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REFRACTORIES FOR IRON MAKING

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Refractories for Iron Making

Refractories for Iron Making

Refractories Experts for high-temperature industry

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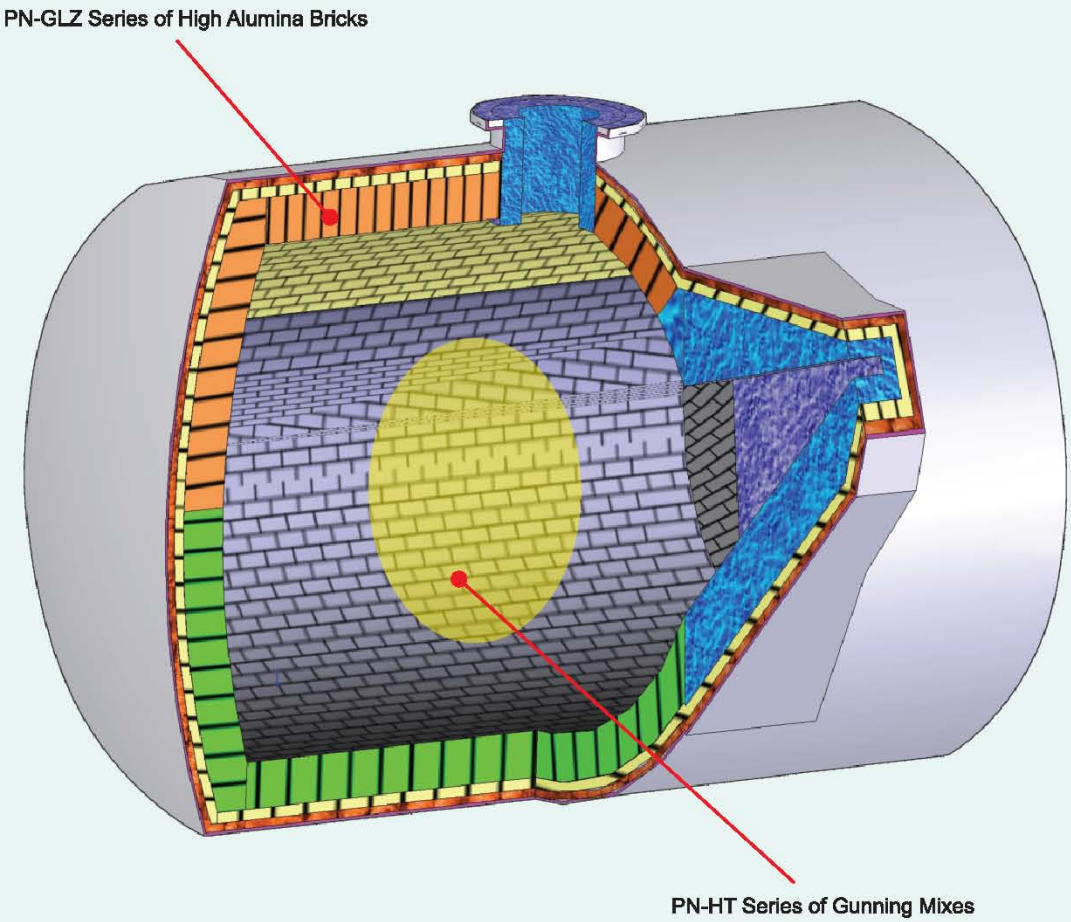
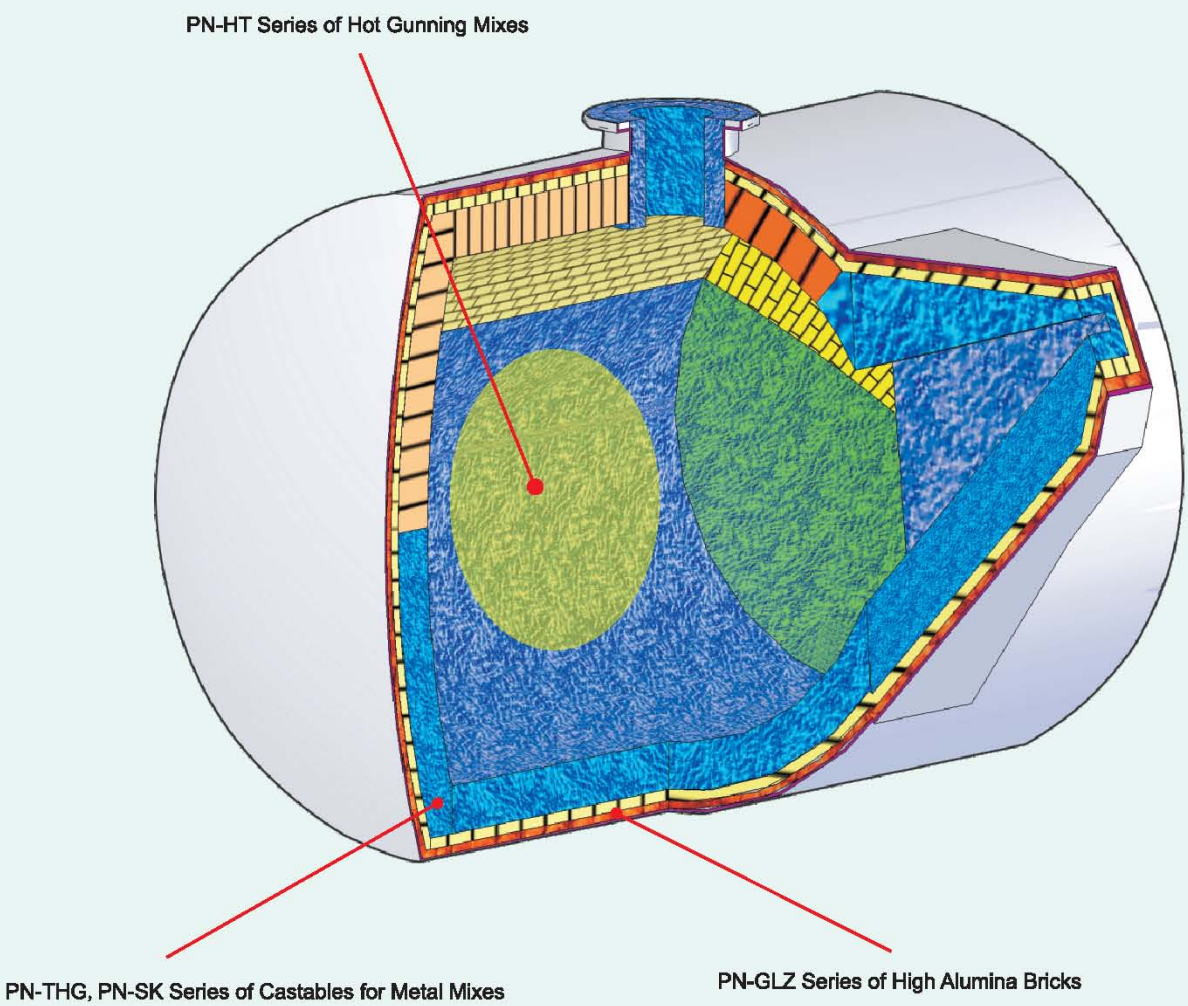
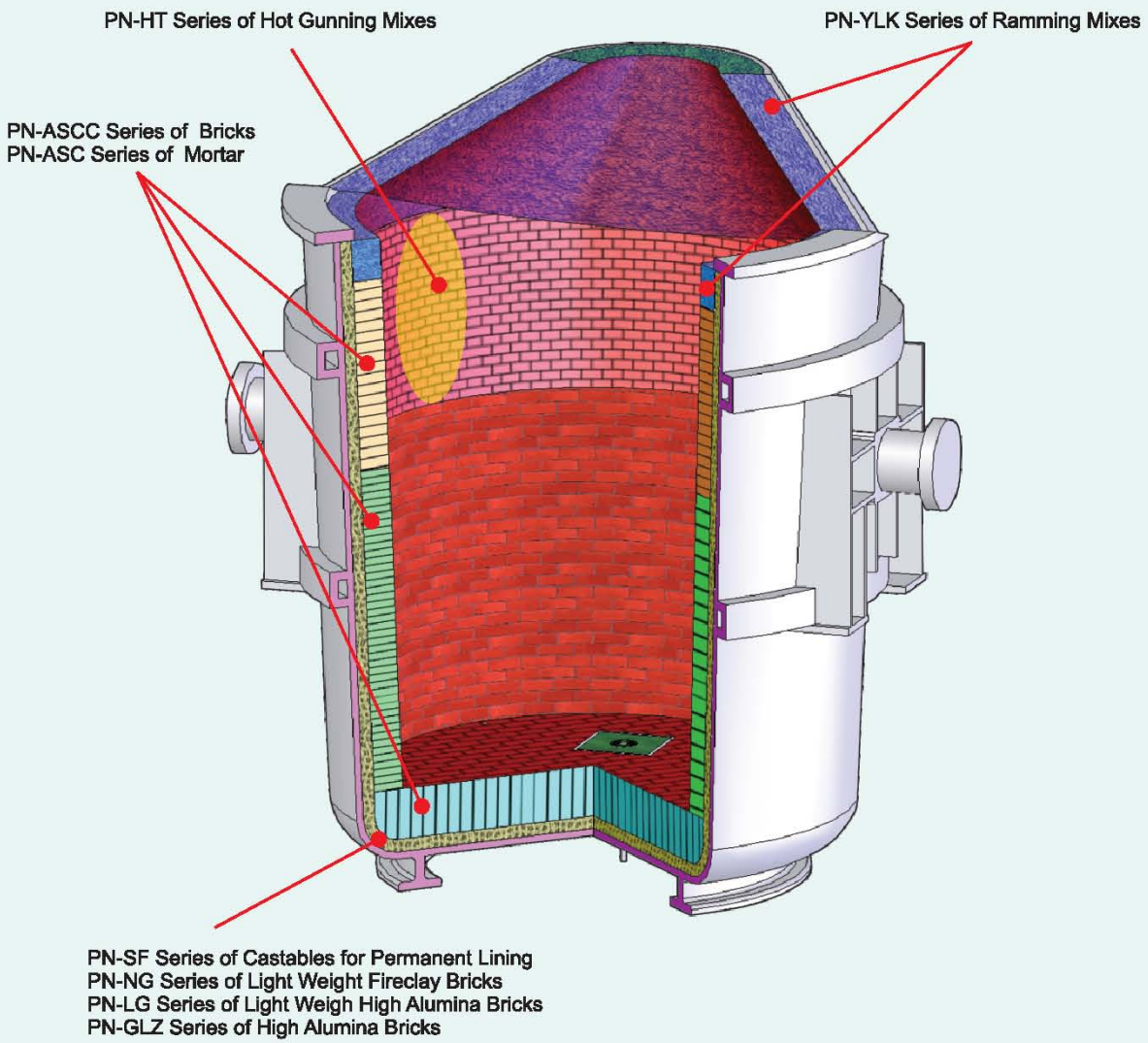
REFRACTORIES FOR HOT METAL MIXER(BRICK LINING)



GUNNING MATERIAL FOR HOT METAL MIXER, TORPEDO CAR AND HOT METAL LADLE



REFRACTORIES FOR HOT METAL LADLE(BRICK LINING)



Refractories for Hot Metal Mixer (BRICK LINING)

Hot-metal mixers are used for storage of hot metal in steel-making plants. Besides, hot metal can be well distributed and the temperature can be well maintained in hot-metal mixers. At the same time, hot-metal mixers are playing an important role in steelmaking coordination. The refractories distribution in which is bricked for the roof, cast for permanent linings of tap-hole zones, sidewall and bottom, bricked for working lining.

Properties of Refractories for Hot Metal Mixer (BRICK LINING)

ITEM		PN–SF1	PN–SK65
Chemical Composition(%); ≥	Al_2O_3	50	55
	SiC	–	6
Bulk Density(g/cm^3); ≥	110℃ × 16h	2.20	2.4
	1350℃ × 3h	2.15	2.3
Cold Crushing Strength(MPa); ≥	110℃ × 16h	30	50
	1350℃ × 3h	50	60
Modulus of Rupture(MPa); ≥	110℃ × 16h	5	6
	1350℃ × 3h	7	8
Linear Change(%)	1350℃ × 3h	± 0.5	± 0.5
Application		Permanent lining	Tap hole

Packaging: Supersack or woven bags on pallet. 1000kg/bag, 500kg/bag, 50kg/bag, 25kg/bag.
Handling and storage: Store under dry conditions. Do not use while finding out agglomeration.
Shelf life: 6 months.

Hot Gunning Mass for Hot Metal Mixer

Hot gunning mixes have good resistances to thermal shock and wear and have excellent resistance to slag erosion. They are developed typically for hot metal mixers and hot metal ladles.

Main Properties

ITEM		PN–HT1	PN–HT2
Chemical Composition(%); ≥	Al_2O_3	65	65
	MgO	7	–
	SiC + C	–	10
Bulk Density(g/cm^3); ≥	110℃ × 24h	2.3	2.3
	1350℃ × 3h	2.4	2.4
Cold Crushing Strength(MPa); ≥	110℃ × 24h	6	6
	1350℃ × 3h	30	30
Modulus of Rupture(MPa); ≥	110℃ × 24h	3	3
	1350℃ × 3h	6	6
Water Addition(%)		10 ± 1	9 ± 1

Packaging: Supersack or woven bags on pallet. 1000kg/bag, 500kg/bag, 50kg/bag, 25kg/bag.
Handling and storage: Store under dry conditions. Do not use while finding out agglomeration.
Shelf life: 6 months.

Al_2O_3–SiC Brick for Hot–Metal Mixer

These kinds of products have been successfully used in Shaoguan Steel (90T), Qingdao Steel (600t), Severstal Russia (600t), etc.

Main Properties

ITEM		PN–ASC–15H Standard Value	PN–ASC–15H Typical Value
Chemical Composition(%)	Al_2O_3; ≥	60	68
	SiC; ≥	12	16
	Fe_2O_3; ≤	1.8	1.25
Physical Properties	Apparent Porosity(%); ≤	18	15
	Bulk Density(g/cm^3); ≥	2.80	2.85
	Cold Crushing Strength(MPa); ≥	100	126
	Softening Point Under Load(℃); ≥	1580	1580
Other Property	Average Coefficient of Thermal Expansion: 4.8(10^{-6} / K, 25~1300℃)		

Al_2O_3-SiC-C Bricks

They features excellent corrosion/erosion resistance and thermal shock resistance, and have high refractoriness under load. They are suitable for hot-metal ladles and torpedo cars.

Main properties of Al_2O_3–SiC–C Bricks for Iron ladle

ITEM		PN-ASCC-6R	PN-ASCC-R2	PN-ASCC-YA	PN-ASCC-6TS
Chemical Composition(%); ≥	Al_2O_3	55	50	60	55
	SiC	5	3	5	5
	C	5	5	8	11
Apparent Porosity(%); ≤		9	11	10	8
Bulk Density(g/cm³); ≥		2.75	2.50	2.70	2.85
Cold Crushing Strength(MPa); ≥		35	30	40	40
Application		Sidewall And Bottom	Sidewall And Bottom	Sidewall And Slag Zone	Slag Zone

Main properties of Al_2O_3–SiC–C Bricks for Torpedo ladle

ITEM		PN-ASCC-11ZR	PN-ASCC-10HR	PN-ASCC-YZC	PN-ASCC-10HZ
Chemical Composition(%); ≥	Al_2O_3	60	65	55	67
	SiC	9.5	10	5	8
	C	9	14	10	15
Apparent Porosity(%); ≤		11	9.5	10	9
Bulk Density(g/cm³); ≥		2.72	2.90	2.85	2.98
Cold Crushing Strength(MPa); ≥		40	40	40	40
Application		Metal Zone And Bottom	Metal Zone And Top	Working Line	Slag Zone, Impact Zone

Castables for Permanent Lining

Main properties

ITEM		PN-SF1
Chemical Composition(%); ≥	Al_2O_3	50
Bulk Density(g/cm³); ≥	110℃ × 16h	2.20
	1350℃ × 3h	2.15
Cold Crushing Strength(MPa); ≥	110℃ × 16h	30
	1350℃ × 3h	50
Modulus of Rupture(MPa); ≥	110℃ × 16h	5
	1350℃ × 3h	7
Service Temperature(℃)		1600
Wate Addition(%)		7~9

Al_2O_3-SiC Mortar for Iron Ladle

Main properties

ITEM		PN-AS70	SiC-N
Chemical Composition(%); ≥	$SiC+Si_3N_4$	-	70
	Al_2O_3	65	10
	SiC	10	-
Refractoriness(℃); ≥		1700	1700

Al_2O_3–SiC Castables(For Hot Metal Ladle Bottom, Lip Ring and Spout)

It features excellent slag erosion/corrosion resistance and good thermal shock resistance.

Main Properties

ITEM		PN–SK65–3	PN–SK65–3–X
Chemical Composition(%); ≥	Al_2O_3	55	55
	SiC	6	6
Bulk Density(g/cm^3); ≥	110℃ × 24h	2.40	2.40
	1350℃ × 3h	2.3	2.3
Cold Crushing Strength(MPa); ≥	110℃ × 24h	50	50
	1350℃ × 3h	60	60
Modulus of Rupture(MPa); ≥	110℃ × 24h	6	6
	1350℃ × 3h	8	8
Linear Change(%)	1350℃ × 3h	± 0.5	± 0.5
Water Addition(%)		6 ± 1	6 ± 1
Application		Iron ladle	Torpedo ladle

High Dense Anti–oxidization Coatings

Main Properties

ITEM		PN–FYT–1
Chemical Composition(%); ≥	R_2O	3
	SiO_2	50

Ramming Mixes for Bottom

Main Properties

ITEM		PN-DDN
Chemical Composition(%); ≥	Al_2O_3	35
	SiC	8
Bulk Density(g/cm^3); ≥	110℃ × 24h	2.15
	1350℃ × 3h	2.15
Cold Crushing Strength(MPa); ≥	110℃ × 24h	20
	1350℃ × 3h	35
Modulus of Rupture(MPa); ≥	110℃ × 24h	4.0
	1350℃ × 3h	4.0
Linear Change(%)	1350℃ × 3h	± 0.5

Clay – based Mortar

Main Properties

ITEM		PN-HN-LT
Chemical Composition(%); ≥	Al_2O_3	35
Cold Rupture Bonding Strength(MPa)	160℃ × 16h	1~3
Bonding Time(min); ≥		1

Packaging: Wooden pallet.
Handling and storage: Store under dry conditions.

Gunning Mass for Blast Furnace

It features excellent binding strength, good abrasive resistance, excellent resistance to carbon monoxide and long service life etc.

Main Properties

ITEM		PN-MS1	PN-MSC1
Chemical Composition(%)	Al_2O_3;≥	50	50
	SiO_2;≥	30	20
	SiC;≥	-	10
	Fe_2O_3;≤	1	1
Bulk Density(g/cm^3);≥	110℃×24h	2.2	2.3
Cold Crushing Strength(MPa);≥	110℃×24h	10	10
	1000℃×3h	20	20
	1500℃×3h	50	40
Modulus of Rupture(MPa);≥	110℃×24h	3	3
	1000℃×3h	5	5
	1500℃×3h	8	8
Permanent Linear Change(%)	110℃×24h	-0.2~0	-0.2~0
	1000℃×3h	-0.3~0	-0.3~0
	1500℃×3h	-1~0	-0.5~0.5
Water Addition(%)		10	9

Packaging: Woven bags on pallet. 100kg/bag, 50kg/bag, 25kg/bag.
Handling and storage: Store under dry conditions. Do not use while finding out agglomeration.
Shelf life: 6 months.

Injection Mixes For Hot Blast Stove

PN-RFY series of injection mixes are mainly applied on sidewalls and flues in hot blast stoves. They are environment-friendly and feature high strength, low linear-change rate, thermal stability, easy installation, and good fluidity etc.

Main Properties

ITEM		PN–RFY
Chemical Composition(%)	Al_2O_3;≥	60
	SiO_2;≥	15
	Fe_2O_3;≤	2.5
Max. Granularity(mm);≤		0.5
Humidity(%);≤		1.0
Refractoriness(℃);≥		1700
Bulk Density(g/cm³);≥	110℃×24h	1.8
Modulus of Rupture(MPa);≥	110℃×24h	8
Cold Crushing Strength(MPa);≥	110℃×24h	20
Permanent Linear Change(%)	150℃×50h	±0.5

Packaging:
1. Bulk packaging: Woven bags on pallet. 50kg/bag, 25kg/bag.
2. Binder packaging: plastic barrel. 45kg/barrel, 25kg/ barrel.

Handling and storage: Under sealed condition. Binder should under condition of fireproofing and sealed.
Shelf life: 3 months.

Injection Mixes for Blast Furnace

PN-GLY series of injection mixes are applied in cooling sidewalls of blast furnaces to fill up the gaps between cooling sidewalls and blast-furnace linings. It features excellent thermal conductivity and can avoid leakages of coal gas. At the same time, it can extend the service life of blast furnaces by quickly conducting heat from blast-furnace linings to cooling sidewalls.

Main Properties

ITEM		PN–GLY
Chemical Composition(%)	Al_2O_3;≥	45
	SiO_2+C;≥	35
	Fe_2O_3;≤	2.5
Max. Granularity(mm);≤		0.5
Humidity(%);≤		1.0
Slit Width of Press Testing(mm);≤		1.0
Refractoriness (℃);≥		1700
Bulk Density(g/cm^3);≥	110℃×24h	1.8
Modulus of Rupture(MPa);≥	110℃×24h	8
Cold Crushing Strength(MPa);≥	110℃×24h	20
Linear Change(%)	150℃×50h	±0.5

Shotcrate for Throats of Blast Furnaces

Shotcrate for throats of Blast furnaces are made of synthetic mullite and sintered corundum and has high strength, low ferrous content, high erosion resistance, good abrasion resistance, high erosion resistance to carbon monoxide and excellent thermal shock resistance.

Main Properties

ITEM		PN–GLPZ–LH
Chemical Composition(%)	Al_2O_3;≥	55
	SiC;≥	20
	Fe_2O_3;≤	0.8
Bulk Density(g/cm^3);≥	110℃×16h	2.4
	1400℃×3h	2.4
Linear Change(%)	110℃×16h	–0.02
	1400℃×3h	–0.5~0.5
Modulus of Rupture(MPa);≥	110℃×24h	5
	1400℃×3h	7
Cold Crushing Strength(MPa);≥	110℃×24h	50
	1400℃×3h	50
Water Addition(%)		5~7
Grain Size(mm)		5.0

Shotcrate for Shaft, Belly and Bosh of Blast Furnace

Shotcrate for shaft, belly and bosh of blast furnace are made of synthetic mullite and sintered corundum and has high strength, low ferrous content, high erosion resistance, good abrasion resistance, high erosion resistance to carbon monoxide and excellent thermal shock resistance.

Main Properties

ITEM		PN–GLPZ–LF
Chemical Composition(%)	Al_2O_3;≥	50
	SiC;≥	12
	Fe_2O_3;≤	0.8
Bulk Density(g/cm^3);≥	110℃ × 16h	2.5
	1500℃ × 3h	2.5
Linear Change(%)	110℃ × 16h	–0.02
	1500℃ × 3h	–0.5~0.5
Modulus of Rupture(MPa);≥	110℃ × 24h	5
	1500℃ × 3h	7
Cold Crushing Strength(MPa);≥	110℃ × 24h	50
	1500℃ × 3h	50
Water Addition(%)		5~7
Grain Size(mm)		5.0

Shotcrate for Hearths of Blast Furnaces

Shotcrate for hearths of Blast furnaces are made of fused corundum and silicon carbide and has high resistance to high temperatures, high erosion resistance, good abrasion resistance, high thermal conductivity, and high refractoriness under load.

Main Properties

ITEM		PN–GLPZ–LG
Chemical Composition(%)	Al_2O_3;≥	70
	SiC;≥	15
	Fe_2O_3;≤	0.8
Bulk Density(g/cm^3);≥	110℃×16h	2.7
	1500℃×3h	2.7
Linear Change(%)	110℃×16h	–0.02
	1500℃×3h	–0.5~0.5
Modulus of Rupture(MPa);≥	110℃×24h	5
	1500℃×3h	7
Cold Crushing Strength(MPa);≥	110℃×24h	50
	1500℃×3h	50
Water Addition(%)		5~7
Grain Size(mm)		5.0

DX-SD Single-cylinder Reciprocating Injection Pump

Main Indexes

TYPE	Max.Pressure (MPa)	Pressure Limit (MPa)	Capacity (kg/min)	Dia. of Outlet Pipe(mm)	Dia. of Inlet Pipe(mm)	Max. Granularity (mm)	Feeding Distance(M)	
							Horizental	Vertical
Hard, Soft Pressing Castables	≤30	2~30	0.6~2	φ50	φ40, φ32	≤5	100	30
Waterless Pressing Castables	≤12	0.5~12	1~5	φ40	φ40, φ32	≤3	150	30

Work site conditions:
Elecrtic power: 380V,30KW; Water: 0.2Mpa
Power: Main engine and hydraulic pressure system: 18KW; Mixer: 7.5KW

Environment-friendly、Low Consumption Type Anhydrous Tap-hole Clay

Tap-hole clay plays very important roles in stabilizing blast furnace operation and in improving the working environment at cast house.

Environment-friendly tap hole clay developed by PRCO is made from Al_2O_3-SiC-C or SiO_2-SiC-C, and high-quality materials such as fused corundum, raw pyrophyllite, synthesized mullite, cokes, silicon carbide, silicon nitride, and others special additions. Tap hole clays is tailor-made with actual operating practices of every blast furnace. They are produced with advanced technical processes and feature easy blocking/opening. Tap hole clay made by PRCO was awarded National Invention Authorization(patent # ZL200510131949.6) in 2008 and listed into 2010 National New Product Programs (Item #:2010 GRD00018).

First-class environment-friendly product: This series of products belongs to environment-friendly refractories and the percentage of benzo (a) pyrene is lower compared with the environment-protection standard of European Union. There is no odors and no smokes during production and application.

Tap-hole clay made by PRCO features good plasticity, easy installation and drilling, and non-splashing.

Good wear/erosion resistance: During tapping, it shows stable hot-metal flows, good tap hole wear resistance . In a 5250m^3 blast furnace continuous tapping is done for 310 minutes.

Low consumption per ton hot metal: specific consumption is less than 0.5kg per ton hot metal in most BFs; and even can maintain less than 0.23kg per ton hot metal in 5250 m^3 BFs.

Main Properties

Kind of Tap Hole Clay		Siliceous				
Volume of Blast Furnace(m^3)		≤1000	1000 ~ 2000	2000 ~ 3000	3000 ~ 4000	4000 ~ 6000
Brand		PN-XT	PN-BHU	PN-HD-1	PN-HD-2	PN-HD-3
Chemical Composition(%); ≥	SiO_2	35	34	32	29	27
	$SiC+Si_3N_4+C$	35	39	44	48	53
Cold Crushing Strength(MPa); ≥	1500℃ × 3h (Reducing Atmosphere)	8.0	10.0	15.5	18.5	20.5
Modulus of Rupture(MPa); ≥		2.0	2.5	3.5	4.7	5.2
Apparent Porosity(%); ≤		29.4	28.6	27.2	26.3	24.6
Feature	Easy drilling; long time tapping; long tap hole and environment friendly					

Kind of Tap Hole Clay		Siliceous				
Volume of Blast Furnace(m^3)		≤1000	1000 ~ 2000	2000 ~ 3000	3000 ~ 4000	4000 ~ 6000
Brand		RF1	RF2	RF–3	RF–4	RF–5
Chemical Composition(%); ≥	Al_2O_3	25	30	35	40	45
	$SiC+Si_3N_4+C$	35	36	38	40	47
Cold Crushing Strength(MPa); ≥	1500℃ × 3h (Reducing Atmosphere)	8.0	10.0	15.5	20.5	25.5
Modulus of Rupture(MPa); ≥		2.0	3.5	5.2	7.7	8.2
Apparent Porosity(%); ≤		29.6	27.5	26.3	24.8	22.3
Features	Long time tapping; long tap hole and environment friendly					

Plugging taphole with world-class hydraulic mud gun

Tap hole after 10 mins tapping

Tap hole after mud gun withdrawing

Tap hole after 90 mins tapping

Tap hole after 296 mins tapping

Packaging: 1000kg Supersack or 20 kg cardboard carton on wooden pallet.
Handling and storage: Avoid straight rain/snow/sun and baking under high temperature.
Shelf life: 3months in summer, 6 months in winter.

Unshaped Refractories for Blast-Furnace Casthouse

Unshaped refractories for casthouses of blast furnaces includes castables for tap holes, castables for working lining of main runners, hot-metal runners, slag runners and swinging runners. Nowadays, Al_2O_3-SiC-C-based unshaped refractoires is usually applied on large-medium-sized blast furnaces. PRCO has full technical capability to manage general contracting programs on unshaped refractories for casthouses of blast furnaces. Unshaped refractories for casthouses of blast furnaces developed by PRCO features excellent slag resistance, high erosion resistance and high production.

Castables for tap hole clay cover

ITEM		PN-TK
Chemical Composition(%); ≥	Al_2O_3	70
	SiC	8
Bulk Density(g/cm^3); ≥	110℃ × 24h	3.0
	1450℃ × 3h	3.0
Cold Crushing Strength(MPa); ≥	110℃ × 24h	50
	1450℃ × 3h	80
Modulus of Rupture(MPa); ≥	110℃ × 24h	5
	1450℃ × 3h	8
Linear Change(%)	1450℃ × 3h	± 0.5

Castables for working lining of main trough

ITEM		PN-ZGZX	PN-ZGTX
Chemical Composition(%); ≥	Al_2O_3	45	70
	SiC+C	30	10
Bulk Density(g/cm^3); ≥	110℃ × 24h	2.60	2.90
	1450℃ × 3h	2.50	2.85
Cold Crushing Strength(MPa); ≥	110℃ × 24h	5	10
	1450℃ × 3h	30	35
Modulus of Rupture(MPa); ≥	110℃ × 24h	1.5	3
	1450℃ × 3h	5	6
Linear Change(%)	1450℃ × 3h	0~+0.5	0~+0.5
Application		Slag Line	Iron Line

Castables for working lining of iron runner

ITEM		PN-TG
Chemical Composition(%); ≥	Al_2O_3	60
	SiC	8
Bulk Density(g/cm^3); ≥	110℃ × 24h	2.80
	1450℃ × 3h	2.75
Cold Crushing Strength(MPa); ≥	110℃ × 24h	30
	1450℃ × 3h	60
Modulus of Rupture(MPa); ≥	110℃ × 24h	5
	1450℃ × 3h	8
Linear Change(%)	1450℃ × 3h	0~+0.5

Castables for working lining of slag runner

ITEM		PN-SG
Chemical Composition(%); ≥	Al_2O_3	36
	SiC	28
	C	2
Bulk Density(g/cm^3); ≥	110℃ × 24h	2.3
	1450℃ × 3h	2.25
Cold Crushing Strength(MPa); ≥	110℃ × 24h	30
	1450℃ × 3h	35
Modulus of Rupture(MPa); ≥	110℃ × 24h	6
	1450℃ × 3h	8
Linear Change(%)	1450℃ × 3h	0~+0.5

Castables for tilter's working lining

ITEM		PN-BD
Chemical Composition(%); ≥	Al_2O_3	60
	SiC	12
Bulk Density(g/cm^3); ≥	110℃ × 24h	2.80
	1450℃ × 3h	2.70
Cold Crushing Strength(MPa); ≥	110℃ × 24h	20
	1450℃ × 3h	50
Modulus of Rupture(MPa); ≥	110℃ × 24h	4
	1450℃ × 3h	8
Linear Change(%)	1450℃ × 3h	0~+0.5

Packaging: Supersack on pallet. 1000kg/bag, 500kg/bag, 50kg/bag, 25kg/bag.
Handling and storage: Store under dry conditions. Do not use while finding out agglomeration.
Shelf Life: 6 months.

Gunning Mixes for Iron Runner

There are two ways to repair main troughs: casting and gunning. In comparison to casting, gunning has advantages like easy installation, time saving and material saving (the old lining doesn't need to be taken out during gunning) etc. Gunning repair can make the troughs uniform eroded and improve the utilization of working lining. Gunning mixes made by PRCO feature good bonding property, low elasticity, excellent slag erosion resistance and ferroslag wear resistance.

Main Properties

ITEM		PN-GUN
Chemical Composition(%); ≥	Al_2O_3	55
	SiC+C	20
Bulk Density(g/cm^3); ≥	110℃ × 24h	2.65
	1450℃ × 3h	2.65
Cold Crushing Strength(MPa); ≥	110℃ × 24h	20
	1450℃ × 3h	30
Modulus of Rupture(MPa); ≥	110℃ × 24h	5
	1450℃ × 3h	8
Permanent Linear Change(%)	1450℃ × 3h	± 0.5

Packaging: Supersack on pallet. 1000kg/bag, 500kg/bag, 50kg/bag, 25kg/bag.
Handling and storage: Store under dry conditions. Do not use while finding out agglomeration.
Shelf Life: 6 months.

Baking-free Ramming Mixes for Iron Runner

This product is suitable to the Medium and small-size blast furnaces with single taphole, and easily installed, time-saved due to free baking. Baking-free Ramming Mixes made by PRCO features high strength, excellent erosion/wear resistance and long service life.

This production had been successfully used in Xianggang, Shagang etc.

Main Properties

ITEM		PN-TD
Chemical Composition(%); ≥	Al_2O_3	55
	SiC+C	15
Bulk Density(g/cm^3); ≥	200℃ × 16h	2.50
	1450℃ × 3h	2.50
Cold Crushing Strength(MPa); ≥	200℃ × 16h	15
	1450℃ × 3h	8
Modulus of Rupture(MPa); ≥	200℃ × 16h	2
	1450℃ × 3h	3
Linear Change(%)	1450℃ × 3h	± 0.5

Silicon Nitride Bonded SiC Bricks

Silicon-Nitride-Bonded-Silicon-Carbide bricks are made from high-purity SiC grains and Si powders as additives and sintered in the nitriding furnaces based on situ theory.

It features high strength, good thermal abrasion resistance, high thermal conductivity, small thermal expansion coefficient, good thermal shock resistance, especially good oxidization resistance and alkali/monoxide corrosion resistance.

Main Properties

ITEM		PN-SCN
Chemical Composition(%)	SiC; ≥	72
	Si_3N_4; ≥	18
	Fe_2O_3; ≤	0.7
Cold Crushing Strength(MPa); ≥		150
Modulus of Rupture(MPa); ≥		42
Modulus of Rupture(MPa)(1400℃ × 0.5h); ≥		45
Apparent Porosity(%); ≤		16
Bulk Density(g/cm^3); ≥		2.65
Coefficient of Heat Conductivity(1000℃)(W/m · K); ≥		15.5
Application		Lower Part of Body, Belly, Inside Lining of Bosh.

Packaging: Wooden pallet.
Handling and storage: Water-proof and shock proof.

Sialon Bonded Corundum Bricks

Sialon-Bonded-Corundum Bricks have not only Sialon's high strength and thermal shock resistance properties, but alumina's good alkali/oxidization resistance. Thus, Sialon-Bonded-Corundum Bricks are expected to be the priority for blast furnace's hearth.

Combined linings (ceramic cup) from Sialon-Bonded-Corundum Bricks can increase temperature of hot metal and extend the service life of the hearths.

Main Properties

ITEM		PN–SLA–80
Chemical Composition(%); ≥	Al_2O_3	80
	N	5
Apparent Porosity (%); ≤		16
Bulk Density(g/cm^3); ≥		3.1
Cold Crushing Strength(MPa); ≥		120
Modulus of Rupture(MPa); ≥	1400℃ × 0.5h	20
Thermal Shock Resistance(time); ≥	1000℃ Water Cold	30
Application		Ceramic Cup, Belly And Bosh

Packaging: Wooden pallet.
Handling and storage: Water-proof and shock proof.

Wet Shotcretes for Iron Making

PN-PSC series of shotcretes are made from high-quality bauxite, white fused corundum, silicon carbide and silicon nitride and feature pumping installation, non-modeling, non-dust; fast installation and time saving, short setting time, high strength and good wear/erosion resistance.

Wet Shotcreting Castable

ITEM		PN-PZSC1	PN-PZSC2
Chemical Composition(%); ≥	Al_2O_3	60	50
	SiC	10	20
Bulk Density(g/cm³); ≥	110℃ × 16h	2.5	2.5
	1450℃ × 3h	2.5	2.5
Cold Crushing Strength(MPa); ≥	110℃ × 16h	40	40
	1450℃ × 3h	60	60
Application		Wet Shotcreting Installation for Iron Ladle, Torpedo Ladle, Hot Metal Mixer, Iron Runner Etc.	Wet Shotcreting Installation for Iron Ladle, Torpedo Ladle, Hot Metal Mixer, Iron Runner Etc.

Packaging: 1000kg supersack on wooden pallet.
Handling and storage: Store under dry conditions. Do not use while finding out agglomeration. Use up in 6 months.
Especial note: Using wet shotcrete equipment during installation. Putting the material into mixer, add 6% water and mix before pumping.

Note

Note