Promising Technologies for Processing Ash and Slag Waste into Geopolymers

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Keywords: concrete; geopolymers; ash and slag waste; testing; building materials; ecology.

Abstract: Thanks to the improvement of ash and slag processing processes, new opportunities for efficient and environmentally friendly production are opening up. The first direction is the production of chemicals: vanadium, titanium dioxide, and gold. The second direction is application in the construction industry: production of cinder blocks, bricks and building mixes; production of swimming equipment, signal buoys, life jackets; production of alumina bricks; foam. A hypothesis has been put forward and tested on the creation of a geopolymer binder based on the process of activating aluminosilicates obtained from ash and slag with alkali solutions.

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