

ŽIAROMAT

1890



Company presentation

The company ŽIAROMAT a. s. Kalinovo is a traditional manufacturer of refractory materials. This kind of production is historically predetermined by occurrence of refractory clays in the locality of Ipeľská kotlina and also by geographic nearness of iron ore and non-ferrous metal ore processors in the past (Podbrezová, Tisovec, Krompachy and like).

In its history the company has gone through different periods of development, from the independent existence in the form of a partnership company to its being included into the state enterprise of Slovenské magnezitové závody, š.p., further it existed as an independent state enterprise and the latest form has been a joint stock company. ŽIAROMAT a.s. is owned by the metallurgy plant ŽP Group Podbrezová from half of the year 2004.

As for the production programme the main production sphere for ŽIAROMAT a. s. still remains fireclay (i.e. building materials based on Al_2O_3), which is plastically or half-dry pressed and also the production of refractory castables and other materials and refractory mixtures.

In spite of gradual decrease in specific consumption of refractory materials in the field of steel and non-ferrous metal production the company has found its place on the market having effected necessary technological investments the reason of which will be proven also in the future.

Our production programme

fireclay: regular, semi-hard, hard, fireplace, pouring, acid-proof, heat insulating light, special;
refractory castables: regular, gunning, insulating, medium-cement, low cement, self-flowing low-cement;
mixes: mortars, mastics, syntetic slogs;

The products of the company ŽIAROMAT a. s. are delivered to the customers
Slovak Republic, Hungary, Czech Republic, Austria, Germany, Peru, Poland, Ukraine, France

Application

Steel works: carbonization plants, blast furnace, preheater, mobile and stationary stirrers, electric arc furnaces, ladles, tundisch ladles, roofs, push furnaces, bell furnaces, pit furnaces, gating systems;

Non – ferrous metals: melting furnaces;

Foundries: melting furnaces, induction ladles; gating systems;

Cements and lime works: rotary and shaft furnaces;

Energetics: fluidized bed boilers and waste-heat boilers, chimneys;

Stoves, fireplaces and cookers

Building material



Production portfolio

ŽIAROMAT a.s. manufactured a wide range of aluminous, aluminous-siliceous, siliceous and other shaped and non-shaped refractory materials:

1	CONVENTIONAL FIRECLAY	KALOR
2	SEMI-HARD FIRECLAY	KALPOR
3	HARD FIRECLAY	KALTOR
4	FIREPLACE FIRECLAY	KALKA
5	FIRECLAY FOR GATTING SYSTEMS	KALCI
6	ACID-PROOF FIRECLAY	KALCID
7	HEAT INSULATING LIGHT FIRECLAY	KALPER
8	SPECIAL FIRECLAY	KALUR
9	CONVENTIONAL REFRACTORY CASTABLES	KALINIT
10	GUNNING REFRACTORY CASTABLES	KALGUN
11	INSULATING REFRACTORY CASTABLES	KALTERM
12	MEDIUM-CEMENT REFRACTORY CASTABLES	KALURIT-MCC
13	LOW-CEMENT REFRACTORY CASTABLES	KALURIT-LCC
14	SELF-FLOWING LOW-CEMENT REFRACTORY CASTABLES	KALURIT-SFL
15	ULTRA LOW-CEMENT REFRACTORY CASTABLES	KALURIT-ULCC
16	REFRACTORY MORTARS	KALMAL
17	REFRACTORY MIXES	KALTERAM
18	REFRACTORY MASTICS	KALTEC
19	PULVERIZED REFRACTORY MASTICS	KALTECP
20	SYNTETIC SLAG	CORUNDUM

Refractory concretes can be manufactured with addition of steel fibers that materially improve their mechanical features. ŽIAROMAT a.s. has a device for manufacturing of fittings that can subsequently be dried and burned up to 1450°C. shaped and non-shaped refractory materials are used in iron metallurgy, steel production, foundry of ferrous and non-ferrous metals, in manufacturing of fireplaces and, silicate industry, energy and incinerators, chemical and petrochemical industries, etc.

Services to customers

It is priority of ŽIAROMAT a.s. to provide complex services to customers in the field of manufacturing and use of shaped and non-shaped refractory materials, contribute to enhancement of the lifespan of lining of melting aggregates, heat installations, increase of the quality of refractory materials and their utilisation.

For this purpose the company provides:

- consultations about selection of suitable materials and their applications
- information about features of shaped and non-shaped refractory materials
- briefings about implementation of materials and treatment of linings

Quality

Our priority is the quality of product assortment. A proof for that is a shift from plastic production to halfdry productions.

A strategic decision of the company was introduction of quality system management pursuant to STN ISO 9001:2001 and the following acquisition of quality certificate.

Our advantage is high flexibility concerning the shape requirements of customers. We provide our own development, manufacture and consultancy. All kinds of tests are performed in compliance with the valid norms and taking-over terms and conditions specified in the contract of sale. All kinds of inspections are performed in accordance with the ISO norms and take-over conditions specified in the purchase contract. Quality of each delivery is confirmed by a certificate of quality.





KALOR

CONVENTIONAL FIRECLAY

The fireclay building materials are unique materials used successfully in almost all lining forms of heat aggregates. This sort of material well resists to sudden temperature changes under conditions of dry heat. It is used in masonry, roofs and parts of metallurgical, glass, cement as well as in other furnaces and for linings of heat aggregates (boilers, stoves, fireplaces, cookers etc). The ordinary fireclay building materials are used particularly for linings which are not stressed by abrasion and do not come in touch with slag, molten metal, molten glass and other materials.

Applications:

for lining of roofs and parts of metallurgic, glass, cement and other industrial furnaces and heat aggregates boilers, stoves, fireplaces, cookers etc.

FIREPLACE FIRECLAY

Fireplace fireclay is used for masonry of working and permanent lining of heat aggregates exposed to lower heat stress such as boilers, stoves, fireplaces and cookers. SPK quality is specially developed for stove industry and it is characterized by high resistance against sudden temperature changes.

Applications:

boilers, stoves, fireplaces and cookers.



KALPOR

SEMI – HARD FIRECLAY

Semi-hard fireclay belongs among special kinds of refractory materials. It is mostly used in conditions where the lining is not stressed by abrasive wear and it is not in contact with molten metal, slag, etc. It is intended for thermal installations in metallurgy, foundry, glasswork, gas engineering as well as in other branches. It is also used for lining of thermal units exposed to lower heat stress, such as boilers, stoves, fireplaces, cookers etc.

Applications:

for lining of roofs and parts of metallurgic, cement and other industrial furnaces and heat aggregates, boilers, stoves, fireplaces, cookers etc.

FIRECLAY FOR GATING SYSTEMS

They are refractory materials which are made in plastic way. They are used for compositions of gating systems for casting in foundries and casting ingots in steelworks. They are single-used products.

Applications:

compositions of gating systems for casting in foundries and casting ingots in steelworks.



KALTOR

HARD FIRECLAY

It has excellent properties in compression strength under normal temperature, consistent with low porosity, resistant against abrasion and sudden temperature changes. It is resistant against slag, molten glass and chemical influences. The hard fireclay building materials are used in conditions where the lining is stressed by abrasion, exposed to molten metals, slags, chemical attacks. They are mostly used in masonry, roofs and parts of metallurgical, glass, cement and other furnaces, ladles and so on.

Applications:

for lining of roofs and parts of metallurgic, glass, cement and other industrial furnaces and heat aggregates exposed to abrasion, molten metals, slags and chemical influences.



KALKA

FIREPLACE FIRECLAY

Fireplace fireclay is used for masonry of working and permanent lining of heat aggregates exposed to lower heat stress such as boilers, stoves, fireplaces and cookers. SPK quality is specially developed for stove industry and it is characterized by high resistance against sudden temperature changes.

Applications:

boilers, stoves, fireplaces and cookers.



KALCI

FIRECLAY FOR GATING SYSTEMS

They are refractory materials which are made in plastic way. They are used for compositions of gating systems for casting in foundries and casting ingots in steelworks. They are single-used products.

Applications:

compositions of gating systems for casting in foundries and casting ingots in steelworks.



KALCID

ACID-PROOF FIRECLAY

Acid-proof fireclay is used in the area of chemical industry as protective acid-resistant linings of desulphurization devices, incinerators and as protective chimney packings of heating aggregates.

Applications:

protective acid-resistant linings of desulphurization devices, incinerators and as protective chimney packings of heating aggregates.



KALPER

HEAT INSULATING LIGHT FIRECLAY

It is used for thermal insulating of all types of furnaces, laddles, tundish, cover insulations for pig iron mixers. It is also applied as working lining of inlet and calcining zones of rotary kilns, in shaft furnaces and dust chambers. It can be used for thermal insulating of steam, hot-water and hot-air aggregates.

Applications:

as thermal insulating of all types of furnaces, laddles, tundish, cover insulations for pig iron mixers, also as working lining of inlet and calcining zones of rotary kilns, in shaft furnaces and dust chambers, steam, hot-water and hot-air aggregates etc.



KALUR

SPECIAL FIRECLAY

It is used for the inside parts of metallurgical, glasswork, cement ovens which are exposed to rubbing slags and melted alloy by the temperature of 1450°C, glass and chemical influences. It is also used for linings of the crucibles of high ovens, the bottom part of high ovens, rotary kilns in cement industry etc..

Applications:

linings of the crucibles of high ovens, the bottom part of high ovens, rotary kilns in cement industry etc.



KALINIT

CONVENTIONAL REFRACTORY CASTABLES

They are used for the linings of heat aggregates, where there is not contact with melted metal or meltage. It is mainly used for the linings of tunnel carriages, chamberoven and heating ovens, input rings of rotary kilns, linings of boilers, driers, quare – walls, laddle roofs, etc..

Applications:

linings of tunnel carriages, chamberoven and heating ovens, input rings of rotary kilns, linings of boilers, driers, quare – walls, laddle roofs, etc.



KALGUN

Gunning refractory castables

They are hydraulically bound refractory materials which can be used in machine coating of the lining by the means of pressure air-gunitting. The gunitting allows rapid repair work on older damaged linings. The repairs made by gunitting can be realized under hot and cold conditions. This means prolongation of lifetime of hot aggregates without any longer stand times.

Applications:

furnaces in non-ferrous industry, forge furnaces, malleableizing, heating furnaces, furnaces in chemical and oil industry, steam boilers, chimneys, dust-collecting chambers, linings in pit furnaces, push furnaces.



KALTERM

INSULATING REFRACTORY CASTABLES

They are ultralight and light heat insulating materials and are used for the last layers of isolation of heat-technical devices. They are made on the basis of bloating pearlite and hydraulic bonds.

Applications:

They are used for isolation of heat aggregates which are built in by casting or vibration. They are mainly used for outside isolation of boilers, air-heaters and so on.



KALTERM

INSULATING REFRACTORY CASTABLES

They are materials for creating monolithic heat-insulating linings by ramming, casting or gunning. They are made on the basis of high alumina light aggregate, aluminous cement and enlighten component.

Applications:

by using gunning machinery, they are used for linings of steam reformings, energetic and heating boilers, insulation of working linings of tunnel furnaces and car chamber furnaces and kiln cars. In engineering industry, they are used for linings of reheating furnaces and annealing furnaces, heat exchangers of cement rotary furnaces etc..



KALURIT-MCC

MEDIUM CEMENT REFRACTORY CASTABLES

They are dry refractory castables with hydraulic binding with medium content of aluminous cement. It is possible to apply them with an ordinary vibration equipment. They are applied in heating units of the ceramic industry and in the units with frequent changes of temperature preserving mechanical strength within the whole range of heat load.



KALURIT-LCC

LOW CEMENT REFRACTORY CASTABLES

They are used for special linings of heat aggregates and for parts of linings stressed by corrosion and scouring by production temperatures of 1600oC such as knecks of mobile mixers, rings and output parts of rotary kilns, balling rotary kilns, quares, exit stones of ladles, on grounds and walls of steel ladles and tundish ladles, for blast furnace trough and runners, lining rotary furnace for lime burning and manufacturing of crucibles, where is need high abrasion, corrosion, thermal shock and alkali resistance.



KALURIT

LIGHT-LOW CEMENT REFRACTORY CASTABLES

They are used for isolation of heat aggregates which are built in by casting or vibration. They are mainly used for outside isolation of boilers, air-heaters and so on.



KALURIT-SFL

SELF-FLOWING LOW CEMENT REFRACTORY CASTABLES

They are used for special linings of heat aggregates particularly in such places where the vibrators are difficult to use. The main use is for preparing various thin-walled linings and special linings in metallurgy, foundry, engineering but also in the energy industry.



KALURIT-ULCC

ULTRA LOW CEMENT REFRACTORY CASTABLES

Ultra low cement-type castables find many applications through industry including the steel and cement rotary kilns. These castable are used for refractory linings with high mechanical strength, resistant to abrasion and corrosion caused by molten metal and slag or by aggressive flue gas and ash, for example blast and electric arc furnace runners, roofs of electric arc furnace, burner blocks.



KALMAL

REFRACTORY MORTARS

Refractory mortars are used to join fireclay materials of different qualities. The mortar in a refractory lining tightly joins the individual shaped pieces and creates an integral whole.

Applications:

granular substances for binding (walling) of the fireclay building materials into a monolithic unit. The G0 – GII mortars are designed for walling of ordinary, semi-hard and hard fireclay building materials.



KALTERAM

REFRACTORY RAMMING MIXES

High alumina stamping and slinging substances based on ceramic binding and delivered in the form of a crushing material. They are processed through machine or manual stamping of delivered soggy substance into steel master forms. They are used mainly in the stove industry and in heating units requiring increased chemical resistance of the lining.

Applications:

They are used in the stove industry and in heating units requiring increased chemical resistance of the lining.



KALTEC

REFRACTORY MASTICS

Mastics are used for tight connecting of fireclays and high alumina materials from the content of 37 to 70 % Al_2O_3 . The KT and KTŠ mastics are supplied in plastic condition. The KTŠ mastics are oven, mounting and repairing mastics with ceramic bond.

Applications:

KT mastics are used for highly stressed and special applications such as mobile mixers, vacuum vessels, ladles etc. KTŠ mastics are used for oven mounting and repairs mastics.



KALTECP

PULVERIZED REFRACTORY MASTICS

Pulverized mastics are used for tight connecting of fireclays and high alumina fireclay materials from 37 to 70 % of Al_2O_3 . KTP mastics are powder mixes.

Applications:

after blended with water, they are used for tight building of fireclay materials.



CORUNDUM

SYNTETIC SLAG

Material „ Corundum“ is possible to use for preparing syntetic slags in steel making or as addition to slags for konvertors, electric arc furnaces, hearth furnaces, ladles and all that jazz.