Dear colleagues!

OJSC Gomelstroymaterialy represented by ISO PROFIT OÜ Company is looking for the partners to promote BELTEP® thermal insulation stone wool on the European Union market. We are ready to provide beneficial price, European quality of the product and efficiency in deliveries. We are interested in cooperation with construction companies or distributors.

JSC “Gomelstroymaterialy” is the few holder of the international certificate for biological solubility EUCEB.
Production of mineral wool slabs

Mineral wool production has been in the enterprise since 1965. In 2005 JSC “Gomelstroymaterialy” introduces to the international building market the unique wall and roof insulation material – insulation slabs made of mineral wool under the trademark BELTEP.

Slabs are produced on a modern production line of Czech machinery company «Frydlantske Strojirny — Rasl a syn s.a.» using the technology of dry forming from mineral wool and synthetic binding agent with waterproofing modifying agent.

In order to ensure the growing needs of the domestic market and increasing exports of these products in 2008, JSC “Gomelstroymaterialy” put into operation a second production line with the installation of similar equipment.

The project allowed to switch to the production of thermal insulation materials with higher physical and mechanical, thermal and operational indices, which greatly enhanced the competitiveness of these products on both the domestic and foreign markets, has expanded its product range, it allowed to produce mineral wool slabs with a thickness of 30 to 200 mm and a density of 30 to 200 kilograms per cubic meter depending on the grade.
Wall and insulation materials manufactured in our plant represent quality and reliability in construction and are a guarantee of success for consumers, and also business confidence.
Mineral wool for thermal insulation slabs BELTEP is produced on the base of basalt fiber. Its insulating properties are based on the chaotic arrangement of the fibers and the content between a large number of air pores which have a low thermal conductivity. During manufacturing the compacted cotton carpet passes through a heat treatment, curing, cutting and finally packaging.

Thermal insulation slabs of mineral wool BELTEP – is the choice of the majority of construction companies. They do not have restrictions on the use: they are used in the construction, reconstruction and repair of buildings and structures, regardless of the type of buildings and degree of fire resistance.

BELTEP – is the best choice for insulation of walls, roofs, floors, attics, balconies, ceilings, basements. Objects built or reconstructed by such a material, have high thermal protection and acoustic indicators, they also have improved comfort.
STAGES OF PRODUCTION

Stage 1

Getting of silicate melt

BELTEP manufacturing process starts with the delivery of the basic materials in a cupola furnace, where under certain conditions melting process occurs and one can get silicate melt.

Stage 2

Processing melt into a fiber

Stage 3

Preparation of the binder solution

Stage 4

Products manufacturing

Formed layer of wool is delivered by the conveyor into pendulum separator, which puts a thin layer of wool in the multilayer carpet of the required thickness.

Then the carpet enters the stacking conveyor, passes through the weighing conveyor, the prepress, which serves for compacting and creating a structure of a spatial orientation of the fibers, forming the required thickness and density of the carpet. Then the carpet enters the heat treatment chamber, where under the influence of hot air the binder is solidified and after compacting the structure with the spatial orientation of the fibers is created.
From heat treatment chamber the mineral wool carpet enters the cooling table and then into the setting of slitting, a measuring device and into the setting of cross cutting, where the final formation of slabs occurs.

Stage 5

Package

Mineral wool slabs BELTEP are packaged into technology packets, easy to transport. If necessary, the packets are stacked on pallets and additionally hooped with stretch-hood film that allows to upload products without the use of manual labor and store outdoors.

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In order to ensure that the fiber complies with the environmental criteria all tests and supervision procedures are regularly carried out by independent expert organizations. Therefore EUCEB certificate is a guarantee of quality of the product and the trademark of the organization - the testimony of its international recognition.
UNIQUE FEATURES
of wool BELTEP

EASY INSTALLATION

Mineral wool slabs BELTEP are not subjected to shrinkage and thermal movement. Insulation keeps its geometrical dimensions for the entire period of operation. If necessary, mineral wool BELTEP of low density can be cut with a knife, and denser one – by using a hacksaw.

SAFETY AND ECOLOGICAL COMPATIBILITY

Mineral wool BELTEP is safe in installation and operation, does not contain asbestos impurities. It has a very low emission of dust particles and chemicals. All products have passed the appropriate hygienic control and certification.

THERMAL INSULATION PROPERTIES

The mineral wool BELTEP consists of extremely thin, randomly interwoven fibers, between which there is air, which provides them with a small density (from 30 to 200 kg/m$^3$). This provides them with a low thermal conductivity (from 0.035 to 0.042 W / (m * K)). The lower thermal conductivity - the better the insulating properties of the material. The mineral wool brand BELTEP reduces heat loss in winter and protect you and your home from heat in summer.
MECHANICAL STRENGTH

Slabs of the mineral wool BELTEP possess such strength characteristics that allow to use them in different systems and to ensure consistent quality, reliability and durability of these systems. All the marks of slabs BELTEP have been tested, they have the necessary technical certificates and certificates confirming the specifications declared by the manufacturer.

CHEMICAL RESISTANCE

Basalt wool BELTEP has a high resistance to organic substances. No solvents or alkaline or mildly acidic environment have an impact on it. Under the conditions of normal humidity mineral wool BELTEP does not cause corrosion.

HYDROPHOBIC PROPERTIES

Thermal insulation materials are the most effective in the dry state. Even a small amount of soaking water has deteriorated the thermal characteristics of insulating materials. Mineral fibers of wool BELTEP in their nature have water-repellent properties. Moreover, in the process of the production of wool BELTEP water-repellent additives are added, thus expanding the boundaries of the material usage and to make its installation in a variety of climatic conditions. The moisture content in the rock wool BELTEP under normal operating conditions is less than 0.5% of the units of weight. Compared to many other materials, mineral wool BELTEP is highly
vapor permeable. Mineral wool insulation slabs BELTEP are good in passing steam and they almost always stay dry, which in its turn affects the healthy microclimate in the building - on the one hand, and durability - on the other.

FIRE PROPERTIES

The main component for the production of mineral wool BELTEP is 100% natural, environmentally friendly material basalt. Its melting point is about 1,500°C. These thermal insulation products BELTEP satisfy the most stringent fire safety requirements and can be used as fire insulation and fire protection systems.

A HIGH LEVEL OF NOISE REDUCTION

Rock wool has a high level of sound absorption.

DURABLE IN USE

The term of service of rock wool for more than 70 years.
Heat and sound insulation of frame structures and other components of residential buildings and industrial buildings, in which the insulation does not accept external load: in vertical and inclined walls in the attic; in the attic ceilings; in the floors covered with all types of coats on the joists with the laying of insulation between joists; in the frame walls and partitions; in pitched roofs; in false ceilings.

It is allowed to use this material as the thermal insulation of the process equipment, thermal installations and pipelines with surface temperatures up to +400°C.
Unstressed heat and sound insulation in horizontal and vertical constructions, including constructions of pitched roofs, attic rooms, attic ceilings, floors on boarding joists with all types of coats, in constructions of framed walls and partitions. First (inner) layer in ventilated systems of warmthkeeping when arranging two-layer insulation.
Heat insulating layer in constructions of three-layer walls, partially or fully made of small-pieces wallings. First (inner) layer in ventilated systems of warmthkeeping when arranging two-layer insulation. Thermal and sound insulating layer in constructions of partitions, floors on boarding joists, ceilings, above-cellar partitions with the lattice frame.

1. Plaster
2. Vapour control layer
3. Laying of ceramic or silicate brick
4. BELTEP LIGHT
5. Ceramic or silicate bricks facing
Heat insulating layer in constructions of three-layer walls, partially or fully made of smallpieces wallings, including insulation with windbreak for low-rise buildings, cottages type buildings, individual houses; in ventilated facade insulation systems of low-rise buildings, cottage type buildings, individual houses with singlelayer insulation with the mandatory windscreen; in the three-layer concrete and reinforced concrete wall panels.

The first (inner) layer in the wall panels with piecemeal assembly. The thermal insulation core in the joints between the concrete and reinforced concrete wall panels. Insulation of industrial equipment, ductwork, piping, refrigeration units, tanks, ventilation chambers and channels.

As filter elements of gas cleaning systems.

1. Suspension air
2. Aluminium tape
3. BELTEP UNIVERSAL
4. Ductwork
FOR VENTILATED FACADES

See Physical and mechanical properties of slabs BELTEP on page 24-25.

VENT 25

Insulation layer in hinged facade systems with air gap at a single-layer insulation performance.

The second (outer) layer of hinged facade systems with air gap for two-layer insulation performance.

The second (outer) layer in the wall panels with piecemeal assembly.

Insulation layer in the construction of three-layer walls with a ventilated air gap.
VENT 50

Insulation layer in hinged facade systems with air gap at a single-layer insulation performance.

The second (outer) layer of hinged facade systems with air gap at two-layer implementation of isolation.

Insulation layer: in the construction of three-layer walls with a ventilated air gap; in the wall panels with piecemeal assembly.
FACADE SLABS WITH ARRANGING PLASTERING SYSTEM

See Physical and mechanical properties of slabs BELTEP on page 24-25.

1. Facing
2. Adhesive solution, reinforced with polypropylene mesh
3. BELTEP FACADE, FACADE 12, FACADE 15
4. Adhesive solution
5. Laying of ceramic or silicate brick

FACADE

Insulation layer when arranging facade insulation systems of low-rise buildings, cottage type buildings, individual buildings.

FACADE 12

Insulation layer when arranging light plaster systems of facade insulation; fire belt in light plaster systems of facade insulation using combustible insulation.

FACADE 15

Insulation layer when arranging light plaster systems of facade insulation; insulation slope (door, window) in plaster systems of facade insulation.
Insulation layer: in the three-layer concrete and reinforced concrete wall panels; when applying heavy plaster insulation systems, including unheated basement structures, car parks, garages, etc.; in hinged facade systems with air gap at a single-layer insulation performance. The second (outer) layer of hinged facade systems with air gap at two-layer implementation of isolation.

1. Floor construction
2. Vapour control layer
3. Reinforced concrete cover plate
4. BELTEP FACADE T
5. Reinforced plaster of cement-sand mortar
FOR COMBINED ROOFS

See Physical and mechanical properties of slabs BELTEP on page 24-25.

**ROOF 30, ROOF 35**

The lower layer of two-layer thermal insulation of combined roofs.

**ROOF 60**

Single-layer insulation of combined roofs.

1. Waterproofing carpet
2. BELTEP ROOF B60
3. BELTEP ROOF 30, ROOF 35
4. Vapour control layer
5. Bearing deck
Products

Stone wool insulation BELTEP

ROOF B60

The upper layer of the two-layer thermal insulation of combined roofs.

ROOF 70

Single-layer insulation of combined roofs with the high loads on the roof.

ROOF 80

Single-layer insulation layer and the upper two-layer thermal insulation of combined roofs with the high loads on the roof.

1. Concrete slabs
2. Preparation
3. Geotextile
4. Drainage layer
5. Waterproofing carpet
6. Strainer
7. BELTEP ROOF 80
8. Vapour control layer
9. Strainer
10. Covering slab
FOR SANDWICH-PANELS

See Physical and mechanical properties of slabs BELTEP on page 24-25.

**SANDWICH, SANDWICH C**
Insulating layer in three-layer metal wall slabs.

1 Metal slab
2 BELTEP sandwich, sandwich C
3 Metal slab

**SANDWICH K**
The thermal insulation layer in three-layer metal covering slabs (roofing).

1 Metal slab
2 BELTEP sandwich K
3 Metal slab

See Physical and mechanical properties of slabs BELTEP on page 24-25.
FOR THE FLOORS WITH INCREASED BASIC LOADS

See Physical and mechanical properties of slabs BELTEP on page 24-25.

FLOOR 125

Thermal and sound insulation layer in the construction of residential floors, including "floating" floors, underfloor heating; attic floors made of reinforced concrete slabs.
FLOOR 190

Thermal and sound insulation layer in the construction of floors of public and industrial buildings, including "floating" floors, underfloor heating; attic floors made of reinforced concrete slabs.
### Physical and mechanical properties of BELTEP slabs:

<table>
<thead>
<tr>
<th>Slab mark</th>
<th>Density, kg/m³</th>
<th>Thickness, d, mm</th>
<th>Thermal conductivity at a temperature 10°C, λ₁₀, W / (m · K), not more than</th>
<th>Thermal conductivity at a temperature 25°C, λ₂₅, W / (m · K), not more than</th>
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## Physical and mechanical properties of BELTEP slabs:

<table>
<thead>
<tr>
<th>Compressive resistance under 10% linear deformation, σ10 kPa, kPa, not less than</th>
<th>Ultimate plane strength of the slab, σt kPa, not less than</th>
<th>Level of concentrated load, N, not less than</th>
<th>Ultimate pull strength of layers, σmt kPa, not less than</th>
<th>Vapor permeability, μ, mg/(m·h·Pa)</th>
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<td>0.504</td>
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</tbody>
</table>
Stone wool insulation BELTEP

The values for all marks of slabs:

- Humidity, %, not more: 0,5
- Water absorption (short), kg / m², not more: 1,0
- Combustibility, class: A1

Dimensions of slabs:

The length of the slab, mm: 1200; 1000. The width of the slab, mm: 600; 1000. The width of slabs by mark “Sandwich”, “Sandwich S” and “Sandwich K” mm: 630, 660, 1000. Manufacturing of slabs of other sizes on consumer’s demand. The thickness of the slabs in these ranges has a pitch of 10 mm.