

4.2

MEAT INDUSTRY



Water and wastewater
technology for slaughter
and meat-processing
businesses

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Water and wastewater technology for slaughter and meat-processing businesses

Wastewater quality and process concepts

Slaughter and meat-processing businesses mainly produce production wastewater, cooling water and sanitary wastewater from various areas of origin. Cost and energy-intensive treatment is required due to their high pollutant load (COD, BOD5, greases, protein and solids). The wastewater load is increased still further by the use of cleaning products and disinfectants.

Wastewater treatment requirements vary depending on the size of the business and the wastewater quantity. In the normal case the pretreated production wastewater from slaughter and meat-processing businesses is fed to a local municipal, mechanical-biological waste treatment plant. The organic substances in the above-named wastewater are readily biologically degradable and can therefore be treated successfully together with household wastewater. In-house pretreatment of the production wastewater with subsequent direct discharge into a receiving water is only recommended in justified exceptional cases. The discharge conditions to be expected in this case in Germany are defined by the minimum requirements in accordance with the wastewater regulations (Abwasserverordnung - AbwV) Annex 10 for the direct discharge of wastewater from meat industry businesses.

The following **process steps** are used generally – depending on the size of the operation – for the treatment of **wastewater from the meat-processing industry**:

- Mechanical wastewater pretreatment
- Grease separation/flotation
- Storage and homogenisation
- Biological treatment
 - Anaerobic wastewater treatment
 - Aerobic wastewater treatment (SBR/MBR plants)
- Filtration
- Sludge treatment and energy generation from biogas
- Waste air treatment
- Automation (E-I&C technology, process and remote monitoring, etc.)

We have the optimum solution

The **wks group** offers **turnkey, integrated solutions** and **individual concepts** for water and wastewater treatment in the **meat-processing industry**.

The optimum process technology is selected, taking into consideration the operational requirements, the need to minimise disposal quantities and energy consumption and/or to generate energy. This technology can be used for the respective wastewater composition and results in the required discharge limits.

Process engineering, mechanical engineering and automation: The **wks group** of companies unites all technical know-how required to implement technical industrial water treatment tasks.

From individual advice, development, to production, installation, commissioning, through to maintenance/service and optimisation, we work with strong partners.

The **wks group** supplies **products and plant components from its own production facility**. Here the focus is on fittings, pipes and vessels made of stainless steel. Experienced engineers, and specialised fitters and welders ensure effective project completion, from the production of individual products through to mechanical equipment for complete, turnkey plants. In all projects we guarantee reliability, on schedule completion and flexibility.



Range of services

- Turnkey plant construction
- Consulting and planning
- Process engineering
- Construction work
- Mechanical engineering
- Automation
- Installation
- Maintenance and service
- Training
- Optimisation
- Operation management

Range of products

- Filter screens
- Mixing and balancing tanks (with aeration)
- Grease separators/flotation plants with/without chemical stage
- Anaerobic pretreatment of highly loaded partial flows
- Energy generation from biogas
- Aerobic biological treatment (incl. nitrification and denitrification)
- Chemical P precipitation
- Flocculation filtration
- Chemical metering and storage
- Sludge treatment
 - Sludge dehydration
 - Sludge thickening
 - Sludge drying



Our experience – your advantage

Our know-how acquired from almost **25 years' of successful water industry plant construction**, our knowledge, our technologies and innovations in **industrial water treatment** are the **guarantor** for an important part of **your economic business success!**

We develop and offer cross-product and cross-system solutions for new build, reconstruction and optimisation of **water and wastewater plants for slaughter and meat-processing businesses.**

Your advantage: Our expertise in processing and mechanical engineering, automation systems, products and plants – we have precisely what you need or develop it for you!



Products and systems

WATER	Equipment components	Waterworks	Drinking water treatment	Water storage plants	
	Screens	Flushing equipment	Weirs	Scumboards	
WASTE WATER	Flow controllers	Valves			
	Stormwater overflow tanks	Stormwater treatment plants	Combined waste- and floodwater	Special structures for airports	
	Precipitants with metering stations	SBR clean water decanters	SBR vertical agitators	Floating sludge decanters	Turbid water
WASTE WATER TREATMENT	Municipal wastewater treatment plants	Industrial wastewater treatment plants	Reconstruction and optimisation	SBR plants	TRIUNO compact wastewater treatment plants
	Equipment components	Sludge treatment / digestion			
ENERGY	PLC technology / process control technology	Complete electrical/ I&C systems	Remote control (telecontrol) systems	Evaluation / logging	Web-based camera system
	Process control loop block	Outdoor cabinet systems	Monitoring small wastewater treatment plants	Energy data recording	
	Testing explosion protection	Energy monitoring	Medium-voltage switching autorisation		
AUTO-MATION					