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## Digestate Screening for Plastics Removal

Digestate is able to play an important role in soil replenishment, but can require some processing before use as an alternative to mineral fertilisers.

### The Problem



Figure 1 - Example food waste

AD plants receive a combination of different food wastes from varying sources, with some coming in retail packaging or containing significant plastics contamination. To utilise the waste, material goes through a de-packaging plant designed to separate the valuable food waste from the packaging. Unfortunately, the side effect is that some plastics are broken into smaller pieces and mixed into the resulting “soup”. While these plants do a good job and retain the more bulky pieces of plastic, it is difficult to ensure that no plastics are passed forward. As the plastics cannot be digested, they pass through the plant, leaving with the digestate.

Public awareness of plastics is particularly high right now, with the consequences to the environment being well publicised. In addition to the unwanted bad press, residual plastics in digestate can prevent digestate from meeting PAS 100, restricting use and value. PAS 110 is a Publicly Available Specification (PAS) ensuring that sites “produce digested material that meets market needs and protects the environment.” For “Total glass, metal, **plastic** and any ‘other’ non-stone, man-made fragments > 2 mm” the upper limit is 0.5 % m/m dry matter.

### Our Solution – HUBER Sludgecleaner STRAINPRESS®

In order to meet PAS 110 for use of digestate as a fertiliser, the plastics content must be reduced. We at HUBER have successfully

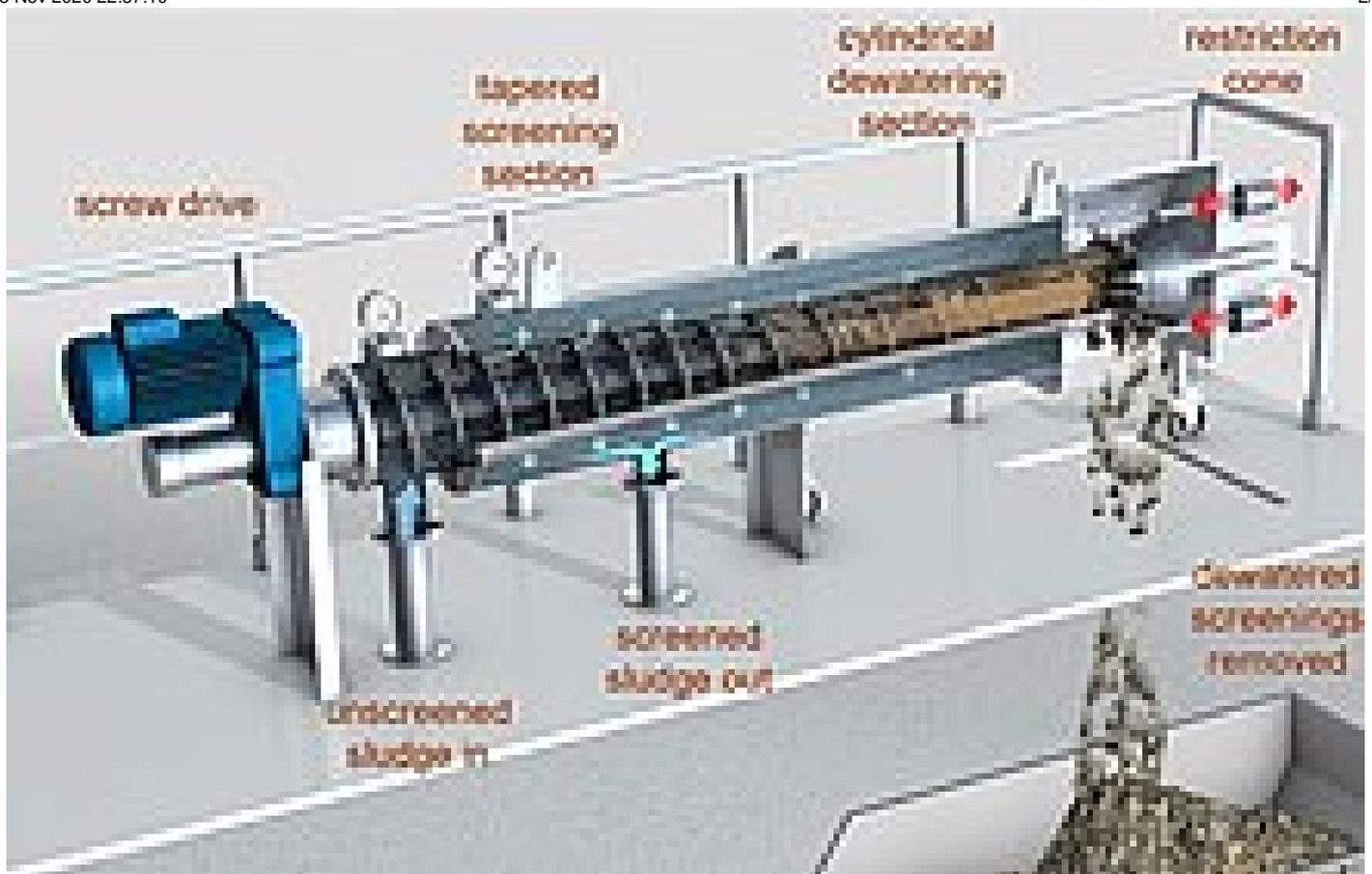


Figure 2 - process sketch of HUBER Sludgecleaner STRAINPRESS@





Figure 3 - Before/After STRAINPRESS® and screenings removed



Figure 4 - Three STRAINPRESS® units installed on a platform, with control panels and frost protection fitted



Figure 5 - Skid-mounted trial unit with feed pump & control panel

installed our STRAINPRESS® for plastics removal at a number of sites. The unit is successful at removing plastics and other large material, enabling digestate to meet PAS 110. The STRAINPRESS® operates automatically and requires minimal maintenance, ideal

The STRAINPRESS® offers:

- Continuous screening, dewatering and transport of coarse material in one operation.
- Enclosed, pressurised operation, so no reliance on multiple pumping stages and can be integrated in pressurised pipelines.
- Complete Stainless Steel fabrication for enhanced asset life.
- Reliable mechanical perforated plate cleaning without the need for any water or chemicals.
- Automatic pressure cone system for maximum dewatering efficiency and compaction of the separated material. Typical screenings are 40-50% DS, minimising disposal volumes.
- Increased operating reliability of downstream sludge treatment systems such as thickening, disinfection, stabilisation, dewatering, drying, and reduced maintenance requirements
- Quick opening and closure device makes control and inspection easy. The screen section is fixed; the press zone has castor swivel wheels and is therefore easy to shift.
- When installed between the digester and the first digestate storage tank, the constant head in the digester can be used to pressurise the STRAINPRESS® without pumping.
- When installed on a platform, separated plastics fall from the STRAINPRESS® directly into a skip below.

HUBER Technology can supply the STRAINPRESS® complete with:

- Frost protection
- Control panel
- Support platform or Conveyor

James Tucker, HUBER's Industrial Business Development Manager commented that "the STRAINPRESS® is ideally suited to this application and provides excellent results. With nearly 400 units sold in the UK alone and decades of experience servicing and maintaining the units, HUBER STRAINPRESS® units are an obvious choice."

HUBER Technology are experts in providing equipment to enhance Anaerobic Digestion, with post-digestion screening being just one of the options. Other equipment includes grit removal, grit washing, packaging compaction and digestate dewatering.

With skid-mounted units available to trial, we are happy to demonstrate the equipment's performance on your site.

Our skid-mounted unit is ideally suited for on-site trials and comes complete with:

- STRAINPRESS® SP290 unit
- Multiple basket types for various application requirements
- Control panel mounted to skid and pre-cabled for plug-and-play
- Feed pump mounted to skid

There is an option to bypass the feed pump so that the STRAINPRESS® can be fed by the pre-existing pump. The STRAINPRESS® operates as a pressurised screen, so can be installed into a pressurised pipeline, not requiring an additional forwarding pump.

#### Related Products:

- [HUBER Sludgecleaner STRAINPRESS®](#)

#### Related Solutions:

- [HUBER Solutions for Sludge Screening](#)

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