



průmyslová
keramika

Metallurgy

PRECAST REFRACTORY
SHAPES AND PREFABRICATED
STRUCTURAL SEGMENTS FOR
METALLURGY

Refractory Partnership

Innovation

Continuous research and development of new materials

Background

Own design, construction and production of moulds

Experience

More than 25 years of experience with production of a complicated precast refractory shapes

Knowledge

Quality technical service and assistance

Requirements:

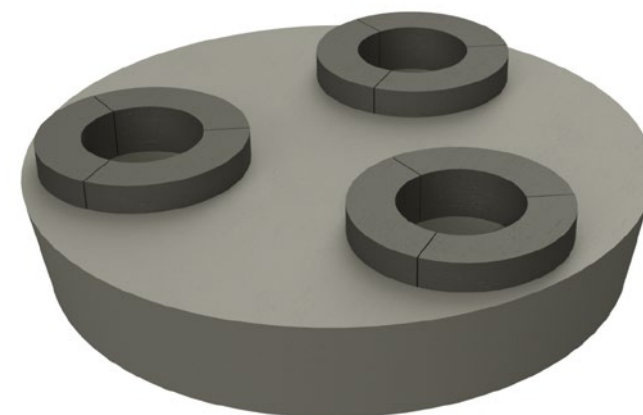
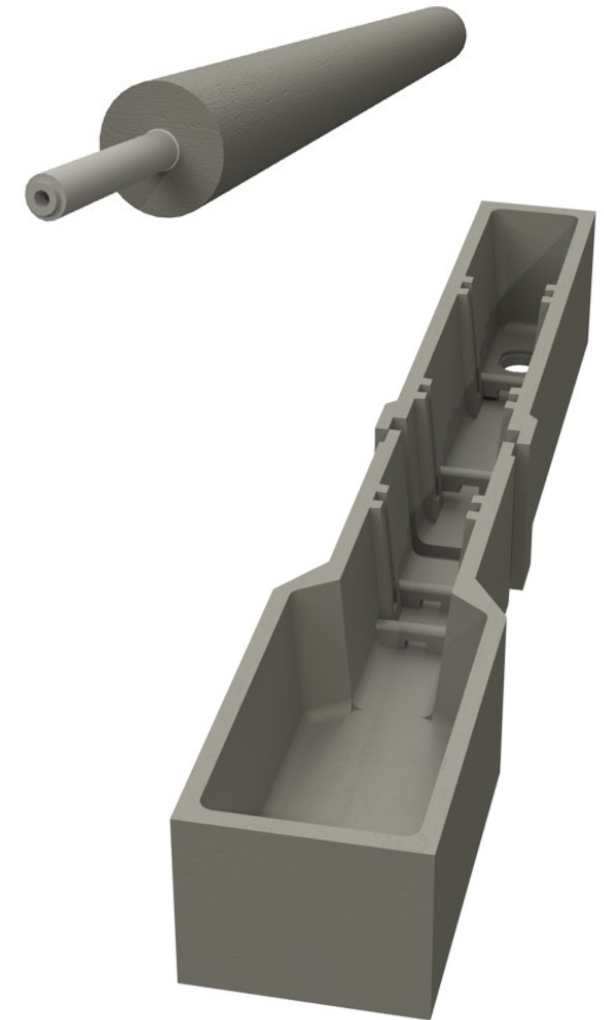
- resistance to high temperature load
- resistance to molten metal and slag corrosion
- resistance to melt penetration
- resistance to extreme thermal shocks

Monoliths:

- NOVOBET 1650
- ULTRABET 1650-BC
- ULTRABET 1650-BCR
- ŽÁROBET 1750-TMSC

Precast shapes:

- NOVOBET 1600-A
- NOVOBET 1650-K
- NOVOBET 1700-TAB
- NOVOBET SPI-TAB
- ULTRABET 1650-BHK
- ULTRABET 1800-TS
- SUPRABET 1800-TSCr



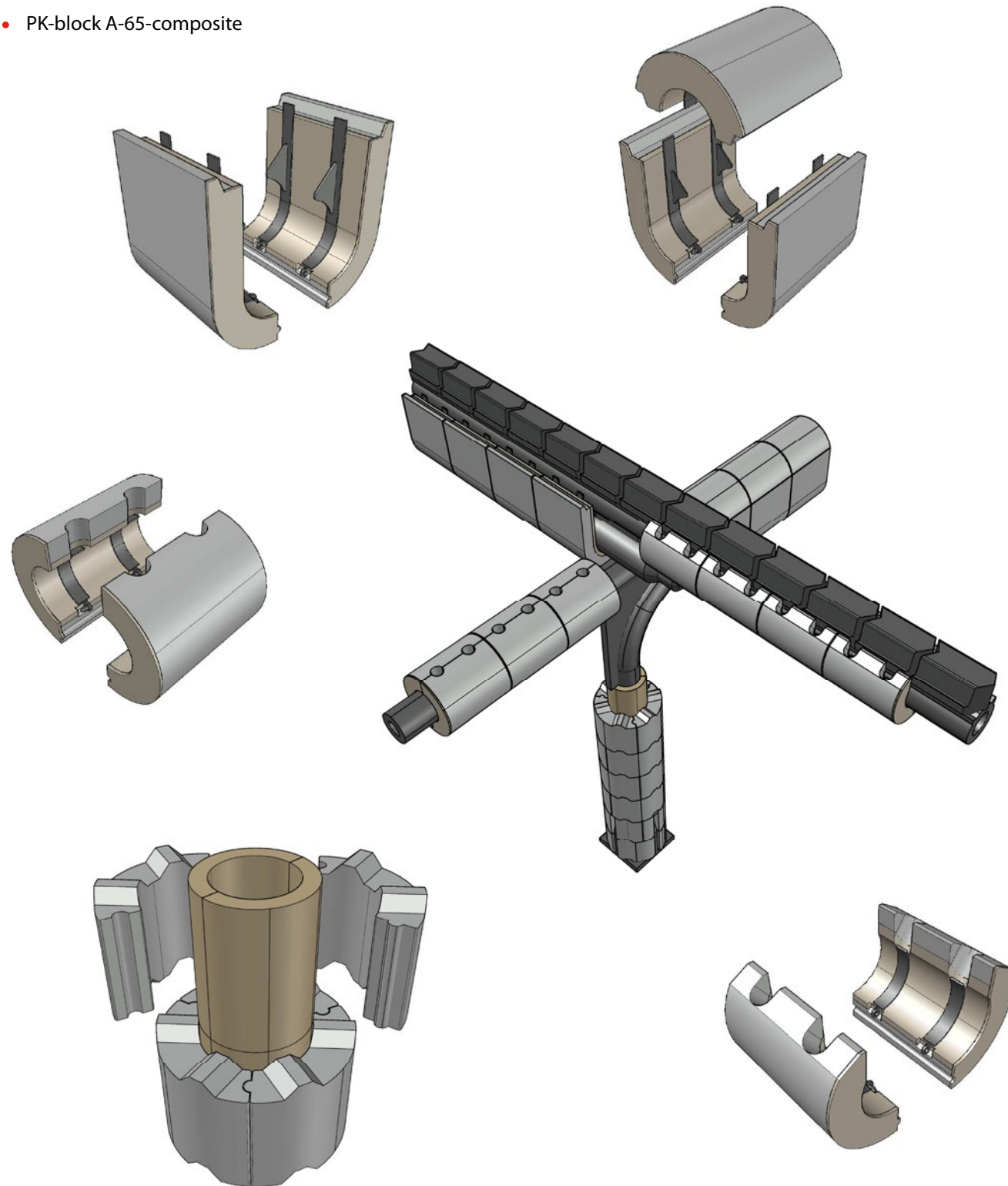
PUSHER TYPE FURNACE – PRECAST SHAPES

Requirements:

- reduction of energy consumption
- excellent insulation
- resistance to furnace environment (flow, vibrations, dynamic load, dimension changes during shut-downs)
- long-lasting functional anchoring system

Materials:

- PK-block A-65-composite



ROTARY HEARTH FURNACE – PRECAST SHAPES

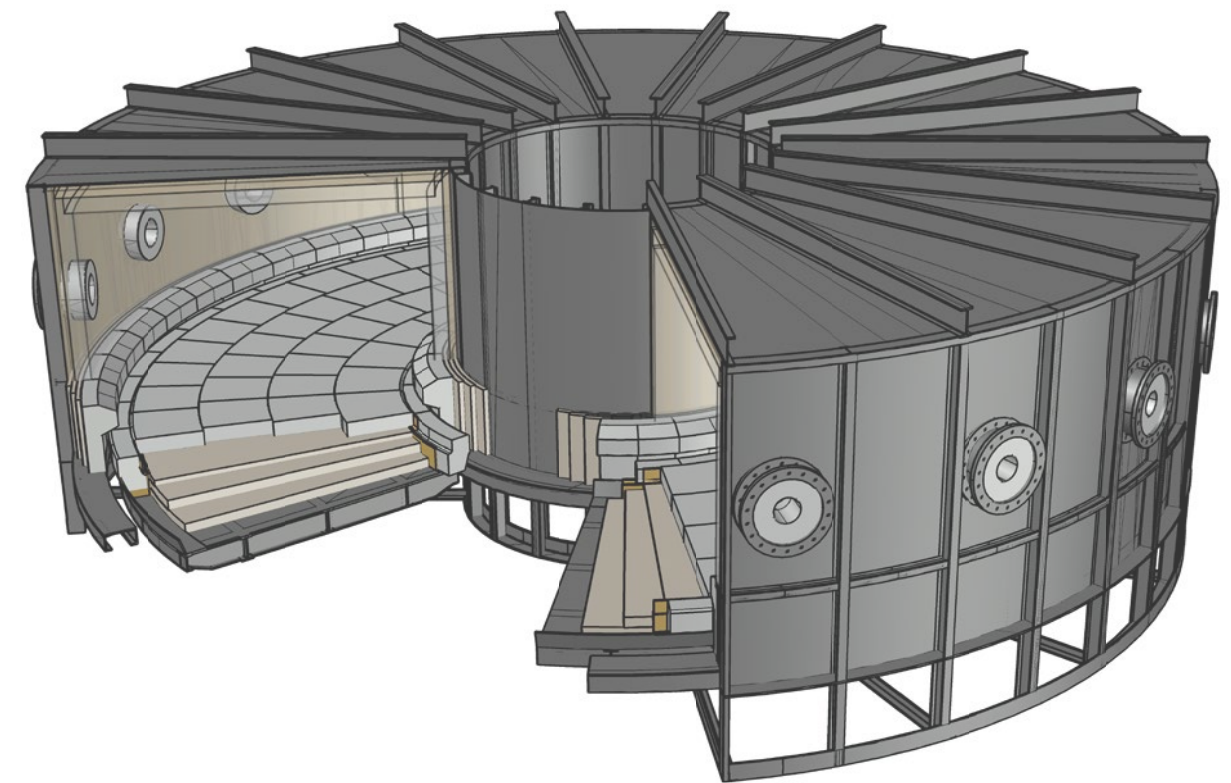
WALLS

Requirements:

- excellent insulation
- quality anchoring system
- resistance to furnace environment
- high creep resistance

Materials:

- ŽÁROBET 1450-HT
- ŽÁROBET 1555-HT
- NOVOBET 1550-MC



HEARTH

Requirements:

- extreme thermal shock resistance
- high strength
- sufficiently high creep resistance

Materials:

- NOVOBET 1550-SA
- NOVOBET 1600-A
- NOVOBET 1600-A-HT

WALKING HEARTH FURNACE – PRECAST SHAPES

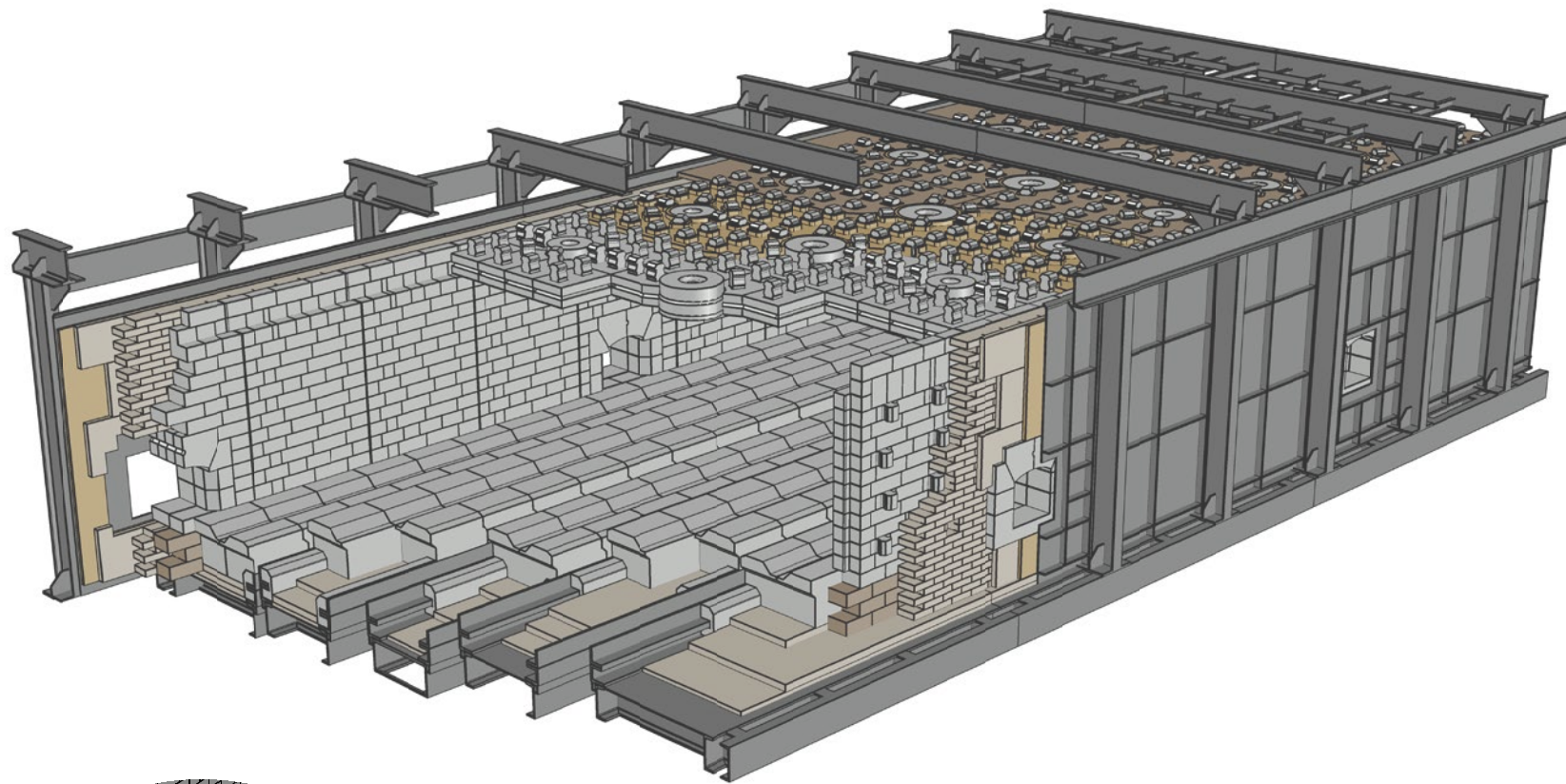
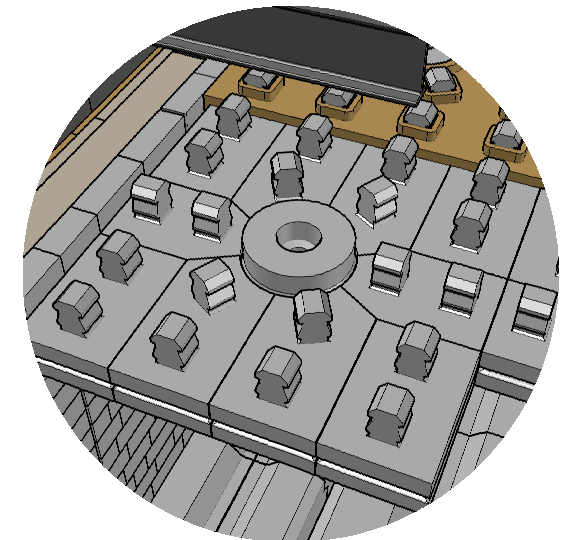
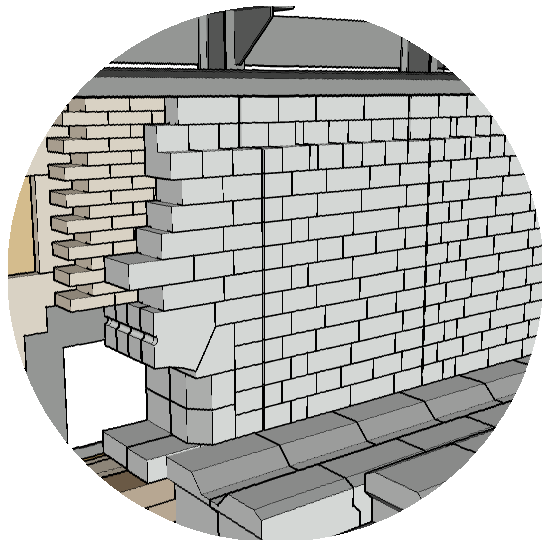
WALLS AND ROOF

Requirements:

- excellent insulating properties
- advanced anchoring system
- resistance to furnace environment
- sufficiently high creep resistance

Materials:

- ŽÁROBET 1450-HT
- ŽÁROBET 1650-HT
- NOVOBET 1550-SA
- CHEMOBET 1500-sol
- ŽÁROBET 1550-HT
- NOVOBET 1550-MC
- NOVOBET 1600-A



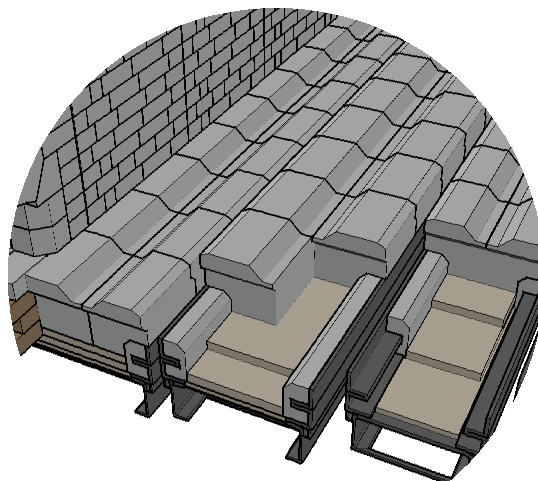
WALKING HEARTH

Requirements:

- high strength
- high abrasion resistance
- very high creep resistance
- resistance to thermal changes (shapes at the furnace inlet)

Materials:

- ULTRABET 1650-BHK



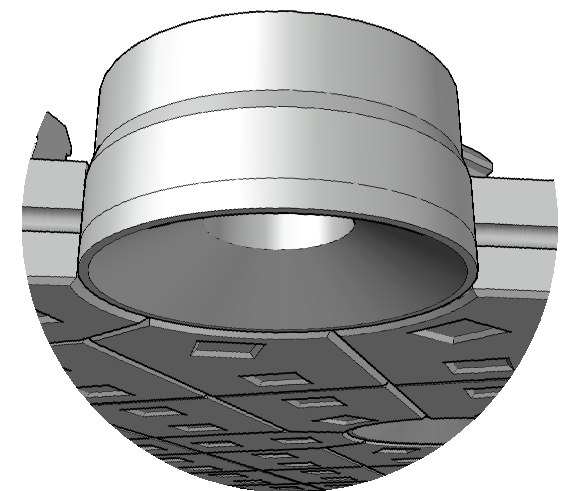
BURNERS

Requirements:

- high resistance to thermal shock

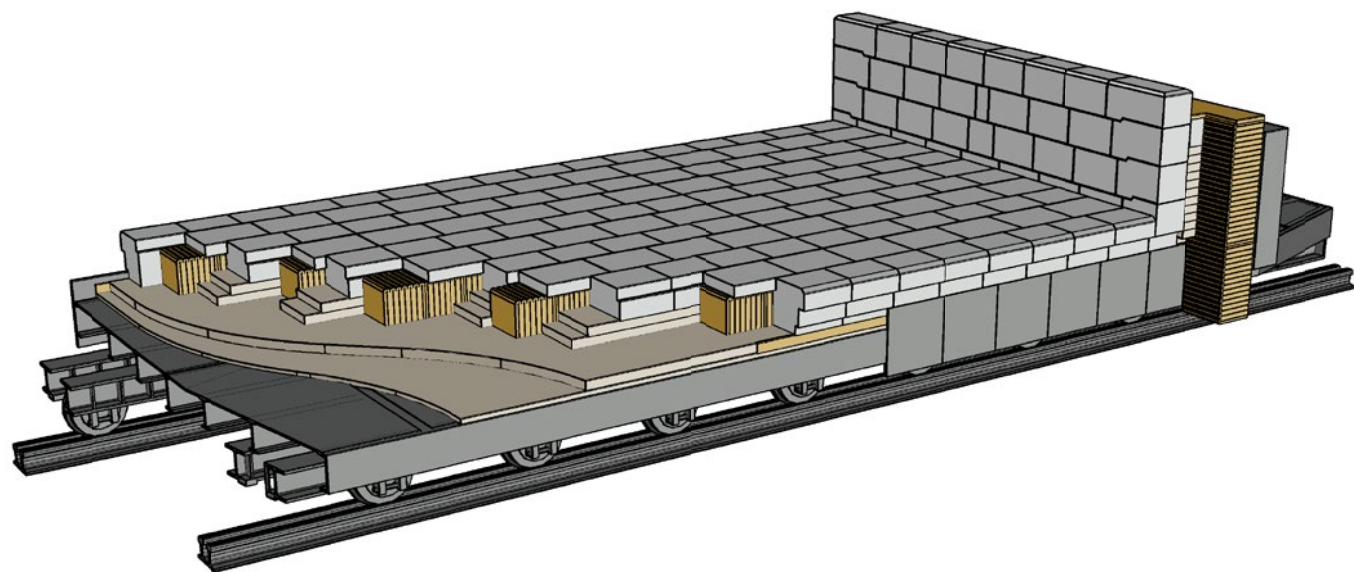
Materials:

- NOVOBET 1600-A
- NOVOBET 1650-AK



Requirements:

- thermal changes resistance
- high strength
- high creep resistance



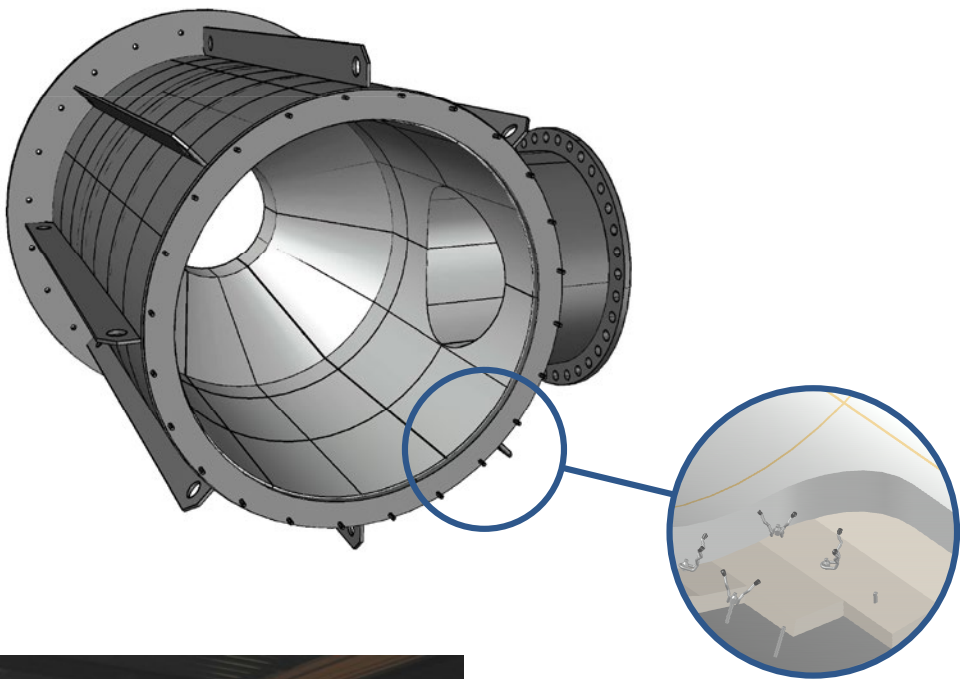
Materials:

- | | |
|-------------------|---------------------|
| • NOVOBET 1300 | • UNIBET 1300 |
| • NOVOBET 1500 | • UNIBET 1400 |
| • NOVOBET 1550-MC | • UNIBET 1500 |
| • NOVOBET 1550-SA | • CHEMOBET 1350-sol |
| • NOVOBET 1600-A | • CHEMOBET 1500-sol |

PREFABRICATED STRUCTURAL UNITS

Our company offers the production of complete construction parts of thermal units. We provide installation of anchoring system, insulation layer and working layer including initial tempering.

We deliver Burners, Ladles, Piping, Parts of stack, Wall and ceiling panels, Furnace gates, Furnace covers, etc.



HOT REPAIRS BY GUNITING

- Requirements:**
- application under high temperatures deep inside thermal aggregates
 - very good adhesion to the original lining
 - parameters close to the casted linings
- Our solution:**
- We offer a modern proven technology of repairs by guniting. The method is applicable in the entire temperature range.
 - We apply chemically bonded refractory mixes with an inert, harmless bonding agent. Values presented in our data sheets correspond with properties of real gunited linings.
 - We can recommend a proven installation company experienced with guniting of these materials.

- Materials:**
- CHEMOBET TOR-1350-sol
 - CHEMOBET TOR-1450-sol
 - CHEMOBET TOR-1500-acid
 - CHEMOBET TOR-1550-A-SiC-5-sol
 - CHEMOBET TOR-1550-B-sol
 - CHEMOBET TOR-1550-K-so



Type of Product	Main raw material	Classification temperature [°C]	Material required [t/m³]	Type of bond	Chemical analysis [%]				CCS [MPa]			Application method
					Al ₂ O ₃	SiO ₂	CaO	other	110 °C	800 °C	CT[°C]	
ZÁROBET 1450-HT	fireclay	1450	2,10	hydraulic	48	42	4,1		50	45	55	vibrating
ZÁROBET 1550-HT	high-alumina fireclay	1550	2,25	hydraulic	53	40	4,5		30	25	50	vibrating
ZÁROBET 1650-HT	andalusite	1650	2,40	hydraulic	63	31	2,8		30	20	50	vibrating
ZÁROBET 1750-TMSC	tabular alumina	1750	2,90	hydraulic	93	2	3	2 (Cr ₂ O ₃)	70	80	100	vibrating
NOVOBET 1300	fireclay	1300	2,30	hydraulic	42	48	2,9		65	70	60	vibrating
NOVOBET 1500	syntetic aluminosilicate raw materials	1500	2,35	hydraulic	51	40	2,5		70	80	90	vibrating
NOVOBET 1550-MC	high-alumina fireclay	1550	2,35	hydraulic	55	38	1,7		75	80	110	vibrating
NOVOBET 1550-SA	fireclay, andalusite	1550	2,50	hydraulic	55	36	2,5		90	105	120	vibrating
NOVOBET 1600-A	andalusite	1600	2,70	hydraulic	65	30	1,4		65	85	100	vibrating
NOVOBET 1600-A-HT	andalusite	1600	2,70	hydraulic	63	31	1,5		55	60	90	vibrating
NOVOBET 1650	high-alumina fireclay	1650	2,60	hydraulic	72	23	1,3		70	100	120	vibrating
NOVOBET 1650-AK	andalusite, corundum	1650	2,75	hydraulic	69	27	1,4		70	95	120	vibrating
NOVOBET 1650-K	corundum	1650	3,10	hydraulic	95	1	1,3		85	100	115	vibrating
NOVOBET 1700-TAB	tabular alumina	1700	3,00	hydraulic	96	2	1,3		60	90	110	vibrating
NOVOBET SPTAB	tabular alumina, spinel	1750	3,00	hydraulic	93	0,1	1,6	4 (MgO)	40	55	100	vibrating
ULTRABET 1650-BC	bauxite	1600	2,70	hydraulic	80	7	0,3		30	50	70	vibrating
ULTRABET 1650-BCR	bauxite, Cr ₂ O ₃	1650	3,05	hydraulic	85	8	0,7	2 (Cr ₂ O ₃)	80	110	150	vibrating
ULTRABET 1650-BHK	bauxite corundum	1650	3,10	hydraulic	85	7	0,7		80	120	150	vibrating
ULTRABET 1800-TS	tabular alumina, spinel	1800	3,10	hydraulic	92	0,5	0,7	4,5 (MgO)	50	60	130	vibrating
SUPRABET 1800-TSCr	tabular alumina, spinel	1800	3,00	hydraulic	85	1,5		9,5 (MgO) 2 (Cr ₂ O ₃)	80	80	100	vibrating
UNIBET 1300	fireclay	1300	2,20	chemical	41	48			60	40	70	vibrating
UNIBET 1400	fireclay	1400	2,15	chemical	47	46			65	35	60	ramming, vibrating
UNIBET 1500	low iron fireclay	1500	2,25	chemical	56	38			90	65	110	vibrating
CHEMOBET 1350-sol	fireclay	1350	2,20	chemical	38	48			70	80	70	vibrating
CHEMOBET 1500-sol	syntetic aluminosilicate raw materials	1500	2,20	chemical	41	46			90	100	80	vibrating
CHEMOBET TOR-1350-sol	fireclay	1350	2,1*)	chemical	38	51			60	65	90	guniting, ramming
CHEMOBET TOR-1450-sol	fireclay	1450	2,2*)	chemical	45	49			85	105	70	guniting, ramming
CHEMOBET TOR-1500-acid	syntetic aluminosilicate raw materials	1500	2,1*)	chemical	40	55			40	50	70	guniting, ramming
CHEMOBET TOR-1550-A-SiC-5-sol	andalusite, SiC	1550	2,4*)	chemical	57	32		5 (SiC)	80	90	90	guniting
CHEMOBET TOR-1550-B-sol	bauxite	1550	2,7*)	chemical	89	5			60	80	110	guniting
CHEMOBET TOR-1550-K-sol	corundum	1550	2,75*)	chemical	92	2			70	90	110	guniting

*) without rebound



Průmyslová keramika, spol. s r. o.
Spešovská 627 / CZ 679 02 Rájec - Jestřebí
Tel.: + 420 516 432 197 / Fax: +420 516 432 273
e-mail: prumker@prumker.cz / www.prumker.cz