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MALTING PLANT UPGRADE WITH NEW PURON® SUBMERGED MEMBRANE TECHNOLOGY A PROVEN SUCCESS

Koch Membrane Systems (KMS) reports the continued success of 16 PURON[®] submerged modules used by malting company Sobelgra, operating within the largest industrial membrane bioreactor plant in Belgium. As part of a plant upgrade, PURON modules were installed by Belgian contractor Enprotech in 2004, doubling the capacity of the treatment plant while utilizing the existing infrastructure.

The system was engineered by another Belgian company, See:Water. Commenting on the installation, Olaf Hanssen of See:Water said, "The modules have now been in continual operation for 18 months and during that time have provided faultless service and constant superior filtrate quality."

Sobelgra, which produces malt for breweries, is located in Antwerp harbour and is part of the multinational Boortmalt group. The capacity upgrade of the Sobelgra facility makes it the largest independent malting company in Belgium. The expansion meant that the existing conventional wastewater treatment plant also had to be increased. However, due to lack of room in the factory, conventional technology could not be used. PURON modules were selected because they could be installed in the limited available space.

PURON MBR modules are manufactured by Koch Membrane Systems GmbH and are available for purchase from KMS. They significantly improve wastewater quality, while utilizing less space than conventional alternatives. The unique single header design and the extremely effective PURON aeration system ensures optimal solids management, high flow rate and reliable operation while using 50 percent less energy than other MBR systems. The membranes installed at Sobelgra now have a total processing capacity of 2,000 m³/day (0.5 MGD).

The treatment plant consists of three processes: a mechanical pretreatment step, a biological treatment step and a membrane filtration step. After removal of the residual coarser materials from barley processing by means of two curved screens, the wastewater is fed into the biological treatment step of the plant, which consists of two aeration tanks connected in series. In the final

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step, the biologically cleaned water is separated from the activated sludge by means of PURON submerged membrane filtration.

"The membranes have exceeded our expectations and we are very happy with KMS who we view as a valuable supplier and reliable partner for submerged membrane systems," concluded Olaf Hanssen.

About Koch Membrane Systems

Koch Membrane Systems, Inc. has been a global leader in separation and filtration products for more than 30 years. A designer and manufacturer of state-of-the-art membrane cartridges and elements, as well as complete membrane systems, KMS products are specified for the most demanding applications. To enhance membrane performance, KMS offers a line of antiscalants and cleaning chemicals, and provides a wide range of maintenance and technical service programs. The company has supplied membranes for more than 15,000 systems installed around the world, serving the food processing, life sciences, and general manufacturing industries, as well as providing potable water and wastewater treatment technologies for communities of all sizes.

Koch Membrane Systems GmbH is a wholly owned subsidiary of Koch Membrane Systems, which is a Koch Chemical Technology Group, LLC company. KMS is based in Wilmington, Mass. For more information on Koch Membrane Systems and its full line of membranes and accessory products, visit www.kochmembrane.com, call 1-978-694-7000 or write to info@kochmembrane.com.

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