HUBER Solutions for Slaughterhouses and Meat Processing Industry

- Customized solutions from one source
- Longtime experience in industrial wastewater treatment
- Well-proven products

Besides large slaughterhouses and meat packing companies, smaller butcheries are also among our customers.

Wastewater of this kind of industry contains high freights of fat, solids, BOD and COD. Heavy pollution surcharges must be paid for such freights. For this reason it is often economical to reduce the freights on site to such an extent that the pre-treated wastewater can be discharged into municipal sewers without surcharges or directly into receiving waters.

In cooperation with our clients we successfully develop and implement customized solutions for their specific wastewater and waste problems.

Requirements depend on business size, wastewater flow and freight:

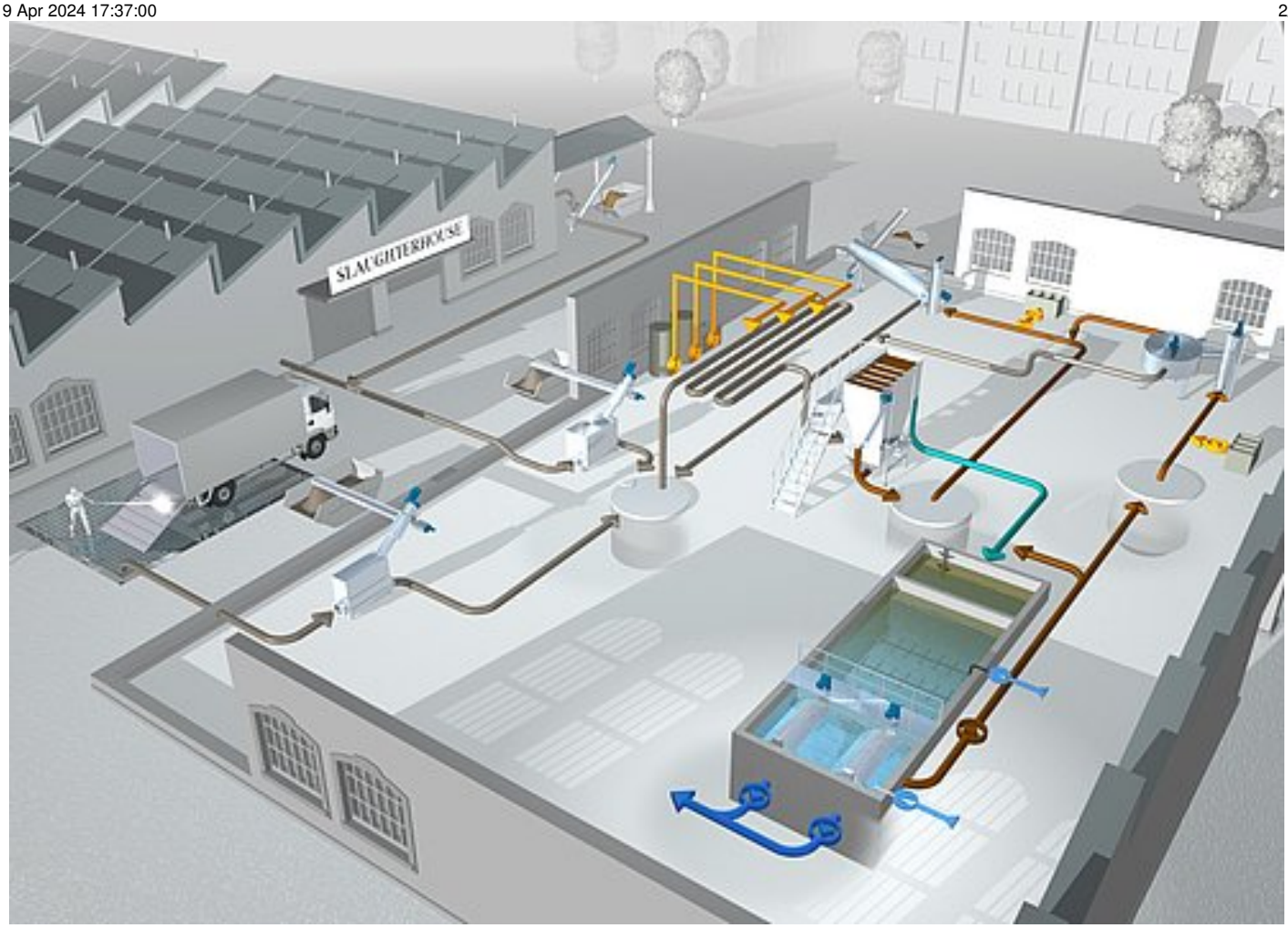
SMALL AND MIDDLE-SIZE SLAUGHTERHOUSES AND BUTCHERIES

- Requirement: Reduction of grease and solids
- Solution: Screening followed by flotation
- Reduction rates: grease: 80 - 90 % ; solids: 85 - 90 % ; BOD_5/COD: 40 - 70 %

BIG MEAT PROCESSING FACTORIES AND SLAUGHTERHOUSES

- Requirement: Elimination of grease, solids and BOD_5/COD
- Solution: Screening, precipitation / flocculation and flotation
- Reduction rates: grease: 90 - 98 % ; solids: 90 - 96 % ; BOD_5/COD: 80 - 90 %
- Sludge dewatering to 20 - 35 % DS

Systems concept



Click on the image to get a detailed, interactive view with additional information and links.

Process

Wastewater from livestock vehicle washing contains not only faecal matter, but also straw and saw dust. We remove such solids with our Screw Screen. The screenings are washed, in order to return faecal matter into the wastewater, and then dewatered and compacted to a solids concentration of at least 35 %DS; they can be incinerated as solid waste.

Where cattle are slaughtered, 35 to 50 kg of paunch waste is generated per animal; it has a water content of about 90 %. Our Coarse Solids Compactor reduces its volume by 50 – 60 % and increases its solids concentration to 20 – 40 %DS.

Wastewater from the butchery contains much blood and fat. We pre-treat this flow with our Wedge Wire Screen; the wedge wires usually have a spacing of 1 mm. After intermediate storage for flow and freight equalization, we treat the wastewater further in a HUBER Dissolved Air Flotation Plant (DAF) . Depending on the specific requirements, the wastewater is first chemically conditioned (by precipitation, coagulation, flocculation and/or neutralization) within a tubular reactor. The DAF effluent can be discharged into the municipal sewer.

For further full-biological treatment we provide a HUBER Membrane Bio-Reactor. Its effluent can be directly discharged into receiving waters. The permeate effluent is of outstanding quality and virtually disinfected, also permitting its reuse as process water.

Waste activated sludge, consisting of biomass generated by biological treatment, is concentrated in our Disc Thickener and then blended with the already thickened flotate sludge from the DAF, mainly containing fat and coagulated blood. The blended sludge is then dewatered in our Screw Press. The dewatered sludge cake and the compacted screenings from the wedge wire screen are preferably supplied to a biogas plant in order to increase its gas production.

When we implement our solutions, we also provide our well-proven HUBER stainless steel components, e.g. Screw Conveyors or Manhole Covers.

Case Studies

- Sludge Dewatering in Poultry Slaughterhouses – a Screw Press Case Study
- HUBER applications in poultry slaughterhouse Süddeutsche Truthahn AG
- A gourmet meat processing plant upgrading their onsite effluent treatment plant - a Dissolved Air Flotation Plant case study

Downloads

Brochure wastewater treatment in meat processing industry and slaughterhouses [pdf, 1.48 MB]

Photos

Video: Wastewater treatment in meat processing industry

https://www.youtube.com/watch?v=HvwV0BaLd68

Products

- HUBER Fine Screen ROTAMAT® Ro1
- HUBER Micro Strainer ROTAMAT® Ro9
- HUBER Screenings Compactor Ro7
- HUBER Dissolved Air Flotation Plant HDF
- HUBER Disc Thickener S-DISC
- HUBER Screw Press S-PRESS
- HUBER Screw Conveyor Ro8 / Ro8 T

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