

LANXESS makes dimensioning tool for water treatment even more practical

- **Ultrafiltration module added to LewaPlus**
- **Dimensioning tool now includes water library**
- **New cost module calculates expenses for ion exchange**

Cologne – The specialty chemicals company LANXESS has comprehensively updated its LewaPlus design software for the water industry. The dimensioning of reverse osmosis (RO) and ion exchange systems (IX) is now even more practical and user-friendlier. There is also the option to include ultrafiltration (UF) in the planning. The new UF module will be presented for the first time at Aquatech, which will take place from November 5 to 8, 2019, in the Dutch city of Amsterdam.

New UF module for the design of ultrafiltration

Ultrafiltration is used as pretreatment for reverse osmosis – and increasingly for ion exchange resins applications. Around one third of all newly built reverse osmosis systems have upstream ultrafiltration – and the number is rising.

LANXESS is a global distributor of high-quality Gigamem ultrafiltration membranes and systems from French company Polymem, which is based in Toulouse. In order to design complex water treatment systems that also include ultrafiltration technology, LANXESS has now integrated this pretreatment into its software.

Ultrafiltration purifies and disinfects water in a single step. It is an alternative to conventional filtration in water purification and produces filtrate with a water quality that is considerably more consistent. Ultrafiltration often also replaces other conventional treatment techniques as well as microfiltration, as it also removes smaller particles and thus significantly reduces deposits in subsequent process steps. This enables a more stable process.

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Water classification helps with system design

LewaPlus also offers users the option to create their own water library. This is because customers often have only an incomplete water analysis – if they have one at all – when planning their system. With a library, they can then utilize the data that is stored in LewaPlus. “We are planning to expand on the master data to include additional water types. There are even already parameters in place for the quality of seawater from various regions,” explains Dr. Jens Lipnizki, head of Technical Marketing Membranes in the Liquid Purification Technologies (LPT) business unit.

Costs at a glance

At Aquatech, LANXESS will present a new cost module available in LewaPlus. This can be used to determine the investment and operating costs of an ion exchanger system. The investment costs include the cost of installing the system as well as the cost of procuring ion exchange resins. The operating costs comprise expenses for regeneration, water supply and wastewater disposal. A cost forecast helps users to estimate the costs over the course of the system’s planned total service life (total cost of ownership, TCO).

LewaPlus is already being used in 90 countries on six continents, including by Centec, a leading systems provider of technologies for water treatment and degasification that is based in Maintal near Frankfurt am Main. User Bernd Hackmann says that “for many years now, I have been using LewaPlus regularly to design complex water treatment systems for a wide variety of sectors. The option to combine various technologies in the system design is a real advantage. I am already looking forward to the new module because the announced direct cost comparison of the various designs will provide an additional benefit.”

The new calculation options are available in LewaPlus for all ion exchange resins modules, thus enabling a cost comparison of

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various system designs and processes. These expand on the existing cost calculation for RO systems. Using identical calculation parameters makes it possible to carry out a direct comparison of the costs of reverse osmosis and ion exchanger systems. "To our knowledge, this function is unique," says Lipnizki.

Detailed information on products and services can be found at <http://lpt.lanxess.com>. The LewaPlus design software can be downloaded from there free of charge.

LANXESS is a leading specialty chemicals company with sales of EUR 7.2 billion in 2018. The company currently has about 15,400 employees in 33 countries and is represented at 60 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, additives, specialty chemicals and plastics. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World and Europe) and FTSE4Good.

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You can find further information concerning LANXESS chemistry in our WebMagazine at <http://webmagazine.lanxess.com>.

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Image



The intuitive design software LewaPlus is a comprehensive tool for planning and designing an industrial water treatment system and allows the dimensioning of ion exchange- and reverse osmosis systems for a wide variety of unique system configurations, including several one-of-a-kind process configurations that can only be achieved with Lewatit and Lewabrane product technology.

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