




**INDUSTRIAL  
SOLUTIONS**



**Practical Report**  
**Butchers operation**

# **All about sausages ... or something else?**

*A butchers operation in North Hessen produces not only meat and sausage products by the linear metre but also highly loaded wastewater. For Werner Sauer, owner of the traditional business, this is something about which one cannot care enough...*



Report & Photos:  
Uwe S. Meschede

For the former purely poultry farm the meat from cackling bipeds still plays an important role. Yet even here Sauer's sensitive philosophy has an effect: battery farming is not a topic; free-range is an absolute must.



*Unrestrained cackling of innumerable hens welcomes the visitor on entering the meat processing business.*

## **The production of food and of meat and sausage products in particular still always means that wastewater is produced endlessly. And it is not without reason that the authorities keep a sharp eye on direct and indirect dischargers...**

Have you ever heard anything about Heimarshausen? No? Completely without reason one would never lose one's way in this 100 soul community on the edge of Naumberg/Hessen. Either one takes a holiday for a couple of days in the very snug country hotel which, in the middle of the Habichtswald nature park, promises "Relaxing days far away from noise and hectic" or makes a visit to the Werner Sauer poultry breeding and butchery business, situated a little way outside the mini-locality... . Already on route from the village to the business premises unrestrained cackling unmistakably indicates the way. Enter the premises and the background noise swells up further and hundreds, no, thousands of hens

greet the unknown visitor with nervous glances and a racket which reminds you a little of the threatening gestures of extraterrestrial visitors. Happy that a high fence separates the wild horde of hens from the peaceful outside world and having arrived safely in one of the two operations buildings the bustling activity of this successful business makes itself plain to the visitor: people in white overalls and rubber aprons move huge mountains of meat from here to there, butchers assistants cut schnitzels and goulash for armies of hungry consumers and masters of their profession produce lengths of sausage which appear to reach from here to the equator. Werner Sauer, head of the complete



*Werner Sauer and his more than 60 employees produce not only meat and sausage products by the tonne (Photo below), but also endless amounts of wastewater, which has to be discharged in an environmentally friendly fashion into the municipal sewer system.*



organisation, explains: 10 tonnes of meat are processed every day in this middleclass business by over 60 employees into sausages, ham, schnitzels and roulades and passed on to the consumer via an own marketing organisation: seven refrigerator vehicles and a steadily growing fleet of sales vehicles supply both canteens and also – directly on weekly markets – private consumers in the greater Kassel area.

That with the production of such quantities of meat an equally large amounts of wastewater with high pollution loads are produced is only natural: depending on the season the influent values of COD lie between 1,500 and 3,300 mg/l. The discharge of the wastewater into the municipal sewer system is thus not completely without problem as is, for example, that for domestic wastewater with an average COD value of ca. 80 mg/l – the reason for high wastewater charges.

In 2002 the point was reached where Werner Sauer went to the local authorities for advice. The question was, "How can the continuously increasing wastewater charges be reduced to an acceptable level?" The recommendation from the official wastewater specialists: reduce the discharge and effluent values by treatment before discharge into the municipal sewer network. The Thüringer firm of BBW Abwassertechnik Weissensee was finally

tasked to plan an appropriate wastewater treatment plant. The target: classification on the official side into a "more favourable" charge category with the discharge of wastewater into the municipal sewer system. Due to the extreme pollution loads on one hand, and the required effluent values on the other hand, as well as a small as possible dimensioning, the biological stage was designed as high load biological; a complete treatment of the wastewater was not sought. As with the Sauer concern one was concerned with an indirect discharger and the strict dimensioning principles for direct dischargers did not have to be taken into account, Werner Sauer's ideas could be met and the plant conceived and built more compactly. At the beginning of 2004 the necessary pipes and drains were laid from the future location of the wastewater treatment plant up to the production buildings – via the courtyard of the operation and over ca. 80 metres



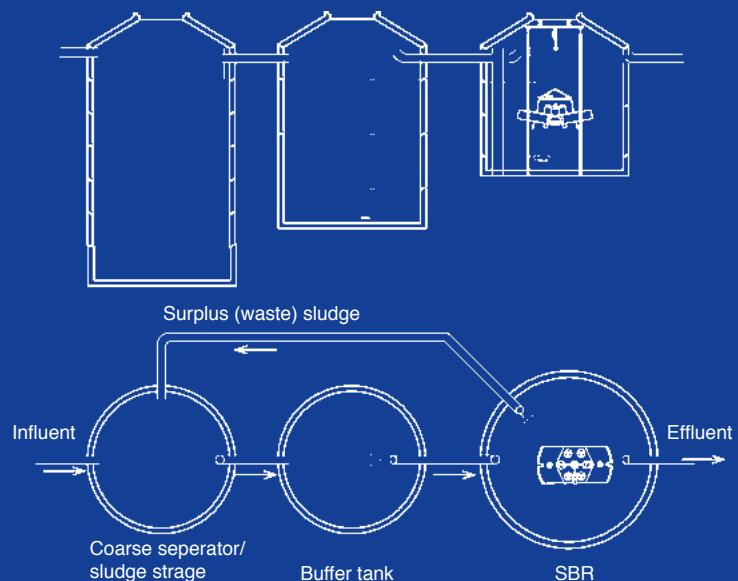


*The three-tank system using the AQUAMAX® XL-1-60 PT in the meadow in front of the butchery operation is barely visible and does not disturb the beauty of the hilly landscape in the slightest. And were it not for the cackling horde of hens behind the back of our photographer, you could almost hear the peace in this idyll!*

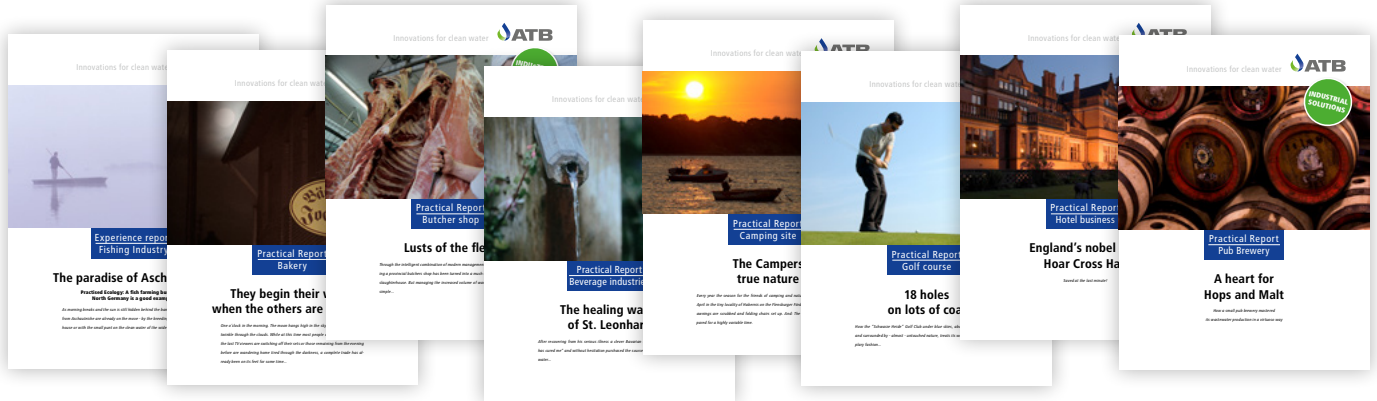
– despite wind, weather and frost. BBW, as manufacturer of the concrete tanks, installed the tanks for the sludge storage, buffering and SBR process in the meadow in front of the operations building and subsequently brought the absolutely newest and future-ensured wastewater treatment technology into operation: AQUAMAX® XL-1-60 PT. The overall development of the structural measures from supervision of works over the assembly of the wastewater treatment technology up to the commissioning of the plant, inclusive of ca. three weeks delay due to ground frost, took about six weeks. Commissioning took place in March 2004. After a test and adjustment phase running over several weeks the plant today treats all the wastewater produced to the complete satisfaction – of BBW, of Werner Sauer and, not the least, of the authorities.

## The Butchers operation project at a glance:

|                                       |   |
|---------------------------------------|---|
| <b>Owner</b>                          | Fleisch- und Wurstwaren Werner Sauer                              |
| <b>Project management</b>             | BBW Weissensee  |
| <b>Plant size</b>                     | AQUAMAX® XL-1-60 PT   |
| <b>Peculiarities</b>                  | Indirect discharger   |
| <b>Cost of plant technology</b>       | Ca. 11.000,- €  |
| <b>Comissioning</b>                   | March 2004  |
| <b>Required treatment performance</b> | Discharge into the municipal wastewater network<br>COD < 600 mg/l |
| <b>Effluent values</b>                | COD < 200 mg/l  |



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