WEB OF SCIENTIST: INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL
ISSN: 2776-0979, Volume 3, Issue 8, Aug., 2022

EFFICIENT USE OF LOCAL WASTE IN THE PRODUCTION OF BUILDING MATERIALS

Abdumuminov Odina Rashidovich
Faculty of Architecture and Civil Engineering
Termez State University, Teacher of Transport Systems and Structures

Annotation
The article considers the factors and trends in the economic development of the building materials industry during the years of independence of the Republic of Uzbekistan.

Keywords: building materials, industry, enterprise, efficiency, production, assessment, modernization, investment, forecast.

Introduction

Modern construction industry is unthinkable without new, highly efficient materials. At the same time, the most important task of the building materials industry is the development and implementation of energy- and resource-saving production technologies, environmentally friendly materials manufactured using low-cost, waste-free technologies with the maximum use of local raw materials and industrial waste. However, the widespread use of man-made waste is constrained by a certain instability and heterogeneity of many industrial by-products, which, in turn, can lead to a decrease in the quality of construction products.

The variability of the properties of industrial waste is influenced not only by the conditions of their formation, but also by the chemical and mineralogical composition, conditions and duration of storage in dumps and sludge reservoirs .

It is known, for example, that some mineral sludges are capable of partial self-hardening due to the occurrence of crystallization processes, which in turn leads to a change in the chemical activity and dispersion of sludges, which worsen their consumer properties.

Therefore, priority in the use of man-made waste in construction should be given to materials that have a stable chemical composition and physical properties that determine the main directions of their application.

Domestic and foreign experience testifies to the wide use of gypsum finishing materials in housing and civil construction. Gypsum and complex plaster mortars, dry mixes, facing panels and slabs, plasterboard materials, suspended ceiling structures, etc. have become widespread.

An analysis of the literature and the chemical composition of industrial waste indicates the possibility of using carbonate, gypsum -containing and mixed sludge in the production of building materials based on cement, gypsum, lime, and composite binders.

This group of wastes can include large-tonnage, mineral, gypsum -containing sludge from glass production, carbonate sludge from the chemical treatment of water from energy enterprises, gypsum -containing and lime sludge from the chemical - pharmaceutical , machine-building, chemical industries, etc.

Since ancient times, gypsum-cement plaster has been known, which helps to purify indoor air and has good biohygienic properties. Similar properties of gypsum materials are due to the peculiarities of the pore structure of gypsum. When obtaining a plastic gypsum dough, 2.5-3 times more water is usually required than is necessary for the hydration of $CaSO_4 \cdot 0.5H_2O$. The chemically unbound water remaining in the mass of gypsum stone forms a system of open pores between gypsum crystals during evaporation. Such a structure imposes significant restrictions on the scope of gypsum products for exterior decoration of buildings, due to the possibility of moisture and a decrease in physical and mechanical properties. However, gypsum materials are indispensable for interior decoration.

The production of building materials is a priority in the global economy. In particular, cement is the most widely used product on Earth after water, its annual consumption on the planet is 1 ton per person.

Cement is produced in 156 countries around the world, but 70% of the world's cement production is in the 10 largest countries. Its level of development is 1.5–2.0 times higher than the growth rate of world GDP, which indicates the growing importance of the efficient use of natural raw materials in cement plants.

As a result of reforms in Uzbekistan, new enterprises, new jobs are being created, foreign investments are being attracted, obsolete enterprises are being modernized and reconstructed. At the same time, the efficiency of some industrial enterprises remains low, and as a result of the rise in the cost of building materials, they become uncompetitive. Therefore, one of the priorities is to improve the scientific and practical base for the development of the economic efficiency of enterprises in the building materials industry.

An important factor in the development of the industry was the Decree of the President of the Republic of Uzbekistan dated May 23, 2019 “On additional measures to develop the building materials industry”.

The resolution provides for the creation of favorable conditions for the rapid development and diversification of the industry, attraction of investments in the

processing of local mineral resources and an increase in the export of building materials.

In the process of its implementation, a large-scale work was carried out to expand and increase the range of production of building materials, introduce and master new modern technologies, ensure rational regional distribution of the production of building materials.

One of the most important tasks in this regard is to increase the production of competitive building materials from local raw materials, the gradual localization of demanded products that are not produced in the country.

As a result of localization measures, a number of building and finishing materials were launched, including dry mixes, drywall and paintwork products, window and door blocks, decorative panels and panels made of composite, plastic and aluminum materials.

In recent years, new types of modern building and finishing materials have been introduced in Uzbekistan that comply with international ISO standards for energy efficiency and advanced technologies in construction - drywall, dry mixes, modern roofing materials, heat-resistant polymer pipes, ceramic tiles, sandwich panels, basalt fiber and fittings, heat-insulating materials are mastered.

In conclusion, it should be noted that structural changes will become an important factor in ensuring further sustainable growth of the building materials industry, deepening cooperation and integration between enterprises, diversifying products, increasing their competitiveness and, most importantly, the effective use of economic and investment potential.

In general, the development of the industry will increase the country's foreign exchange reserves by providing the country's construction market with relatively cheap, high-quality modern building materials based on local raw materials, expanding their range, and increasing the volume of import-substituting export-oriented competitive products.

Bibliography

1. Abdukarimov I. T. Ways of reading and analyzing financial statements. Tashkent, 2019.

2. Madrakhimov U. A. Ways to improve sustainable economic growth in Uzbekistan: author . diss . ... cand. economy . Sciences. Tashkent, 2017.

3. Makhmudov E. Kh. Economics of industrial enterprises. Tashkent, 2015.

4. Gypsum materials and products (production and use): Handbook / Under the general editorship of A.V. Ferron. - M.: DIA, 2019.

5. Sycheva L.I., Tsepeleva E.Yu., Antonicheva N.B. The use of gypsum-containing waste in the production of building materials // Tr. VNIIESM. - Ser. 11.- Issue. One.