

SLUDGE DEWATERING in the meat-processing industry

Marmy Viande en Gros SA is one of the largest slaughterhouses in Switzerland. Correspondingly large is the quantity of waste water. Recently for the dewatering of approximately 12.000 m³ sludge/per year the ACAT screw press AS 0705 S is used.



Marmy Viande en Gros SA situated in Estavayer-le-Lac is one of the largest slaughterhouses in Switzerland. In 1990 the slaughterhouse started and originally there was only a mechanical pre-treatment for the waste water to remove coarse material. In 2000 the company was enlarged. Since this time up to 2,200 cattle are processed per week. With the expansion it was also necessary to enlarge the waste water treatment system.

Since then at Marmy Viande the intrusive material has been removed out of the slaughterhouse waste with a fine screen with a width of one millimeter. The pretreated waste water is collected in a buffer container. Via a flocculator, where flocculating agents are added to separate sludge from water, it is transported to a storage tank. The separated water is piped to the municipal waste water treatment plant of Estavayer-le-Lac.

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The installation and commissioning was completed within four days, according to the customer's request

The sludge from the storage tank is dewatered with a screw press and the filtrate water is returned to the buffer container. When the existing screw press needed cost-intensive repair services on the drive unit, Marmy Viande gathered information for the latest technologies.

The first meeting between Marmy Viande and ACAT was at the beginning of 2011. The conversation was followed by a test dewatering with an ACAT screw press.

The ACAT- screw press: Unbeatable in cost/benefit calculation

With a trial it was possible to demonstrate the clear advantages of the ACAT screw press to the existing screw press. Starting with a dry substance content of the thin sludge of 4,9% the dewatering values achieved more than 40% dry substance without any optimization. That was nearly a doubling of the dewatering values which were achieved with the existing system and the filtrate was visually free of solids.

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An additional advantage of the ACAT screw press is the extremely low water consumption. In a cycle of four to six hours the screen basket is automatically cleaned with process water and the water consumption is about 300 l per wash.

Finally the profitability analysis was the decisive factor to buy the ACAT screw press Type AS 0705 S with a throughput of 320 kg dry substance/h or 10 m³/h. The ordered volume included also the adaption of the existing plant to the new system and a new control unit for a fully automated sludge drainage system.

After an initial delay caused by prolonged periods of very frosty weather, the system was installed and it was put into operation at the beginning of March 2012. To keep the running operation of the slaughterhouse a mobile sludge dewatering system was used. The installation and commissioning was completed within four days, according to the customer's requests.

The guaranteed performance concerning throughput and degree of drainage was achieved. We wish to thank them for this order and we would like to express special thanks to Mr. Moret, Head of the waste water treatment, for his support which contributed significantly to the smooth implementation of this project.



Unloading from the truck, to the hall for installation