



Sludge treatment plant Luzern, Switzerland

Sludge treatment plant Buholz-Luzern

For environmental control of the residual in Buholz, the “Gemeindeverband für Abwasserreinigung Luzern und Umgebung”, Switzerland built in 1993/1994 a sludge treatment plant consisting of mechanical dewatering, thermal drying and incineration. Both the sludge and the screenings and residual grits are incinerated.

The new sludge treatment concept contributes heavily to the safety of sludge waste removal.

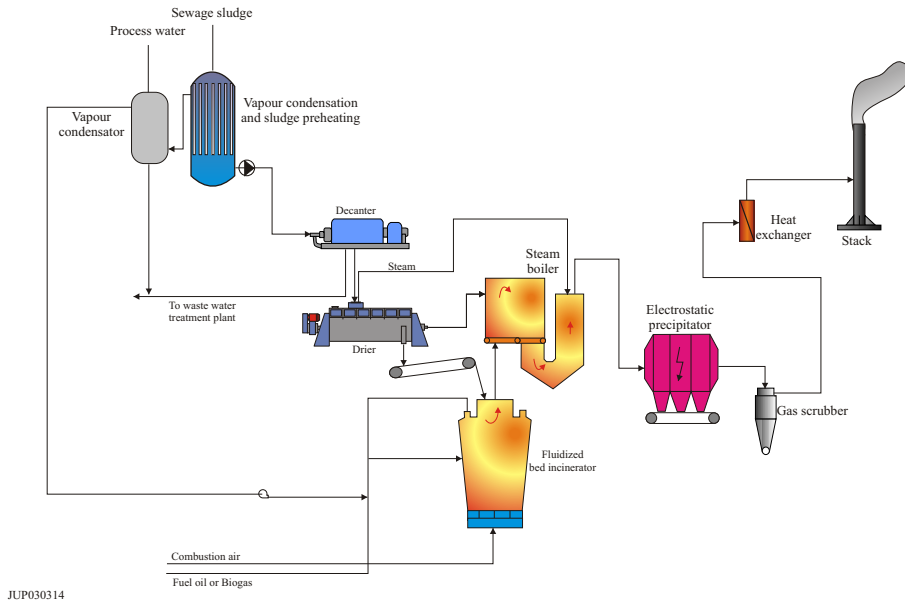
For environmental reasons the sludge will be thermally dried and incinerated according to the directives within sludge regulations.

Haarslev Industries
Atlas Stord and Haarslev merged to Haarslev Industries in

2006. Over 50 years experience as a supplier of industrial thermal drying units made us to a competent partner.

The applications can be found in the range of the fishmeal industries, in the handling of animal by-products and for the drying process of industrial and municipal sludge. In addition they find an application in the drying process of biomass and in breweries and distilleries.

Flow Diagram of the Sludge Treatment in Buholz-Luzern



Plant data

Total plant capacity: 172 t wet sludge/day

Sludge dewatering

- 2 countercurrent solid bowl centrifuges
throughput capacity each: 30 m³/h
- Dry substance content before centrifuge: 4%
- Dry substance content after centrifuge: 25%

Sludge drying

- 1 disc dryer: TST-70R
- Heating surface: 250 m²
- Throughput capacity: max. 7,600 kg/h
- Dry substance content before dryer: 25%
- Dry substance content after dryer: 50%
- Installed driving power: 132 kW

Incineration

- 1 fluidised bed incinerator
- Combustion temperature: 850° C
- Start-up burner: 2.9 MW
- Burner air fan: 8,500 Nm³/h
- Throughput capacity: max. 7,600 kg/h
- Sludge: max. 3,600 kg/h, 50% DS
- Rakings: max. 1,000 kg/h, 50% DS

Steam generation

- 1 large volume boiler with dual-fuel burner
- Fuel: Natural gas or fuel oil
- Combustion capacity: 8.9 MW
- Steam generation: 14 t/h / 10 bar / 180° C

Clean gas values of flue gas cleaning

(Standard conditions, dry, 11 % O₂, according to the Schweizer Luftreinhalteverordnung opf Febr. 1992)

- SO₂ ≤ 50 mg/m³
- CO ≤ 50 mg/m³
- HCl ≤ 20 mg/m³
- Hg ≤ 0,1 mg/m³
- NO_x ≤ 80 mg/m³
- Dust ≤ 10 mg/m³
- HF ≤ 2 mg/m³

Sludge treatment plant

- Starting-up: 1994
- Operating period: ca. 6,000 h/a

We reserve the right to alter the specifications at any time without prior notice.



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