BELT DRYER SCHAFFHAUSEN (CH)

Reference Description

SEVAR
Drying Technologies

BELT DRYER
BD 3000/5

Chamber 1-3 of Belt Dryer BD 3000/5 with horizontal chemical scrubber

Combined inlet and outlet chamber with outlet screw cpnveyor

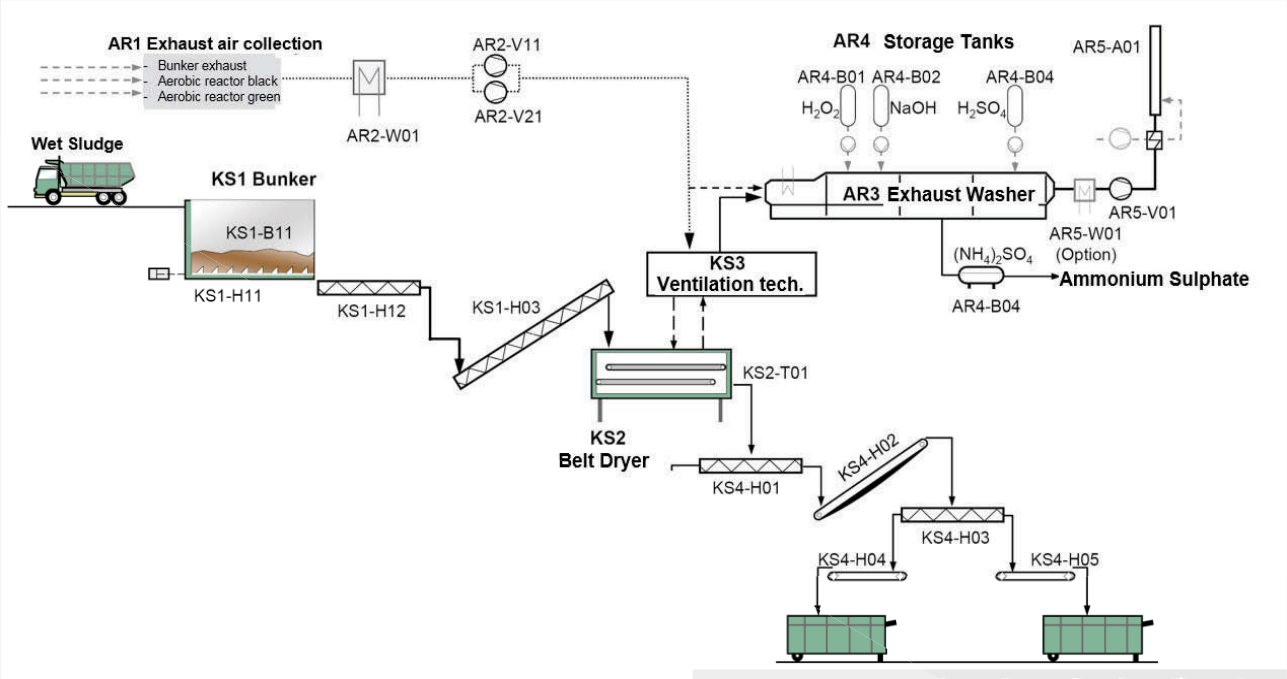
Dried sewage sludge

In 2009 WWTP Assocation Schaffhausen, Switzerland has decided to renew their Waste treatment plant KBA, Kehrichtbehandlungsanlage. In addition to the renewal of the mechanical-biological treatment of domestic and commercial, organic waste and garden waste, a sewage sludge drying plant has been built.

By the fermentation of the aqueous fractions of the waste treatment biogas is produced and converted into electricity by a CHP unit. The cooling water (95/75 °C) of CHP gas engine (600 kWel) is used for the indirect heating of the belt dryer through series of internal heat exchangers to fully dry the municipal sludge up to 90% DS. The exhaust gas of the CHP is converted to steam for other usage. The residual heat of the exhaust gas is used for preheating of the fresh drying air (70/50 °C).

Haarslev Industries received an order to supply a drying plant with a throughput 8000 t/a of municipal sludge at 30% dry solids content. Sludge from neighbouring WWTPs is delivered to a 40 m3 reception bunker. The belt dryer BD3000/5 with five drying modules is capable to evaporate minimum 700 kg/h of water. The sludge is pumped with an eccentric screw pump to the dosing unit of the belt dryer and evenly spread over the 3 m wide belt. The dried sewage sludge which has a granular shape is finally transported via a screw conveyor, stored in containers and later incinerated in a regional cement factory. The humid exhaust air of the belt dryer is cleaned passing through a chemical scrubber. The plant does not produce any condensate.

FUNCTIONAL PRINCIPLE OF THE SLUDGE TREATMENT PLANT:



Source: Process flow of consulting engineers

TECHNICAL SPECIFICATION:

Scope of supply:	Belt Dryer BD 3000/5, conveyinf technology, scrubbers
Type of drying:	Full-drying
Heating source:	Indirect Heating: Hot water of CHP [95/75 °C], Drying temperature in the range of 75 - 85 °C
Material:	Digested, dewatered municipal sewage sludge
DS input:	> 28%
DS output:	80-95%
Throughput:	8,000 t/a (1,000 kg/h)
Water evaporation:	700 kg H_2O/h
Operating hours:	24 h/d, fully automatic
Commissioning:	2012

SEVAR AG emerged in 2020 from the environmental technology division of Haarslev Industries A/S. The over 30 years proven **technology of belt drying** is continued under the already well-known name SEVAR with a motivated team. The young German company with headquarters and production near Karlsruhe is supported by an international network of partners and agents.

SEVAR designs and manufactures plants for the thermal treatment of **municipal and industrial sewage sludge**, fermentation residues and wood residues. The treatment of the humid exhaust air resulting from the drying process with condensation and odour treatment is also considered. Reference plants are available for inspection worldwide.

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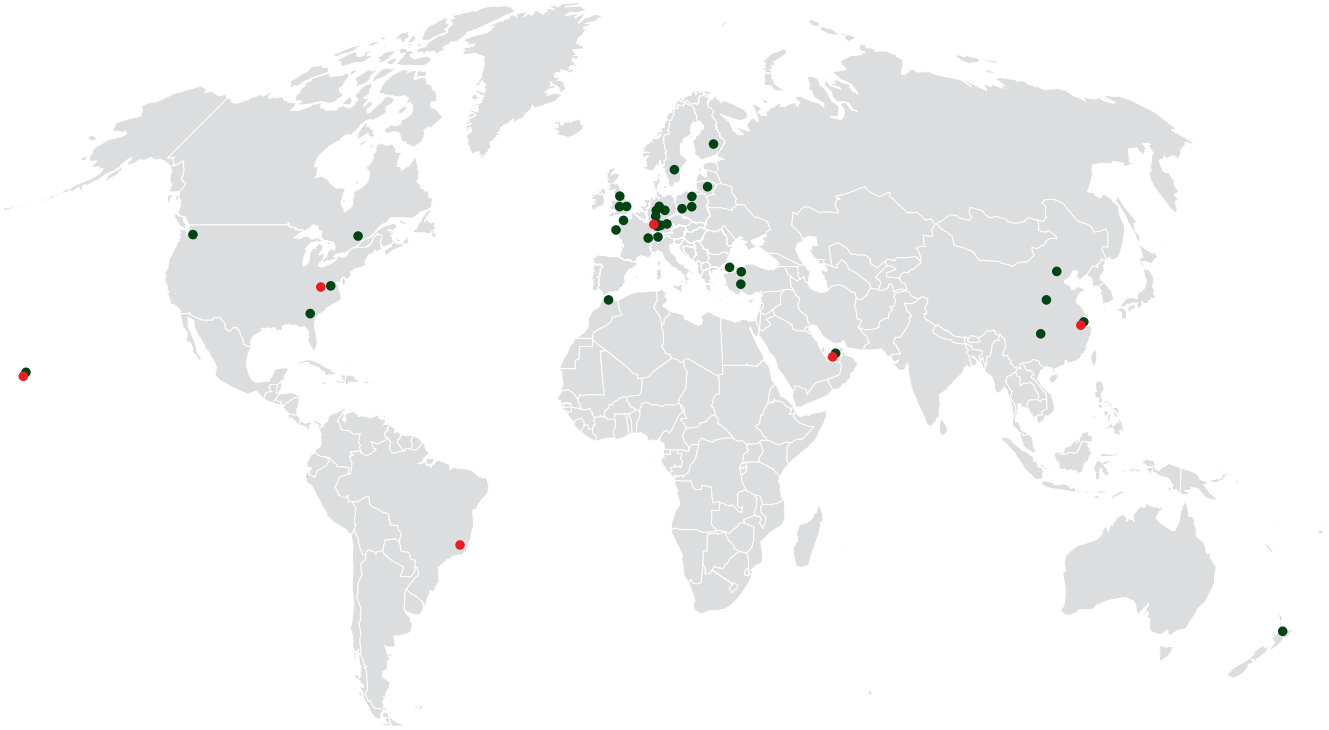

References and locations worldwide

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