PROSPECTS OF INNOVATIVE MATERIALS PRODUCTION IN THE BUILDING MATERIALS INDUSTRY

F. Dadakhanov, B. Sharopov, I. Umarov, M. Mukhtoraliyeva,
S. Hakimov, A. Abdunazarov, A. Kazadayev
Teachers of the Namangan Institute of Engineering and Construction
(farruxdadaxanov@gmail.com)

Abstact: The following article provides information about modern construction materials. In addition, information is also provided about the decorative construction materials industry. The production and introduction of modern construction materials into the construction materials industry is the most urgent issue today.

Key words: Decorative stone materials, travertine, facade foam, tile, natural stone, public and industrial, natural decoration, dense travertine, decorative stone.

Today, like every industry, the construction industry is rapidly developing. New modern construction materials are being produced. Thanks to the manufactured building materials, luxurious and modern buildings and structures are being built today.[1,2] The strength of these buildings and structures depends on the correct choice of construction material. Today, the construction of strong and modern buildings and structures is the demand of the times. In the construction of buildings and structures, each building material used for their construction has a specific function. Decorative construction materials are used to make the building look beautiful and luxurious. Decorative building materials are materials used to decorate the external facade of buildings and structures.[3,4,5,6] It is important to choose finishing materials in the construction of residential, public and industrial buildings. As a finishing material, tiles processed from natural finishing stones and architectural products are widely used. Natural decorative stone products are actively used in various facade systems to decorate buildings.[7,8,9,10]

Examples of natural decorative stone products include marble, granite, gabbro and other materials. Currently, 101 natural decorative stone mines are included in the state reserve in Uzbekistan, 51 of which are currently being used. In 2018, a total of 209.0 million cubic meters of marble, granite, gabbro, etc. were mined from natural decorative stone mines. [11]

This shows a 37% increase compared to 2017 (131.5 million m3). In 2018, 155 enterprises specializing in the processing of natural decorative stones produced more than 4.5 million m2 of marble, granite, gabbro and other slabs. , architectural products

(road and sidewalk curbs, architectural products, etc.) were produced, but today, as a result of the launch of large investment projects carried out by the "Uzsanoatqurilishmateriallari" association and regional governments, natural decoration in the territory of the republic more than 200 enterprises specializing in stone processing are operating. In 2019-2021, it is planned to implement a number of investment projects on the mining and processing of natural decorative stones (marble, granite, gabbro, etc.). As a result, the annual production capacity is about 3.0 mln. meter is a square. [12,13,14,15]

In addition, it is worth mentioning that today new decorative construction materials are being produced. Examples of such materials include the following

1. Travertine
2. Facade foam plastic
3. Fasadbop marble tile
4. Marble chips
5. Fiber cement and others.

Travertine (travertine in French) is a sedimentary rock formed as a result of calcium carbonate minerals. Main properties: despite the relatively high percentage of water permeability, natural travertine has cold-resistant properties and is durable. The density of travertine is -2.5-2.74 g/cm3. The heat transfer coefficient is equal to 2-2.5 W/mC0. Porosity - 8.2%. Water absorption by weight -1.7%. Strength -47 Mpa. Travertine is often used as a building material. [2] It usually has no planes of weakness, and its high porosity makes it light weight for its strength, provides good thermal and acoustic insulation properties, and is relatively easy to work with. Dense

travertine makes an excellent decorative stone when polished. The Romans mined travertine deposits to build temples, monuments, aqueducts, bath complexes, and amphitheatres such as the Colosseum, the world's largest building constructed primarily of travertine.[16,17,18,19,20]

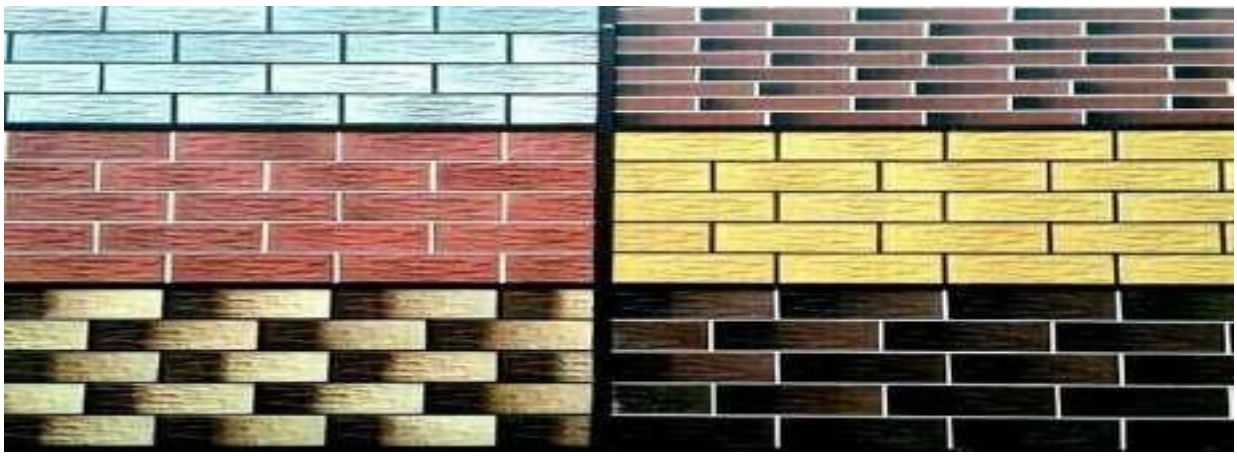

Figure 1. Modern views of travertine

Fasadbop penoplast is a modern construction material used for finishing the facade of buildings and structures. Main properties: density-15÷40 kg/m3, thermal conductivity-0.038÷0.042 W/m*k, water permeability-0.02, vapor permeability permeability -0.05, operational period - 20÷40 years.

Fig. 2 Facade foam plastic

Facadebop marble tile, this material is mainly used for finishing purposes. It is a metamorphic rock. Density 2650-2900 kg/m3, porosity 0.5-1.5%, strength limit 80-300 Mpa, thermal conductivity coefficient 2.2-2.8 W/m*C.

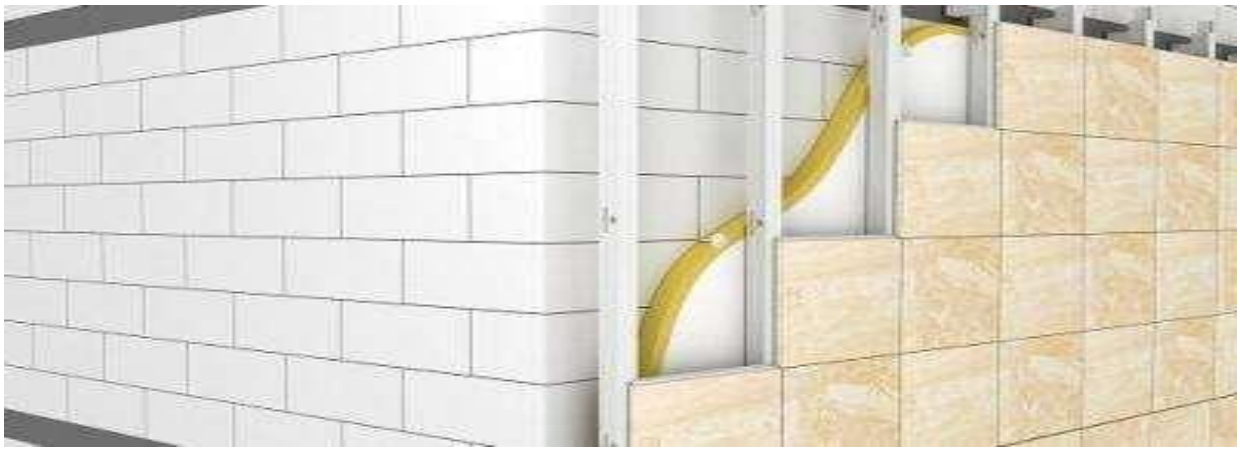

Fig. 3 Fasadbop marble tiles

Marble chips are waste and pieces of marble. It is used for decorative, filling and assembly work. It is resistant to decay, does not fade in sunlight, can withstand any weather. It is characterized by long life.[21,22,23,24]

In conclusion, it can be said that the modern decorative building materials produced today have several advantages. As a result of the use of such construction materials, today we can build modern, durable and high-quality decorative buildings and structures that fully meet the requirements of today's times.

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