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HUBER Sludgcleaner STRAINPRESS® to ensure energy yield from digester gas plants

By generating electricity and heat from digester gas, operators of wastewater treatment plants with anaerobic sludge stabilisation can generate energy themselves, and thus significantly reduce the purchase of external energy and consistently and sustainably lower their operating costs. Under suitable conditions, by feeding external and organic-rich waste (co-substrates) into the digester, gas and thus energy production can even be increased to the point of energy self-sufficiency. Typically, liquid waste from the food industry or catering (such as grease separator contents or flotated sludge) is delivered, processed and fed into the digester.



Screenings dewatered by the HUBER Sludgcleaner STRAINPRESS® from out-of-date food, packaging residues and plastics.

Sustainably improving digestion processes and gas production

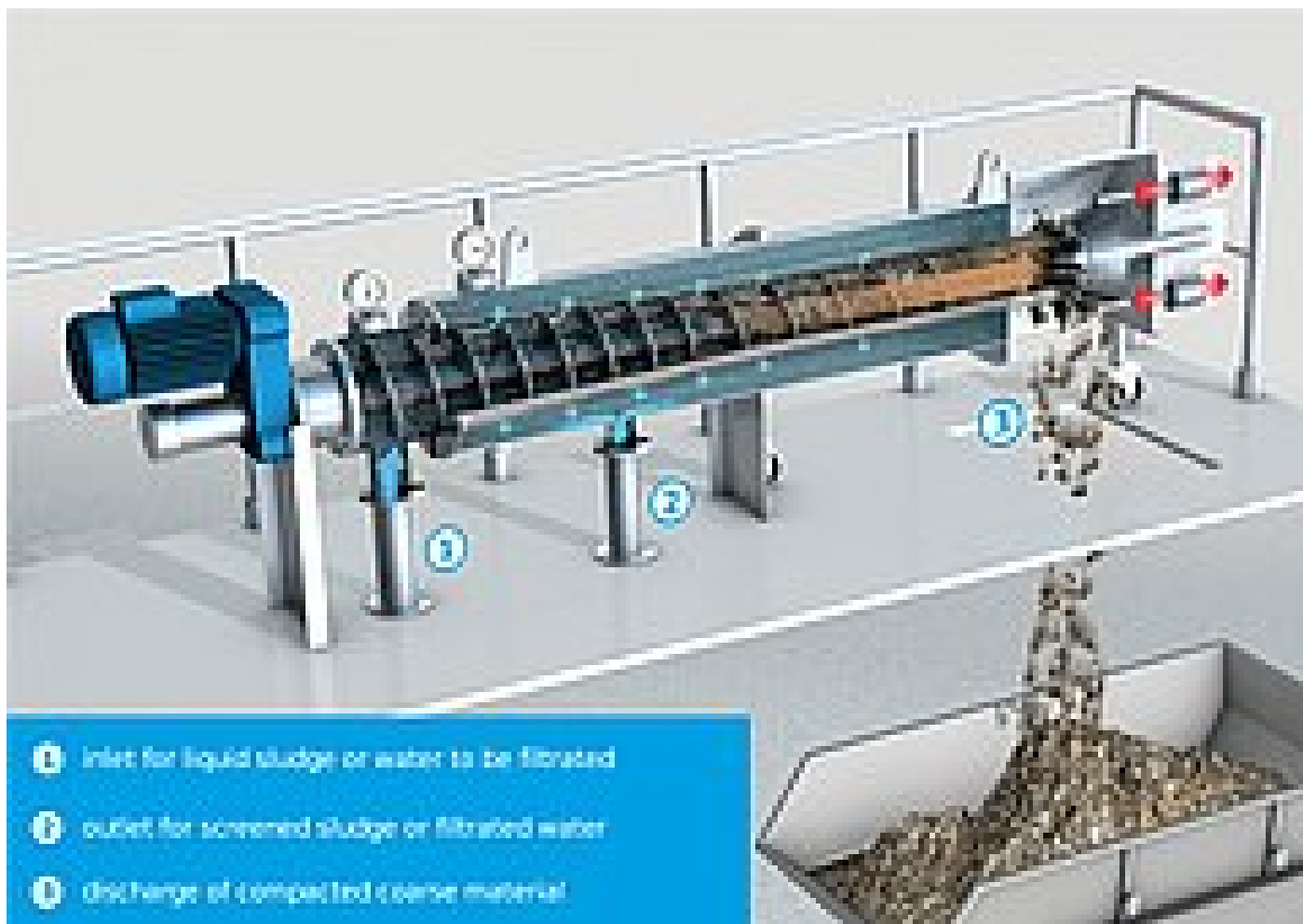
In order to sustainably improve the digestion process or gas production through co-substrates, as well as to protect mixing and conveying units and the downstream sludge dewatering system, foreign materials contained in the substrate must be removed and coarse solids must be broken up.

Typical materials and coarse solids are:

- Fibrous materials, textiles
- Stones, metals
- Plastics

Possible effects of insufficient removal of impurities are:

- Wear on pumps and dewatering units
- Blockages in pipeline installations
- Blockages, floating ceilings and deposits in the fermenter
- Reduced or unstable gas yields
- Restrictions in the treatment of filtrate water and digested sludge



Design sketch: HUBER Sludgecleaner STRAINPRESS®

Proven for over 20 years: the HUBER Sludgecleaner STRAINPRESS®

For the removal of contaminants from sludge, the HUBER Sludgecleaner STRAINPRESS® has proven its worth for more than 20 years. The STRAINPRESS® is a horizontal cylindrical screen for continuous separation and dewatering of foreign matter. It is divided into an inlet and screening zone plus a compaction and discharge zone.

A pump conveys the unscreened sludge through the screening zone and presses the screened sludge for further treatment. The coarse material retained on the cylindrical screen is stripped off by a coaxial screw and pushed through the compaction zone where the material is pressed and dewatered. The screw operates only when the pressure sensors detect a differential pressure caused by screen surface blinding. The foreign matter is pushed through a gap around a hydraulically actuated jam cone, which partially closes the end of the tube and builds up counterpressure. The counterpressure of the cone is automatically regulated inversely proportional to the load of the screw drive.

Individual adaptation for throughputs from 5 to 150 m³/h raw sludge

Proven options such as screen perforation sizes between 2 mm and 10 mm as well as individual designs of the compaction zones allow the machine to be adapted to different properties of the raw sludge and the screenings. Experience has shown that the HUBER coarse material separator can achieve specific separation capacities of 1 to 10 kg screenings per m³ raw sludge (dewatered to approx. 40%). Due to pump feeding and the closed screening process, even non-hygenised sludges and substrates can be treated without health

hazards for the operating personnel.

Complete removal of coarse material for significantly increased operational safety

Often alternatively used macerators only macerate coarse material – inert and abrasive contaminants as well as fibres, however, remain in the substrate and can cause the negative effects mentioned above. In contrast, the HUBER Sludgcleaner STRAINPRESS® removes the coarse material completely from the process, thus ensuring significantly higher operational reliability in the downstream process stages.

Related Products:

- [HUBER Sludgcleaner STRAINPRESS®](#)

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