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HUBER applications in poultry slaughterhouse Süddeutsche Truthahn AG

The turkey slaughterhouse Süddeutsche Truthahn AG was built in Ampfing in 2002. With 500 employees and 200 contractual fatteners, the independent Süddeutsche Truthahn AG generates an annual turnover of more than 170 million euros.

The slaughterhouse Süddeutsche Truthahn AG produces approx. 800 m³ of wastewater daily. This wastewater has already been collected in the production building and treated in the wastewater building with a preliminary screen (curved screen) and a flotation system and discharged to the adjacent wastewater treatment plant. Due to continuous expansion of the production, the existing machine technology could no longer meet the discharge conditions required by the municipality. In addition, a high cleaning and maintenance effort was necessary. Therefore, Süddeutsche Truthahn AG decided to renew the complete wastewater treatment plant in order to be able to reliably and permanently comply with the required inlet conditions.



 $HUBER\ Drum\ Screen\ RoMesh @\ 3\ and\ HUBER\ Longitudinal\ Grit\ Trap\ ROTAMAT @\ Ro6\ 30\ with\ integrated\ grease\ paddle$



Discharge from the fat separation



HUBER Dissolved Air Flotation Plant HDF10 with chemical treatment stage

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The collected wastewater from the production will continue to be discharged by gravity to the existing pump shafts. In each of these shafts a feed pump has been installed. One pump is used to feed the screening plant, the other to circulate and agitate the solids. A HUBER Drum Screen RoMesh[®] 3 with 3 mm perforated plate and an internal and external spray nozzle bar is used as screening system. This is mounted on a base frame to direct the effluent directly into the downstream HUBER Longitudinal Grit Trap ROTAMAT[®] Ro6 30. The grit trap is equipped with paddles to remove floating materials (e.g. free grease). The sediments (grit, stomach pebbles) are transported into a container by a discharge screw conveyor. The mechanically cleaned wastewater then flows by gravity into another pump shaft and from there into an agitated mixing and equalising tank (approx. 900 m³). This tank not only serves to homogenise the wastewater but also functions as a safety in case of an accident or for carrying out maintenance work on the wastewater system (buffering of a whole daily quantity).

From the mixing and equalising tank a dry-installed centrifugal pump transfers the wastewater via a tubular flocculator to the HUBER Dissolved Air Flotation Plant HDF 10. In the tube flocculator, precipitant (ferric III chloride) and polymer are dosed and neutralised. In the HUBER Dissolved Air Flotation Plant HDF 10 the produced flocs are floated with micro-bubbles (approx. 50µm) and are pushed into the flotate sludge tank by a scraper. The flotate sludge and settling solids are removed at regular intervals by the flotate pump. The disposal route for the flotate sludge is still via a biogas plant.

The clear water flows by gravity to another pump shaft and is pumped on to the sewage treatment plant. Later on, a part of the clear effluent from the flotation plant is planned to be reused. However, this requires hygienisation, which will be retrofitted at a later date.

The tube flocculator and the switchboard and control system have already been prepared for easy retrofitting of the HUBER chemical dosing system DIGIT-DOSE.

In addition to the machines, HUBER SE also supplied the complete piping, the mechanical and electrical installation as well as the switchboard and control system. The plant technology was successfully commissioned in May 2020.

Process parameters / inlet values:

Nominal flow 60 m³/h Maximum flow 80 m³/h 1000 m³/d Daily flow рΗ 6-8 COD 7000 mg/l Conductivity 3.02 mS/cm TR 0.71 % NH₄-N 72.6 mg/l PO₄-P 47.6 mg/l

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