

Development of technologies for the production of wall materials based on organic binders hardening contact with silica as a component of waste power plants.

State registration –0110U002326

Head - Paschenko E.A.

Results

Developed a highly efficient production technology of silicate wall materials, which harden and create a waterproof and stone-like composition at the time of formation (compaction) and characterized by physico-mechanical characteristics higher than existing similar silicate products.

Identifies the main patterns of synthesis of calcium hydrosilicates at low temperatures in the range from 25 to 90⁰C, depending on the type and condition of the crystal structure of the silica component. The effect of the fusion products on the physico-mechanical and operational characteristics of the compositions of contact-condensation-curing, the influence of the organic component of organic binders contact hardening on the synthesis of basic physical and mechanical properties of the materials.

On the basis of material balance and heat engineering calculations determined that the implementation of the technology of production of wall materials, the specific consumption of thermal energy are reduced by 9 times compared to conventional autoclave technology of production (from 955 thousand to 109 kJ per 1,000 bricks).

Pdf