MECHANICAL PARTIAL DEWATERING OF SLUDGE DEPOSITS

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The goal of the work. Mechanical separation of liquid with the help of press in long-lived mules.

Results. Significant reduction in the volume of sewage sludge is carried out either in natural conditions (on sludge sites, silt ponds), or in artificial conditions (on filter presses, centrifuges, etc.). After dehydration, the initial sediment is reduced in volume 7-15 times, that is, it has a moisture content of 55-80%.

However, in the realities of our time, sludge deposits accumulate in the treatment facilities. Most sludge grounds and ponds in relation to filling go near the limit of the project powers, and require new areas for placing of fallouts, that it is related to the financial penalties for placing of wastes degradation of new territories busy under silt grounds and pond. In our studies, we want to show whether it is profitable to economically introduce the mechanical separation of fluid for the mules of the protracted storage.

Experiments were carried out on a press for mechanical spinning of a liquid from organic materials. The machine has levers on which there are loads. Moving them, you can adjust the pressure of the exit (movement) of the solid fraction.

For researches, a product from treatment plants of Fastov with a total humidity of 65.5% was used. The product is spatula, its storage time in fields of aeration is more than 30 years. On its basis, working mixtures of mule with straw were made.

Conclusions. Studies have shown that for sludge solutions and their working mixtures, which consisted of mules, which were stored for a considerable time and had a spatula structure, mechanical dehydration occurs in a small percentage redistribution of moisture.