



Mobile container-based sludge dehydration technology for dewatering sewage sludge (09 HU 50R8 3CO7) of small towns 

Abstract

A Hungarian SME offers a mobile container-based sewage sludge dehydration technology, suitable for industrial and agricultural facilities and sewage treatment plants of small towns. It is also suitable for sewage cleaning of small towns lacking proper sewage systems. The closed circuit system ensures odourless and clean operation. It has good dehydration efficiency. Cooperation partners for technical, joint venture or commercial agreement are awaited.

Description

The Hungarian company's activities encompass the following: environmental protection consultancy, development and trade of sludge dehydrating containers and polyelectrolite dosing devices and filtration rollers necessary for sludge dehydration, mobile sludge dehydration services and trade of animal incinerators.

Sludge dehydration is the last phase of sewage cleaning, its tasks are as follows: water content reduction of sludge generated during the cleaning process. The volume of dehydrated sludge in the EU is close to 10 million tons/year, its management costs amount to 50% of the full sewage cleaning process. Sludge dehydration is necessary because only sludge with suitably dry matter content can be used or stored in depots. During the dehydration process, sludge volume decreases proportionately to the increase of dry matter content, thus unloading and transportation costs are significantly lower.

The technology uses gravitational force and polyelectrolite to filter water from the sludge. Device components: polyelectrolite entry tank, polyelectrolite mixer, in case of polyelectrolite powder, a dropping unit (eductor), polyelectrolite pump, doser for diluting water (ejector), filter elements (membrane technology filtration), mixing cyclone, sludge pump. The technology is suitable for further use with sewage

water not containing heavy metals (Cu, Cr, Hg, Pb, etc.).

The process requires no investment. It can be used for several small sewage farms in the region. Dehydration (flocculation, filtration), storage and transportation can all be accomplished with one device, providing the operator with a complex sewage sludge treatment solution. Filtering containers, with similar structure to that of the well-known construction and demolition debris transportation containers are suitable for transportation of dehydrated sludge. Dehydrated sludge can be used for recultivation of agricultural areas as well.

- polyelectrolite: A macromolecule with charge, contains electrolite dissociating groups.
- flocculation: phase separation

Innovations and advantages of the offer

Current technologies available are only capable of dehydrating sludge only with large amounts of sewage water

- The offered technology provides a cost effective dehydration method for even small villages.
- Devices can easily be installed outside the village.
- The technology can be used for different types of sludge with different dry matter contents.
- Dehydrated sludge can be shovelled, and can be transported drip free.
- It has good dehydration efficiency.
- Due to simple machinery, its operation is easy and reliable.
- It has a long life-span, and is characterised by low investment and maintenance costs.
- Leechate does not contain any floating materials.
- The closed circuit system ensures odourless and clean operation.



Mobile container-based sludge dehydration technology for dewatering sewage sludge of small towns (09 HU 50R8 3CO7) 

Current and Potential Domain of Application

The technology can be used by local governments of small towns and villages, by industrial and agricultural facilities for treatment of agricultural sewage, communal sewage, industrial waste water not containing heavy metals, river and lake silt.

For further information (including IPR status) please contact:

Susanna Chericoni
Phone: 39 050 931620
Fax: 39 050 931640
Email: s.chericoni@cpr.it