

Press release

April 2015

Hager + Elsässer at Achema 2015, Hall 4.0, Stand A15

Innovations in industrial water treatment

Stuttgart. Hager + Elsässer (H+E) is one of the world's leading solution providers in holistic water management. At Achema 2015 the company will present its process for cleaning and recycling effluent from production plants. With this process H+E is providing industrial companies with a solution to challenges which are arising on the one hand from a growing market for higher quality products and on the other from stricter limit values. With its in-house designed ZLD process, H+E offers a particularly cost-efficient, environmentally friendly and space-saving alternative to conventional treatment technologies, thus optimizing closed-loop water systems for industry.

The new process is in fact a compact and well-conceived combination of processes that enables the creation of material cycles with the aim of achieving effluent-free production. The technology can be used to produce water of all grades from clean to ultra pure in any industry, for example the chemical, mining, petrochemical, power generation, metal processing and food production industries, to name but a few.

Its advantages include the extreme robustness of the system and a significantly reduced energy requirement. The prescribed limit values for water, concentrates/waste, salt concentration, recyclable materials, acids and alkalines can be reliably achieved with this new process. The complete system is also smaller than conventional ZLD

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processes, thus reducing investment costs by around 20 percent. Moreover, the system is constructed in such a way as to significantly reduce the time required for assembly and commissioning.

H+E will also be presenting its optimized AOP process at Achema. AOP is short for Advanced Oxidation Process and describes a process used to treat wastewater streams that are not degradable by means of simple biological processes. This is the case in the paper and pulp industry, for example, where the use of bleaching processes is rising, resulting in more and more recalcitrant residues in wastewater. AOP is also used in the petrochemical industry, where biotoxic substances hinder wastewater treatment. Unlike other solution providers which in such cases utilize total chemical oxidation of poorly degradable substances, H+E uses a combination of chemical and biological processes. Firstly, combined oxidants are utilized to convert the substances into biologically available substances, after which biological filtration (BIOFIT.F) is used to eliminate them cost efficiently. This results in water of a dischargeable quality, meaning that the level of waste products in the water is below the limit set by the authorities. In contrast to AOP treatment processes that use chemicals alone, this combined process reduces ozone input by four fifths, thus the operating costs are lower. At the same time, the process developed by H+E is also more environmentally friendly due to its reduced requirements for ozone and energy. For this reason the Umweltbundesamt, Germany's main environmental protection agency, funded its introduction at a large German paper manufacturing company.

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HAGER + ELSÄSSER

H + E GmbH has had its headquarters in Stuttgart for over 80 years and is a leading manufacturer of plants for industrial process water treatment, ultra pure water treatment and wastewater treatment for a wide range of industries. H+E plants are currently installed in over 160 countries across the globe. In addition to its main location in Stuttgart, H+E also has branches in Dresden (manufacture and production), England, Malaysia, the Philippines, Singapore and Thailand.

AQUARION AG

Headquartered in Switzerland, Aquarion AG is an EPC solution provider offering a comprehensive range of industrial water treatment solutions for many different industries, and constantly incorporates the latest technologies and processes into the solutions it offers.

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See below for photos. All photos are attached to this e-mail in printable quality or can be obtained from the press contact above.



Image 1: Ozone feed line on a large-scale project for the paper industry utilising the new AOP process from HAGER + ELSÄSSER.



Image 2: Vacuum pumps and ozone generator on a large-scale project for the paper industry utilising the new AOP process from HAGER + ELSÄSSER.