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ADVANTAGES OF CONSTRUCTION OF EXTERNAL ENCLOSING STRUCTURES FROM AEROSHED CONCRETE IN MODERN CONSTRUCTION.

Abstract: *The article is devoted to the advantages of using aerated concrete in construction projects for the construction of external enclosing structures. Important thermal insulation properties of the material are its lightness, strength, environmental friendliness, ease of use, ease of processing and fire safety.*

Key words: *aerated concrete, external enclosing structures, construction, thermal insulation, lightness, strength, environmental friendliness, environmental friendliness, fire safety.*

ПРЕИМУЩЕСТВА ВОЗВЕДЕНИЯ НАРУЖНЫХ ОГРАЖДАЮЩИХ КОНСТРУКЦИЙ ИЗ ГАЗОБЕТОНА В СОВРЕМЕННОМ СТРОИТЕЛЬСТВЕ.

Аннотация: *Статья рассматривает преимущества использования газобетона в современном строительстве для возведения наружных ограждающих конструкций. Описываются теплоизоляционные свойства материала, его легкость, прочность, экологичность, долговечность, простота обработки и пожаробезопасность.*

Ключевые слова: *газобетон, наружные ограждающие конструкции, строительство, теплоизоляция, легкость, прочность, экологичность, долговечность, пожаробезопасность.*

Gasbeton is a material widely used in modern construction. It has many advantages that make it an attractive choice for the construction of external enclosing structures. Here are some of them:

1. Insulation: Gasbeton has excellent insulating properties due to its porous structure. This allows you to save money on heating and air conditioning because the material retains heat in winter and coolness in summer.

2. Lightweight: Gasbeton is a lightweight material, making transportation and installation easier. This also reduces the load on the foundation of the building, potentially saving money on its construction.

3. Strength: Gasbeton has sufficient strength to be used as external enclosing structures. It can withstand significant loads and does not deform under the influence of moisture or temperature.

4. Eco-friendliness: Gasbeton is made from natural materials such as cement, sand, and water. It doesn't contain harmful substances and doesn't pollute the environment.

5. Durability: Gasbeton is a durable material that can last for decades without losing its properties. It is resistant to atmospheric conditions, rotting, and corrosion.

6. Ease of processing: Gasbeton is easy to process, allowing you to create various architectural shapes and elements. You can cut, drill, and polish it without much effort.

7. Fire safety: Gasbeton is a non-flammable material, making it safe for use in buildings. It doesn't support combustion and doesn't release toxic substances when heated.

Gasbeton has significantly better insulating properties than burnt brick. This is due to its porous structure formed during production. The pores are filled with air, which is a poor conductor of heat. As a result, walls made of gasbeton can effectively retain heat inside the room, reducing heating costs.

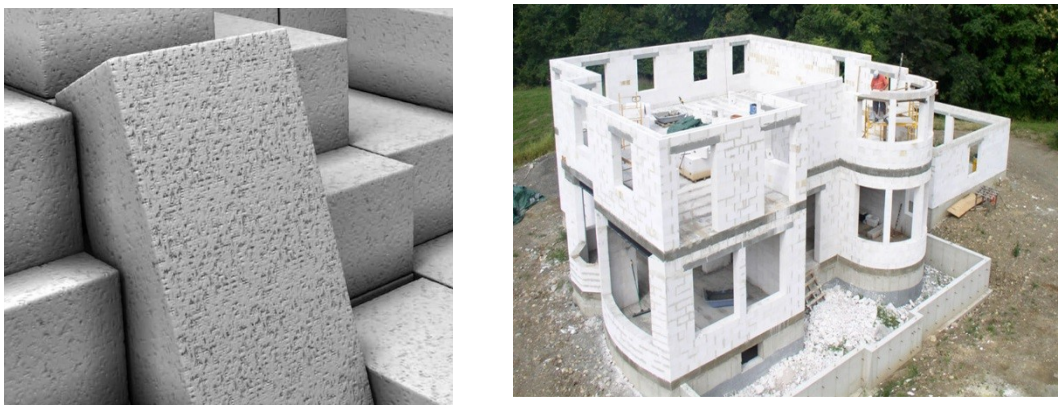

Fig.1. Appearance of aerated concrete and a building made of aerated concrete blocks.

Gasbeton is aerated concrete that hardens in an autoclave. Its composition includes cement, quartz sand, water, aluminum powder, and special additives. The material is characterized by high strength, low weight, and low density. Because of this, it has several advantages over other building materials. For example, the typical density of gasbeton ranges from 300 to 1200 kg/m³, it has low thermal conductivity, so walls made of it keep warmth in winter and coolness in summer, gasbeton is classified as a non-combustible material, so it can be used for constructing buildings of any fire resistance category, gasbeton allows steam passage, ensuring a comfortable microclimate indoors, gasbeton can withstand multiple freeze-thaw cycles without losing its properties.

Unlike burnt bricks, gasbeton has better insulation. Bricks are made from clay and baked at high temperatures, resulting in a dense structure. This structure holds heat less well, so brick walls require additional insulation.

In addition, gasbeton has greater thickness, which also contributes to improved insulation. For example, a wall made of gasbeton 30 cm thick can have the same insulation as a brick wall 1 meter thick.

Thus, gasbeton is a more preferable material for building walls in terms of insulation compared to burnt bricks.

Overall, using gasbeton for constructing exterior enclosing structures is a profitable solution that combines high efficiency, environmental safety, and economy.

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