PROBLEMS OF DOMESTIC SYNTHETIC FOAM DEVELOPMENT

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Today, new technologies are breaking into construction with great force. One of these technologies is one of the types of cellular concrete - foam concrete.

ABSTRACT
By the Decree of the President of the Republic of Uzbekistan dated June 19, 2009 No. PP-1134 "On additional measures to stimulate the increase in production and improve the quality of wall materials", enterprises of the construction industry of Uzbekistan were given a directive to increase the output of building wall products, which include cellular concrete and blocks of them.

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Today, new technologies are breaking into construction with great force. One of these technologies is one of the types of cellular concrete - foam concrete. The use of lightweight concrete in construction is becoming more and more common.

As you know, foam concrete consists of such components as: binder (cement), fine aggregate (sand), water, foaming agent and, if necessary, various kinds of additives.

A foaming agent plays a key role in the formation of pores in the structure of concrete. Until now, a small number of researchers were engaged in the development of the composition of a synthetic foaming agent in our country, but no final results were obtained for introduction into production. In this regard, to this day, foaming agents are imported into our country from abroad. The main supplier is the Russian Federation.

To date, the SamGASI Regional Test Center is working on the creation of a synthetic foam concentrate based on local raw materials.

Analysis of foaming agents for foam concretes showed that aluminosulfonaphthenic foaming agent is the most acceptable for the conditions of our region. For its production, materials are used that are produced in our country.

To obtain an aluminosulfonaphthenic foaming agent, it is necessary to select the optimal

mixture of kerosene contact, sulphate alumina, sodium hydroxide and water.

The preparation of an aluminosulfonaphthenic foam concentrate consists of the following steps:

- preparation of an aqueous solution of alumina sulfate;
-reception of a 20% sodium hydroxide solution;
- neutralization of kerosene contact;
-mixing the sodium salt of petroleum sulfonic acids with water a solution of alumina sulfate.

For the stability of the foam, it is also necessary to take into account the water-cement ratio of foam concrete. The water content in porous concrete is the sum of the calculated amount required for mixing the solution and the water contained in the foam. Before adding foam, the water-cement ratio of the slurry must be at least 0.38. Too low value of the water-cement ratio can cause the production of a product with a higher than the specified bulk density.

This is due to the fact that concrete will take the water necessary for chemical and physical reactions from the foam, causing partial destruction of the foam, i.e. reducing its volume in the foam concrete mixture. The process of foam destruction occurs in three stages: first, water is released, then foam destruction is added to the water release, and at the end the foam structure is destroyed. The optimal ratio is in the range from 0.4 to 0.45. The water temperature is not allowed above +25 ° C

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