



Intelligent technologies for plus-energy houses - latest construction materials and management methods.

Phosphogypsum – innovative construction material

Construction materials made of phosphogypsum have perfect thermal properties and allow for holding temperature indoors. They are environment-friendly, for they allow post-production waste management. Their production is almost 50% cheaper than standard construction materials. Because of lack of organic substances, they are resistant to stretching and pressing and resistant to unfavorable weather factors and microorganisms activity. The phosphogypsum materials are characterized with multiple appliances depending on additions, including: semi-conductors, which allow for changing colors and materials' properties.

Smart Home

Smart Home is an application for passive and plus-energy houses management. It is used for remote or local combining with intelligent energy management systems and electronic equipment. Smart Home enables control of household appliances and audio/video devices, alert system, video monitoring, lighting, anti-theft security and other domestic systems.

Reinforcing bars

Made of composite materials, reinforcing bars allow for avoidance of so-called cold bridges in the construction's walls. They are made of ununiformed blends of various construction components. Reinforcing bars do not conduct

heat, thus not causing thermal loss, which occurs in conventional constructing. Our reinforcing bars are resistant to stretching and corrosion.

Foamed glass

Foamed glass is an insulation material of high efficiency. It is an environment-friendly material made from dissolved cullet and frothier and ash additions. As a inorganic substance, foamed glass is resistant to mould. Because of its high waterproof features it may be also used for hydro-insulation of walls and floors.

Recuperators

Recuperators are devices responsible for heat recovery from the air flowing out of a building on the basis of counterflows. The heart of the recuperator is the heat exchanger, in which the flown cold air diverges with the warm ventilation air with no risk of mixing. The initially heated air gets into the building. Our recuperators are characterized with a very high efficiency of even 95%.

RES micro-installations

In case of plus-energy buildings it is necessary to equip them with highly-efficient micro-installations for energy production from renewable sources. We have photovoltaic installations in our offer and unique on worldwide scale modular construction vertical wind turbines. Both PV panels and the turbines may be used as a domestic solution, for they are aesthetic and safe.