

Development of an innovative, energy-saving and economical method of phosphate recovery from wet sludge from small and medium-sized sewage treatment plants

Project management: Prof. Dr.-Ing. Artur Mennerich

Summary: The goal is to develop (to a stage of market-readiness) an innovative and economical technique for recovering phosphate from wet sludge emanating from small and medium-sized sewage treatment plants. Currently, no suitable economical technologies are available for these sewage treatment plants. The process is characterised by a robust construction, requires little energy, is easy to operate and does not need many chemicals. The cost of the produced fertilizer is planned to be €3/kg, i.e. at least 20% below that of similar processes for large sewage treatment plants. By using newly-developed electronic instrumentation and control technology, the sludge dewatering is influenced in such a way that the resulting composition of the process water is optimal for phosphate recovery. The subsequent recovery technique is based on the use of locally available renewable raw materials as carrier materials, and permits the use of the end product as a high-quality fertilizer as a secondary raw material base in agriculture in the region. At laboratory scale, technical scale and large scale, test systems will be developed and analysed in order to develop the systems for efficient large-scale use on the market.

Funding: Federal Ministry for Economic Affairs and Energy
ZIM

Duration: 2016 – 2018

Funding amount: 190.000 €

Organisational unit: Faculty of Civil and Environmental Engineering

Research areas:



Gefördert durch:



Bundesministerium
für Wirtschaft
und Energie

Salzgitter

Suderburg

Wolfenbüttel

Wolfsburg