

TECHNOLOGY FOR AERATION STATION SLUDGE DEWATERING USING GEOTEXTILE MATERIALS

Areas of Application

The technology is to be used for reducing the water content in aeration station sludge

Specification

Dewatering of aeration station sludge is based on the pattern “sludge inside the container → water through geotextile material out of the container” and “sludge outside of the container → water through geotextile material into the container with ongoing water evacuation.”

The problem of regeneration of filter modules has been solved



Filtering module in BSA aerobic stabilizer

Dewatering of aerobically stabilized sludge by plant prototype

Sample	COD, mg O ₂ /dm ³	Dry residue, mg/dm ³	Suspended particles, mg/dm ³
Initial sludge	10 400	11 950	10 980
Filtrate	240	860	46

Advantages

Dewatering of aeration station sludge in the mode “sludge outside the container” has been implemented for the first time. The proposed approaches can be used to reduce the load on ground sludge treatment facilities; to deeply clean the return supernatant water supplied from silt sites to the head of biological sewage treatment process; to reduce the level of silt detention ponds for increasing their operating capacity and for minimizing the load on guard dams; to dewater the sludge accumulated by placing it in geotextile containers; and to condition the sludge of any origin (except for aggressive one)

Stage of Development. Suggestions for Commercialization

IRL5, TRL7
Process chart is developed and training is provided upon request

IPR Protection

IPR3

Contact Information

Volodymyr I. Kashkovsky, Institute of Bioorganic Chemistry and Petrochemistry of the NAS of Ukraine; +38 044 559 20 71, +38 044 559 98 00, e-mail: kash54vik@gmail.com