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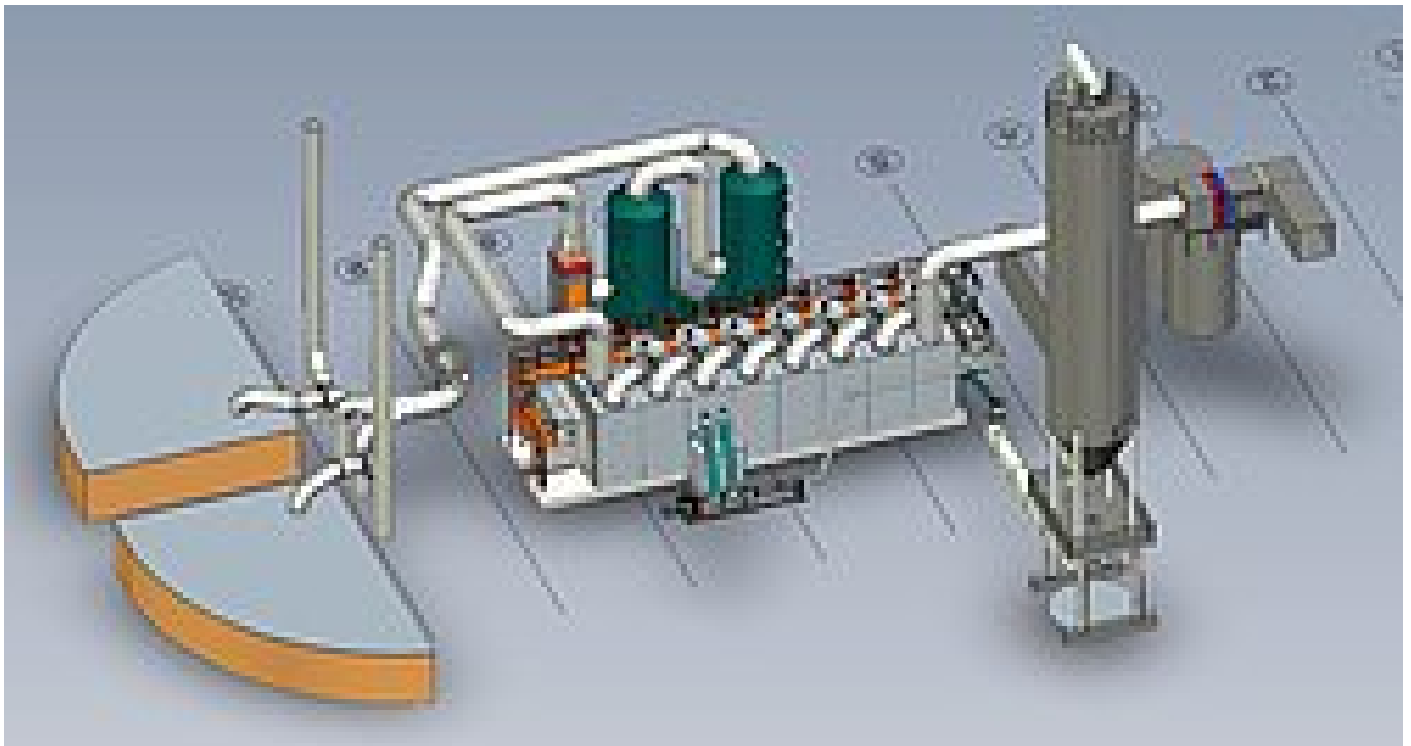
Erlangen decides in favour of HUBER technology for sewage sludge drying

Convincing belt drying solution for sewage sludge

At the beginning of 2021, HUBER was awarded the contract for the supply of a HUBER Belt Dryer BT 16 for WWTP Erlangen after an EU-wide public tender. In the run-up to the tender for this advanced sludge treatment project for a volume of 15,700 t/a, several processes were investigated.

These were:

- Solar Sewage Sludge Drying
- Hydrothermal carbonisation
- Belt drying



Sludge drying plant with HUBER Belt Dryer BT with dry material silo and effluent cleaning

The decision was made in favour of the belt drying option, as this drying process allows the sewage sludge to be dried continuously to $\geq 90\%$ DR. The thermal energy demand of the drying plant is ensured 100% by renewable energy from the existing combined heat and power system of the sewage treatment works as well as from a combination of PV systems and heat recovery using high-temperature heat pumps. The electrical energy needed for belt drying is also generated 100% by renewable energy from digester gas converted into electricity in the combined heat and power plant.

The sewage sludge, dewatered to approx. 28% DR, can be temporarily stored in the existing sludge silo and discharged via screw conveyors into the feed hopper of the thick sludge pump. The eccentric screw pump conveys the sludge into the extruder of the dryer. An inline inlet DR measurement is installed in the sludge line to continuously measure and record the DR content of the dewatered sludge. Based on the measured values, the drying plant is automatically and optimally adjusted to the sludge currently being fed. In the extruder itself, the sludge is pressed through a die and the sludge "spaghetti" are then fed onto the upper belt of the dryer, which ensures high permeability for the dryer air flowing through. The upper dryer belt transports the fed sludge once in longitudinal direction through the dryer. In the process, the heated dryer air flows through the belt and through the sludge lying on the belt from bottom to top and dries both. At the end of the belt, the sludge falls into the transfer box, is then evenly distributed on the lower belt and transported through the dryer again in the opposite direction. In this process, the sludge is further dried to the required 90% DR. The DR and temperature measurement installed at the end of the lower belt continuously monitors the moisture and temperature of the dried sludge and adjusts the control of the dryer fully automatically. This ensures that the required degree of drying is reliably maintained.

The dried sewage sludge is then transported via an angular bucket elevator into a dry material silo. From there, the dried sludge granulate is transported by silo vehicles to the thermal utilisation plant.

The exhaust air is cleaned in an acidic and a basic scrubber and then fed into a biofilter.

Related Products:

- [HUBER Belt Dryer BT](#)

Related Solutions:

- [Medium-Temperature Belt Dryers](#)
- [HUBER Solutions for efficient Sludge Treatment](#)

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