CVT VALORISATION SUD

Gravity thickener for liquid sludge from waste water treatment plants using rising filtration, with no conditioning polymer

OT-00080

Technology's description

Reducing the volume of sludge from waste water treatment plants is a key parameter for handling and conveying... improving techniques and optimizing costs are crucial (storing sludge thickened by gravity makes up 40% of the total cost of the spreading sector).

Scraper Box is a simple, efficient and low cost innovative technology for thickening liquid sludge. It can be automated and does not require conditioning polymer.
It produces sludge that is 60% more concentrated than with usual thickeners: sludge dryness is increased significantly, achieving 50g/L compared to the current 30g/L, without the use of costly coagulants.
For example: a city with a daily production of 20m3 of sludge at 30g/L would only produce 12m3 at 50g/L with Scraper Box.
Our innovative thickener is particularly adapted to the needs of rural and peri-urban cities with small waste water treatment plants (smaller than 2000 inhabitant). It is mobile, robust and simple to maintain while its tactile interface makes it easy to use.

The device includes a tank (inlet: raw sludge; outlet: thickened sludge) with an internal filter to separate two sections. raw sludge is added into the lower section. It is then thickened over 2 stages: settling followed by filtration/compression. The settling phase occurs until the sludge cake reaches the filter located in the upper part of the tank. The thickened sludge is removed separately from the liquid contained in the upper section. A second tank allows a continuous thickening while the first one is emptying.

Advantages

- Reduced production costs
- No use of coagulant
- Significant increase in sludge dryness
- Robust
- Easy to use
- Easy maintenance
- Mobile
- Can be automated (using a low-cost device)
- Concurrent removal during thickening (2 tanks)

Industrial applications

- Processing waste water: thickening sludge from waste water treatment plants.

Intellectual property

- Technology patented

Technology transfer

- Co-development with licensing agreement
- Know-how
- License

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