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TECHNOLOGIES PRODUCTIONS OF BUILDING MATERIALS WITH THE USE OF WATER TREAT IN THE MAGNETIC FIELDS

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After studying the application of the theory of magnetic water and significant achievements in scientific researches and practical application in building materials production we have proposed technologies of concrete products manufacture using high-frequency electromagnetic devices for magnifying "Ilios", as well as the device "Vulkan" and "Kalmat".

Magnetic water was received on the stand with two devices that can operate independently from each other. The task of the research isto carry out comparative studies of the optimization process of magnetic water according to this technology, field parameters and water-cement ratio of the initial formulation of products. To conduct products research after a certain period of time (28 days) (strength gain) using steaming and without steaming. To consider the effect of magnetic water as an activator, with the use of components to obtain concrete with damaged structure and of various chemical compositions, with various additives.

For the experiment over 200 samples of concrete cubes in two ways, with a working section 70x70 have been made in batches (with or without steaming up to 28 days). The steaming chamber (t = 80 °C, 6 h) has been used for steaming.

On the 7^{th} day the strength of the samples prepared with the magnetic wateris 20…40 % more than the strength of samples prepared with ordinary water. On the $7…11^{th}$ day samples prepared with the magnetic water gain the same strengthas the samples with ordinary water on the 28^{th} day. On the 28^{th} day the strength of the samples prepared with magnetic water is 7...12 % more than that of the samples prepared with plain water.

Our studies confirm the practicability of the magnetic water use as an activator in the production of construction materials, which will let use energy-efficient nanotechnologies in the production. This requires a deep study of complex physical and chemical systems, which is scheduled by the author in the following series of experiments.

The use of water treated with high-frequency electromagnetic fields obtained from devices "Ilios" lets reduce energy consumption during heat treatment of concrete (steaming).

To receive detailed experimental data on the magnetic field of the device "Kalmat" is a subject for further study.