0.30
C.C.S (MPa) \geq	1500°C × 3h	4	5	8	7
	1500°C × 3h	8	6	15	10
L.C.R (%)	1500°C × 3h	-2.0 ± 0.50	-3.0 ± 0.50	-1.0 ± 0.50	-1.0 ± 0.50

Nozzle birck for tundish

Name		(Purging plugs) upper nozzle			metering nozzle	
Brand		XL-TUN45			XL-TZrN94	
zone		body	Anti-blocking layer	purging plugs lining	Lining	Body
Chemical composition (%)	ZrO ₂ +HfO ₂	-	-	-	≥ 94	-
	Al ₂ O ₃ \geq	45	65	55	-	70
	C+SiC \geq	25	10	20	-	-
B.D (g/cm ³) \geq		2.20	2.70	2.40	4.30	2.80
A.P (%) \leq		20	16	25	20	20
C.C.S (MPa) \geq		50	25	20	100	50
Thermal shock resistance (times) \geq 1200°C water		5	5	-	5	5
Application		It can be applied to control flow of steel with Plate billet, large billet, round billet continuous-casting tundish stopper.			It can be applied to control flow of steel with small billet continuous-casting .	

Refractories for tundish

Stopping slag plate, impact plate, turbulence, nozzle well block

Item	Name	Stopping slag plate		Gas curtain stopper	Impact plate		Turbulator	Nozzle well block
	Brand	XL-TDQ-1	XL-TDQ-2	XL-TQDQ85	XL-TCB-1	XL-TCB-2	XL-TWQ82	XL-TWB80
Chemical composition (%)	Al ₂ O ₃	≤1.0	≥85	-	≥2.0	≥80	≤1.0	≥80
	MgO ≥	80	-	85	80	-	82	-
	Cr ₂ O ₃ ≥	2.5	SiO ₂ ≤10	-	1.0	-	3.0	SiO ₂ ≤15
	CaO ≤	-	2.0	-	-	2.5	-	2.5
B.D (g/cm ³) ≥		2.90	3.10	2.45	2.85	2.85	2.90	2.85
C.C.S (MPa) ≥		55	80	15	40	60	55	50
CMOR (MPa) ≥		12	15	5	10	12	12	8

Covering agent for tundish

Item	Brand	XL-TFJ-1	XL-TFJ-2	XL-TFJ-3	XL-TFJ-4	XL-TFJ-5
	Material	Carbide rice hull	CaO-SiO ₂	MgO	Al ₂ O ₃ -CaO	Al ₂ O ₃ -CaO
Chemical composition (%)	CaO	-	42-45	12-18	25 ± 1.5	35 ± 1.5
	Al ₂ O ₃	-	<4	<1.5	46 ± 2.0	47 ± 2.0
	SiO ₂	≥50	18-25	8-10	4 ± 1.5	4 ± 1.5
	MgO	-	2-4	65-70	14 ± 2	<5.0
	Fe ₂ O ₃	-	-	-	2 ± 0.5	2 ± 0.5
	C	≤45	4-7	<1	<0.5	<2.5
Melting temperature (°C)			1420-1480	1520-1580	1380-1500	1375-1466
Melting time (min)			15-25	20-30	-	-
Size (mm)			1-5	1-5	1-10/100 μ m	1-10/100 μ m
Features and application		Insulation function	Smelting high carbon steel	Smelting extra low carbon steel	Smelting killed steel .	



Monoblock stopper, Ladle shroud, Sub-entry nozzle

Name		Sub-entry-nozzle		Sub-entry nozzle		Ladle shroud	Monoblock stopper		
		XL-SEN-A		XL-SEN-B			XL-LSA	XL-TMS-A(B)	
Brand									
Zone									
Item		Body	Slag line	Body	Slag line	Integration	Body	Head	Head
Chemical composition (%)	Al ₂ O ₃ ≥	50	-	45	-	45	55	70	MgO ≥ 60
	C+SiC ≥	25	12	30	15	25	25	20	15
	ZrO ₂ ≥	3.0	75	4	72	-	-	-	-
B.D (g/cm ³) ≥		2.40	3.50	2.30	3.50	2.30	2.40	2.70	2.60
A.P (%) ≤		16	16	19	19	18	18	18	16
C.C.S (MPa) ≥		20	20	20	20	20	25	25	20
CMOR (MPa) ≥		8	8	6	6	6	8	8	6
service life (hrs) ≥		6		8		8	10		
Thermal shock resistance (times) ≥ 1200°C . Water		5		5		5	7		
Application		Thin billet continuous casting		Common continuous casting		Flow of steel protection for ladle&tundish	Control to flow of steel for continuous casting tundish		



Unshaped refractories for blast furnace

Item		Name	Waterless gun mud	Waterless pressure the mud	Cooling wall ramming mix
		Brand	XL-PN	XL-YN	XL-CRM
Chemical composition	(%) ≥	Al ₂ O ₃	30-35	≥50	-
		SiO ₂	15-20	-	-
		SiC	8-13	5-10	-
		F.C	20-25	-	≥76
		Content	-	-	≤12
		Volatile	-	-	≤12
(h)		setting time	~ 10min	36-48	24
(°C)		setting temp.	180-200	70-80	10-40
B.D	(g/cm ³)	150°C × 24h	≥1.8	-	≥1.5
L.C.R	(%)	1200°C × 3h	0 ~ -2.0	0 ~ -2.0	±0.5
C.C.S	(MPa)	1200°C × 3h	≥8.0	-	≥25

Castable mix for blast furnace runner

Item		Brand	XL-IRC1	XL-IRC2	XL-IRC3	XL-IRC4	XL-IRG5
		Chemical composition	(%) ≥	Al ₂ O ₃	70	60	60
	SiC+C		15	10	15	20	20
B.D	(g/cm ³)	≥ 110°C × 24h	2.85	2.75	2.85	2.75	2.45
CMOR	(MPa)	≥ 110°C × 24h	6	5	5	6	1.0
		≥ 1450°C × 3h	10	8	8	8	4.5
C.C.S	(MPa)	≥ 110°C × 24h	30	35	30	30	5
		≥ 1450°C × 3h	40	40	50	50	20
L.C.R	(%)	1450°C × 3h	0-0.5	0-0.5	0-0.5	0-0.5	±0.5
Adding water in operation		(%)	5-6	5-6	5-6	5-6	10-12
Application			Taphole runner	Branch Taphole runner	Swing taphole tank	Slag runner	Gunning taphole runner

Nobaking ramming mix for blast furnace runner

Item		Brand	XL-ASC60D	XL-ASC65D	XL-ASC70D	XL-ASC75D
Chemical composition (%) \geq	Al_2O_3		60	65	70	75
	SiC+C		18	16	15	14
B.D. (g/cm^3) \geq	$200^\circ\text{C} \times 24\text{h}$		2.42	2.50	2.60	2.70
C.C.S. (MPa) \geq	$200^\circ\text{C} \times 24\text{h}$		15	15	20	20
	$1450^\circ\text{C} \times 3\text{h}$		30	30	35	35
L.C.R.	$1450^\circ\text{C} \times 3\text{h}$		± 0.6	± 0.5	± 0.4	± 0.4
Application			Slag runner, blast furnace runner		Blast furnace runner	

CM CM series of castable mix and gunning (coating) mix

Item		Brand	XL-CM100	XL-CM120 XL-CM120G	XL-CM130 XL-CM130G	XL-CM140 XL-CM140G	XL-CM160 XL-CM160G
Chemical composition (%)	$\text{Al}_2\text{O}_3 \geq$		30	35	40	45	76
B.D. (g/cm^3)			0.8 ± 0.2	1.3-1.7	1.4-1.7	1.8 ± 0.2	2.2 ± 0.2
CMOR \geq (MPa)	$110^\circ\text{C} \times 24\text{h}$		0.5	1.0-4	1.5-4	3.0	4.0
	($^\circ\text{C}$) $\times 3\text{h}$		1.0 (1000 $^\circ\text{C}$)	2.5-6 (1200 $^\circ\text{C}$)	3-6 (1200 $^\circ\text{C}$)	5.0 (1400 $^\circ\text{C}$)	6.0 (1450 $^\circ\text{C}$)
L.C.R. (%)	($^\circ\text{C}$) $\times 3\text{h}$		± 1.0 (1000 $^\circ\text{C}$)	± 0.7 (1200 $^\circ\text{C}$)	± 0.7 (1200 $^\circ\text{C}$)	± 0.6 (1400 $^\circ\text{C}$)	± 0.6 (1450 $^\circ\text{C}$)
Thermal conductivity coefficient (700 $^\circ\text{C}$) ($\text{w}/\text{m} \cdot \text{k}$)			0.25	0.35	0.4	0.6	-
Application temp. ($^\circ\text{C}$)			1000	1200	1300	1400	1450
Application			Insulation-thermal layer	Blast furnace hot stove furnace	Blast furnace hot stove furnace	hot stove furnace	hot stove furnace blast furnace heating furnace

Hot metal ladle, torpedo ladle and mixer iron furnace refractories

Al₂O₃-SiC-C brick

Index		Brand	XL-ASC75Z	XL-ASC70Z	XL-ASC68Z	XL-ASC65Z
Chemical composition (%)	Al ₂ O ₃ ≥		75	70	66	62
	SiC ≥		12-15	10	8	6
	C ≥		12	10	10	8
A.P (%) ≤		6	7	8	9	
B.D (g/cm ³)		3.25 ± 0.05	3.10 ± 0.05	3.05 ± 0.05	3.00 ± 0.05	
C.C.S (MPa) ≥		55	50	45	40	
R.U.L 0.2 (MPa) (°C) ≥		1750	1700	1700	1650	
Application		Impact zone, slag line	Slag line hot metal zone	hot metal zone	Free zone	

Unshaped refractories

Item		Name	ASC castable mix			ASC mortar	Gunning mix	High aluminum castable mix
			Brand	XL-ASC70J	XL-ASC60J	XL-ASC50J	XL-ASC65M	XL-PTL70
Chemical composition (%)	Al ₂ O ₃ ≥		70	60	50	65	70	65
	C+SiC ≥		15	13	10	13	-	-
	CaO ≤		2.0	2.0	2.5	-	5	2.5
B.D (g/cm ³) ≥ 110°C × 24hr			2.85	2.70	2.55	-	2.0	2.60
C.C.S (MPa) 110°C × 24hr ≥ 1300°C × 3hr			40 60	30 50	25 45	-	30 50	40 50
CMOR (MPa) 110°C × 24hr ≥ 1300°C × 3hr			8 12	6 10	6 10	1.5	6 8	8 12
L.C.R (%) 1300°C × 3hr			± 0.5	± 0.5	± 0.5	1-2.5min	-1.0-0	± 0.5
Application			Hot metal ladle working lining, torpedo ladle, mixer iron furnace, hot metal trough			Construct ASC bricks	Torpedo ladle, mixer furnace permanent lining	Hot metal ladle, torpedo ladle, mixer iron furnace permanent lining

Making slag agent of hot metal pretreatment and furnace refining

Name		Refining composite-slag premelting		Steel desulphuration agent	Steel cleaning agent	Hot metal desulphuration agent
Brand		XL-JFG-1	XL-JFG-2	XL-JFG-3	XL-JFG-4	XL-JFG-5
Material		CaO-Al ₂ O ₃			CaF ₂	CaO-Al ₂ O ₃
Chemical composition (%)	CaO	45-50	44-50	40-50	8-20	30-45
	Al ₂ O ₃	40-50	42-47	10-20	10-20	15-25
	CaF ₂	< 5.0	< 5.0	< 15	10-20	< 15
	Na ₂ O	-	-	< 10	MgO < 5	< 15
	CaC ₂	-	-	< 20	> 60	< 30
Features and Application		Cleaning steel, deoxidation, desulphuration, mainly used in thin billet continuous-casting.	Deep desulphuration and adsorb Al ₂ O ₃ impurity.	Refining desulphuration ladle.	Cleaning steel CSP continuous casting.	Hot metal pretreatment desulphuration

Item Name	Size (mm)	B.D (g/cm ³)	ignition point (°C)	1000°C (S) antilflaming time	Mg(%)		(% Impurity)		
					Before passivation	After passivation	S	Si	P
Magnesia based desulphuration agent	0.5-1.6 ≥90%	0.98	≥600	≥15	99.9	90-97	≤0.002	≤0.02	≤0.002
Application	It can be applied in hot metal pretreatment desulphuration								

Refractory mortar

Series of refractory mortar

Item		Chemical composition (%)					M.O.R (MPa) \geq		time (min)	Grain size (%)			Application
		Al ₂ O ₃ \geq	MgO \geq	Cr ₂ O ₃ \geq	SiC \geq	C \leq	110°C \times 24H	1400°C \times 3H		-0.1 mm	+0.5 mm	-0.074 mm	
Name	Brand												
Al ₂ O ₃ -C mortar	XL-ACN80	80	-	-	-	2	1.0	-	3-5	100	2	50	Slide plate, Aluminum magnesia carbon brick
Chrome Corundum mortar	XL-AGeN6	85	-	6	-	-	1.5	4.0	1-3	100	2	50	Purging plug brick, nozzle brick, slide plate
	XL-AGeN4	88	-	4	-	-	1.5	4.0	1-3	100	2	50	Purging plug brick
High Al ₂ O ₃ mortar	XL-GLN	42-60	-	-	-	-	1.0	3.0	1-3	100	2	50	Construct fireclay brick, high aluminum brick
	XL-GLN70	70	-	-	-	-	1.0	4.0	1-3	100	2	50	Construct high aluminum brick
	XL-GLN80	80	-	-	-	-	1.0	4.0	1-3	100	2	50	Construct high aluminum brick
Al ₂ O ₃ -MgO mortar	XL-LMN	50	30	-	-	-	1.5	5.0	1-3	100	2	50	Construct magnesia aluminum brick, aluminum magnesia carbon brick

Series of refractory mortar

Item		Chemical composition (%)					M.O.R (MPa) \geq		time (min)	Grain size (%)			Application
		Al ₂ O ₃ \geq	MgO \geq	Cr ₂ O ₃ \geq	SiC \geq	C \geq	110°C \times 24H	1400°C \times 3H		-0.1 mm	+0.5 mm	-0.074 mm	
Name	Brand												
ASC ASC mortar	XL-ASCN	65	-	-	SiC+C \geq 10	-	1.5	3.0	3-5	100	2	50	Construct ASC brick, aluminum carbon brick
Magnesia mortar	XL-MHN	-	80	-	-	-	1.5	2.0	1-3	100	2	50	Construct magnesia brick, magnesia carbon brick
MgO-Cr ₂ O ₃ mortar	XL-MGeN20	-	60	20	SiO ₂ \leq 1.5	-	1.5	4.0	1-3	100	2	50	Construct RHDHAOD/VOV refining furnace working lining
	XL-MGeN8	-	70	8	-	-	1.5	3.0	1-3	100	2	50	Construct magnesia chrome brick, magnesia brick
Phosphate-bonded corundum mortar	XL-PAN	80	-	-	-	-	3.0	5.0	1-3	100	2	50	Construct corundum brick, high aluminum brick
Phosphate-bonded chrome corundum mortar	XL-PAGeN2	80	-	2	-	-	3.0	5.0	1-3	100	2	50	Construct corundum brick, upper nozzle brick
	XL-PAGeN8	80	-	8	-	-	3.0	5.0	1-3	100	2	50	Construct corundum brick, slide plate
Phosphate-bonded high Al ₂ O ₃ mortar	XL-PLN75	75	-	-	-	-	3.0	5.0	1-3	100	2	50	Construct blast furnace, hot stove furnace

Refractory products for cement rotary kiln

Name		High aluminum brick	Periclase composite spinel brick	Silicon mullite brick	Magnesia aluminum spinel brick	Magnesia iron spinel brick	Direct bonded magnesia chrome brick
Item	Brand	XL-KLZ75	XL-FMA	XL-ASZ	XL-MAZ	XL-MFZ	XL-ZMGe
Chemical composition (%)	$\text{Al}_2\text{O}_3 \geq$	75	6-9	63	9-13	4-6	-
	$\text{MgO} \geq$	-	75	-	80-87	87-92	80
	$\text{Fe}_2\text{O}_3 \leq$	3.2	$\text{SiO}_2 \leq 2.0$	2.0	1.0	3-5	-
	$\text{Cr}_2\text{O}_3 \geq$	-	2-4	-	-	-	8.0
(MPa) C.C.S \geq	60	50	90	65	50	45	
(g/cm ³) B.D \geq	2.65	3.00	2.60	2.85-3.00	2.85-3.00	3.00	
(°C)R.U.L (0.2MPa) \geq	1400	1700	1600	1700	1700	1650	
(°C) Refractoriness	1780	1790	1780	1790	1790	-	
(W/(m·k)) (350±25°C) Thermal conductivity	1.4	-	2.5	2.8	2.6	2.9	
Application		Preheating zone, bottom transition zone	Sintered zone, upper transition zone	Decomposition zone, upper and bottom transition	Sintered zone, upper and bottom transition zone	Sintered zone	Sintered zone

Refractory castable mix for cement rotary kiln

Name		Corundum castable mix		High aluminum castable mix		Steel fiber castable mix		Alkaline resistance castable mix
Item	Brand	XL-ACF90	XL-ACF92	XL-BC75	XL-BC70	XL-SBC75	XL-SBC80	XL-JSC
Chemical composition (%)	$\text{Al}_2\text{O}_3 \geq$	90	92	75	70	75	80	≤ 40
	$\text{CaO} \leq$	2.0	1.8	2.5	2.5	2.5	2.0	9.0
	$\text{SiO}_2 \geq$	-	-	-	-	-	-	55
B.D (g/cm ³) 110°C × 24h \geq		3.10	3.15	2.60	2.70	2.70	2.85	2.30
CMOR(MPa) 110°C × 24h \geq		10	12	6.0	8	9.0	10	5
	1100°C × 3h \geq	12	14	8.0	10	12	14	6
C.C.S (MPa) 110°C × 24h \geq		60	80	40	50	70	70	40
	1100°C × 3h \geq	80	100	50	70	80	90	60
(%)L.C.R 1100°C × 3h		±0.5	±0.5	±0.1	±0.1	±0.5	±0.5	0 ~ ±0.5
Application		Mouth kiln		Mouth kiln		End kiln		End kiln

Sintered magnesia bricks

Brand	Chemical composition (%)			A.P (%) ≤	B.D (g/cm ³) ≥	C.C.S (MPa) ≥	R.U.L (0.2MPa) (°C) ≥	PLC (1650°C × 2h)
	MgO ≥	SiO ₂ ≤	CaO ≤					
XLMZ-89	89	-	2.5	18	2.90	50	1550	0 ~ -0.5
XLMZ-91	91	3.0	2.0	18	2.95	60	1560	0 ~ -0.5
XLMZ-93	93	2.5	2.0	18	2.95	60	1620	0 ~ -0.4
XLMZ-94	94	2.0	2.0	18	3.00	60	1650	0 ~ -0.4
XLMZ-95	95	2.0	2.0	18	3.00	60	1650	0 ~ -0.3
XLMZ-96	96	1.0	2.0	18	3.00	60	1680	0 ~ -0.3
XLMZ-97	97	0.8	1.0	18	3.00	60	1700	0 ~ -0.2
XLMZ-98	97	0.8	0.6	18	3.00	60	1700	0 ~ -0.2

Sintered magnesia calcium bricks

Brand	Chemical composition (%)			A.P (%) ≤	B.D (g/cm ³) ≥	C.C.S (MPa) ≥	R.U.L (0.2MPa) (°C) ≥
	MgO ≥	CaO ≥	S+A+F ≤				
XLMDZ-05	87	5	2.0	18	2.95	50	1680
XLMDZ-10	80	10	2.0	18	2.95	50	1680
XLMDZ-15	80	15	2.0	18	2.95	50	1700
XLMDZ-20	75	20	1.5	20	2.90	50	1700
XLMDZ-25	70	25	1.5	18	2.95	50	1700
XLMDZ-30	65	30	1.5	18	2.95	50	1700
XLMDZ-35	60	35	1.8	18	2.95	50	1700
XLMDZ-70	70	20	SiO ₂ ≤ 6	18	2.95	50	1680
XLMDZ-65	65	15	SiO ₂ ≤ 5	18	2.95	50	1680
Application	XL-MDZ05-35; (VOD AOD) XL-MDZ70/65; XL-MDZ05-35; It's mainly used in refining furnace working lining (VOD AOD) . XL-MDZ70/65; Hydration resistance, small thermal conductivity Coefficient , based C ₃ S , mainly used in cement rotary kiln working lining.						

Direct bonded magnesia chrome bricks

Item Brand	Chemical composition (%)			A.P. (%) ≤	B.D. (g/cm ³) ≤	C.C.S (MPa) ≥	R.U.L (0.2MPa) (°C) ≥	Thermal shock resistance 1100°C.water 次(Times) ≥	Thermal expansion 1400°C (%)
	MgO ≥	SiO ₂ ≥	Cr ₂ O ₃ ≥						
DMC-4	80	2.5	4	18	2.93	40	1600	4	-
DMC-6	75	2.8	6	18	2.95	40	1600	4	-
DMC-9A	70	2.8	9	19	2.98	40	1600	4	1.8
DMC-9B	70	3.0	9	19	2.98	40	1580	4	-
DMC-12B	60	3.2	12	19	3.00	35	1580	4	-
XLZMGe-12A	70	1.5	12	17	3.10	45	1700	6	1.7
XLZMGe-16A	70	1.5	16	18	3.15	40	1700	5	1.6
XLZMGe-16B	68	2.5	16	18	3.10	45	1700	6	-
XLZMGe-18A	65	1.5	18	18	3.15	40	1700	6	-

XLZMGe-18B	63	2.5	18	18	3.15	45	1700	5	-
XLZMGe-22A	58	2	22	18	3.18	40	1700	7	1.6
XLZMGe-22B	56	3	22	18	3.15	40	1700	6	-
XLZMGe-26A	53	2	26	18	3.20	40	1700	7	1.8
XLZMGe-26B	51	2.5	26	18	3.18	40	1700	6	-
Fused rebonded magnesia chrome bricks									
XLDMK-12	75	1.5	12	15	3.30	50	1700	-	1.0
XLDMK-14	75	1.5	14	15	3.30	50	1700	-	1.0
XLDMK-16	70	1.5	16	15	3.30	50	1700	-	1.0
XLDMK-18	65	1.5	18	15	3.20	50	1700	-	0.9
XLDMK-20	60	2.0	20	16	3.25	50	1700	-	0.9
XLDMK-26	50	2.0	26	17	3.25	50	1700	-	0.9

Magnesia aluminum bricks and periclase spinel bricks

Brand	Item	Chemical composition (%)				A.P (%)	B.D (g/cm ³)	C.C.S (MPa)	R.U.L 0.2(MPa) (°C)	Thermal shock resistance 1100°C . water 次(Times)
		MgO ≥	Al ₂ O ₃ ≤	SiO ₂ ≤	Fe ₂ O ₃ ≤					
XLML-80A		80	6-9	2.0	-	17	2.95	40	1600	3
XLML-80B		80	6-9	3.5	-	17	2.95	30	1580	3
XLML-85		85	8	2.0	-	18	3.05	40	1650	5
XLMJ-75A		75	13	0.6	0.8	17	2.95	40	1700	10
XLMJ-75B		75	13	1.0	0.8	17	2.95	45	1700	10
XLMJ-80		80	9	1.5	2.8	17	2.95	45	1700	10
XLMJ-85A		85	9	0.6	0.7	16	2.95	45	1700	12
XLMJ-85B		82	9	2.5	0.8	17	2.95	40	1700	10
XLMJ-93A		88	5	0.6	0.7	16	2.95	40	1700	12
XLMJ-93B		85	5	2	0.8	17	2.95	45	1700	10
XLMJ-95A		93	3	0.6	0.7	16	2.95	45	1700	12
XLMJ-95B		90	3	2.5	0.8	17	2.95	40	1700	10



Periclase spinel brick



MgO-Al₂O₃ brick



Direct bonded the magnesia chrome brick



Rebonded magnesia chrome brick



Sintered magnesia brick

Sintering magnesia

Brand \ Item		MgO (%) ≥	SiO ₂ (%) ≤	CaO (%) ≤	L.O.I. (%) ≤	B.D (g/cm ³) ≥
Medium-class magnesia	XL-SM95	95	2.0	1.6	0.3	3.20
	XL-SM94	94	2.5	1.8	0.3	3.20
High purity magnesia	XL-SM97	97	0.8	1.2	0.3	3.30
	XL-SM96	96	1.0	-	0.3	3.25

Fusing magnesia

Brand \ Item		MgO (%) ≥	SiO ₂ (%) ≤	CaO (%) ≤	Fe ₂ O ₃ (%) ≤	L.O.I. (%) ≤	B.D (g/cm ³) ≥
Common fused magnesia	XL-FM98	97.8	0.80	0.8	0.50	0.20	3.50
	XL-FM97	97.0	1.50	1.2	0.80	0.20	3.45
	XL-FM96	96.0	1.50	1.5	1.00	0.20	3.40
Large crystal fused magnesia	XL-LCFM99	99.0	0.20	0.4	0.30	0.10	3.50
	XL-LCFM98.5	98.2	0.50	0.8	0.50	0.15	3.50
	XL-LCFM98	97.6	0.65	1.0	0.65	0.20	3.50
	XL-LCFM97	97.0	0.70	1.5	0.70	0.20	3.45
	XL-LCF96.5	96.5	0.70	1.2	0.70	0.20	3.45