



ECONOMIC EFFICIENCY OF RATIONAL USE OF SECONDARY RESOURCES

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Abstract:

This article analyzes data on the efficient use of secondary resources, in particular waste from ferrous metallurgy, agriculture, chemical industry, fertilizer industry.

Keywords: Waste, Recycling, Slag, Fly Ash, Pozzolanic And Slag Sements,, Ferrous Metallurgy , Waste, Electrothermophosphorus.

The following economic efficiency is determined by the rational use of secondary resources in the production of building materials and products: saves raw materials resources and multiplies them, eliminates the lack of natural resources, reduces land employment, including the need to build fertile land, eliminates the need to build houses, improves the technical and economic performance of industrial sectors, provides an opportunity to intensify.

Typically, waste-derived raw materials and components are reduced to be 2-3 times less expensive than professionally processed raw materials. The use of some of the trash will save fuel usage by 10% to 40% and the cost of equivalent funds by 30% to 50%. Furthermore, raw material resources will not always be built near production facilities, and new raw material reserves may be located outside of industrial firms. This condition also raises the expense of transportation.

The economic effectiveness of waste utilization varies depending on the type of trash. For example, using coal extraction and enrichment wastes in the manufacturing of baked clay allows for the conservation of technological fuel, the use of slag and ash as a semi-finished product in the creation of various mineral binders, and the conservation of fuel.

The use of materials and objects manufactured from agricultural waste, such as cereal porridges, rice, and similar plants, results in the conservation of wood. The cost of fillers is lowered by 1.5-2 times for the manufacturing of gravel special concrete, which can be crushed as an additional product in mining-enrichment combinations.

Slag and ash are used to make cement, concrete, admixtures, ceramic and silicate, ceramic and other composite building materials, which saves a lot of resources and energy. It is expected that grinding slags and cement clinker together will save 20-70 percent of clinker and fuel. In addition, including slag soil and ash into the cement mortar boosts burnt humus production while reducing waste.

The waste pozzolan produced during the manufacture of a carbonated component is utilized as an addition in the extraction of sulphate-resistant cements in the cement industry. Heat-electrostatic discharge (HED) is a type of electrostatic discharge that occurs when Ashes also make cement more resistant to the sulfate environment.

The manufacturing of pozzolan and slag cements allows you to save the most amount of fuel for the least amount of money.

The use of thermal energy ash in the creation of aggregate concrete, mortar-ash-slag, building-type combinations, and light fillers saves a significant amount of energy and materials, lowering production costs dramatically.

Black metallurgical slag is an important component in the production of cement, mineral cotton, concrete, and slag cements, especially in the form of granules.

Slag alkali binders, as well as mortars and concretes, can be made from electrothermophosphoric slag, which is a waste product of the fertilizer industry. Wound fasteners can be substituted with a building plaster when phosphogips, an industrial waste, is processed. Prof. T. A. Otakoziev's sulfominerally based cement This is demonstrated his school's creation.

To summarize the aforementioned instances of secondary resource utilization and cost savings, it should be highlighted that big tonnage waste kinds are economically based, having been tried and employed experimentally in the creation of construction materials and goods. However, one of the issues that needs to be addressed is the development and implementation of innovative technologies for the use of multi-toned industrial waste, such as phosphogips, slags, and ash.

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