

Perform with PerforMem

- Brand-new software from LANXESS for analyzing reverse osmosis
- Helps to localize interference factors in water treatment more easily
- Normalized system data and laboratory data can be displayed in one tool

Cologne – The specialty chemicals company LANXESS has developed a new normalization software for analyzing reverse osmosis. PerforMem automatically imports system data from templates in standard process control systems and quickly normalizes even large volumes of data.

"In addition to system data, laboratory measurements can also be entered and displayed alongside each other. To the best of our knowledge, no other normalization software offers this level of flexibility," says Dr. Jens Lipnizki, head of Technical Marketing Membranes in the Liquid Purification Technologies business unit at LANXESS. "Programs like these are often Excel-based and thus cannot conveniently manage and analyze large volumes of data," says the membrane expert.

PerforMem also provides a much more detailed graphical representation of process data and normalized values. Normalized values can then be converted to various formats for further processing or analysis if necessary.

The easier way to localize interference factors

Whenever membrane processes suffer from falling retention or reduced performance, this could be due to changes in the water quality or temperature, or deposits in the reverse osmosis system. To allow interference factors to be localized more easily, plant operators should continuously document a range of basic parameters such as

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temperature, flow, pressure, yield, and conductivity. It can also be helpful to measure the pressure drop, ideally between the concentrate stages.

This data should be normalized – in other words, set in relation to a standard condition. This allows operators to see whether the impaired performance can be attributed to the reverse osmosis system or altered feed parameters.

Digitalization of plant data is one of the focal points and challenges in today's water management sector. This involves digitalization of not only large-scale plants, but also medium- and small-scale plants. The collection of plant data in a cloud in combination with remote maintenance makes economic sense no matter what size the plant. The data can be used for process optimization and troubleshooting – provided that it can also be analyzed. "This is frequently a weak point because, in practice – meaning, when the water treatment plant is in operation – huge volumes of data are recorded very quickly, but are rarely subject to any kind of analysis," says Lipnizki.

Easy analysis of reverse osmosis with new LANXESS software

The new PerforMem software quickly and accurately calculates current plant and laboratory data in relation to a reference point. This makes it easy to establish whether performance is impaired due to changed feed composition or fouling. If fouling, such as salt deposits, is the problem, countermeasures can be quickly implemented so that the plant can continue to run for as long as possible under optimum conditions.

You can find detailed information about LANXESS products and services for the water treatment industry on the website at lpt.lanxess.com.

LANXESS is a leading specialty chemicals company with sales of EUR 6.8 billion in 2019. The company currently has about 14,300 employees in 33 countries. The core

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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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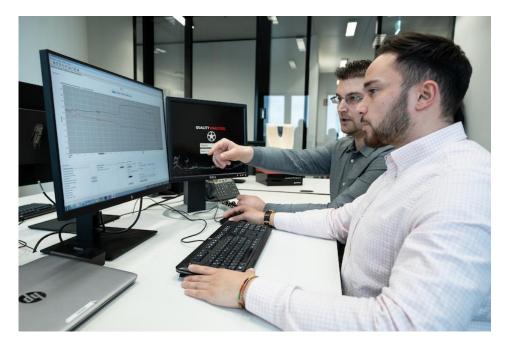
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Image



David Langhals, system manager in the Liquid Purification Technologies business unit at LANXESS, demonstrates functions of the new PerforMem normalization software to his colleague Giuliano Cannavó (right). This program, developed by LANXESS, can be used to evaluate the performance of a reverse osmosis system and quickly identify faults. Photo: LANXESS AG

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