



# The Best of German Engineering

Encyclopaedia  
of German Mechanical Engineering





Dr. Volker Oles, Gottlieb Hupfer (CEO), Peter Leyendecker and Gerhard Häring (f.l.t.r.) manage EnviroChemie GmbH; a look at the production (bottom)



Plant for chemical-physical wastewater treatment (top); customers include major dairies (centre); view of the research and development (bottom)

## ENVIROCHEMIE

EnviroChemie GmbH supplies energy-saving and resource-efficient system solutions for the industry worldwide. With around 550 systems delivered each year and more than 10,000 customers, EnviroChemie is a leader in decentralized industry wastewater treatment in Germany and other European countries. Products as well as technologies used from the company serve the industrial water treatment, water recycling and wastewater treatment. EnviroChemie provides, as a first step, advice, then designs, builds and operates the facilities. The comprehensive range of services extends over the entire operating time of the facilities.

Laboratory and pilot plant trials are conducted for the basic evaluation. Configurations are then made on the basis of this evaluation. The company's own R&D department redevelops or further develops systems within the context of customer orders, research collaborations and for their own plant development. With Envopur, EnviroChemie introduced a highly innovative membrane method for recovering ceramic from grinding water. A high degree of innovation is shown in Flomar high-performance flotation plants with special air saturation for effective cleaning of heavily polluted industrial wastewater. These systems are used, for example, in the chipboard industry. In addition to the food industry and the chemical and pharmaceutical industries, the automotive and metal industries provide the majority of EnviroChemie's customers. Demand is particularly strong for biological



EnviroModul modular plant systems for decentralized water and wastewater treatment

## MILESTONES

**1976** Company founded in Switzerland

**1987** Company founded in Germany and company's headquarters expanded

**2000** Companies founded in Poland and Russia

**2001** Introduction of the EnviroDTS product line; systems for biotechnology and healthcare facilities

**2002** Companies founded in Brazil and Romania

**2006** Introduction of the EnviroFALK product line of process water compact units

**2010** Integration of AWATEC AG, Switzerland; branch in Sweden is founded

**2012** Introduction of the innovation EnviModul – modular plant systems; acquisition of Dr. Baer Engineering GmbH

wastewater treatment processes which recover energy from wastewater in the form of biogas and/or thermal energy, as well as modular plant systems of the EnviModul series. Apart from traditional industrial sectors, the products are also used in research facilities, the healthcare sector (wastewater sterilization and decontamination), transportation (e.g. internal tank cleaning, recycling of aircraft de-icing fluid) and in commercial kitchens (treatment of fatty kitchen wastewater).

Branches of EnviroChemie are located at four locations in Germany as well as in Switzerland, Poland, Russia, the Netherlands, Bulgaria, Romania and Sweden. In addition, there is a central agency in Rio de Janeiro. The company was founded at Lake Zurich in Switzerland in 1976. Since 1987, it has been headquartered in Rossendorf near Darmstadt. Here EnviroChemie has 140 employees (2012), worldwide there are 350 with an engineer ratio of 70%. In 2011, it generated a turnover of 75 million euros.

## FACTS AND FIGURES

**Industry:** process engineering machinery and equipment

**Products:** plants for industrial water treatment, water recycling and wastewater treatment

## BLUE COMPETENCE: ENERGY FROM WASTEWATER

### BLUECOMPETENCE

Alliance Member

Partner of the Engineering Industry Sustainability Initiative

Sometimes you just have to look closely. This was also the case with Biomar, a development that is based on entirely natural processes. Biomar has basically copied the metabolic system of cows. In several steps – similar to a cow's stomach – food wastewater is treated. In this way, water, CO<sub>2</sub> and biogas are produced. The starting point for this development was that a Swedish dairy

produced large amounts of whey each day, which arises as a waste product in the manufacture of dairy products. The high-energy by-product had to be disposed of, partly at great expense. EnviroChemie developed a concept with which the non-recyclable organic load in the whey is converted along with other industrial wastewater into energy-rich biogas by means of anaerobic wastewater treatment: Biomar. In addition, a part of the thermal energy stored in the wastewater is recovered via a heat exchanger and heat pump. EnviroChemie was awarded the "Energy Globe Award 2012" for this project.

**Customer industries:** almost all industry sectors, research institutes, healthcare, transportation, commercial kitchens

**Market position:** leader in the decentralized industry wastewater treatment in Germany and other European countries

**Turnover:** 75m euros (2011)

**Employees:** 350 worldwide, including 140 in Rossendorf (2012)

**Locations:** Germany, Switzerland, Poland, Russia, the Netherlands, Bulgaria, Romania, Sweden, Brazil

**Export ratio:** 60%

**Founded:** 1976, Switzerland

**Member of VDMA since:** 1994

### CONTACT

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»WE DO NOT LEAVE OUR CUSTOMERS ON THEIR OWN WITH THE FACILITIES. ENVIROCHEMIE SEES ITSELF AS A QUALITY SUPPLIER FOR WATER ENGINEERING PLANTS AND ATTACHES PARTICULAR IMPORTANCE TO INNOVATION, DURABILITY AS WELL AS ENERGY- AND RESOURCE-EFFICIENT SOLUTIONS.«

Gottlieb Hupfer, CEO



Insight into EnviModul modular plant systems



At a food manufacturer in Tanzania, process waters are treated physico-chemically and biologically for irrigation

One of the most important industries in the world as a driver of innovation, job creator and representative of Made in Germany: The companies of the German mechanical engineering industry in words and images for the first time.

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