

### **Enabling textile dyeing without effluent, LANXESS participates in Water Today 2017 – February 23- 25, 2017 in Chennai**

Reverse osmosis and ion exchange go hand in hand

**Chennai** – Specialty chemicals company LANXESS is showcasing its ion exchange resins and membrane technologies at Water Today's Water Expo 2017, with a special focus on introducing novel reverse osmosis (RO) elements from its Lewabrane® product line that display improved performance along with Bayoxide® which enables water treatment by synthetic iron oxide adsorbers.

Over a period of more than 70 years of industrial production and continuing technical development, Lewatit® ion exchangers have become remarkable high-tech products which can be used as powerful tools that often allow astonishingly sophisticated tasks to be accomplished. They are successfully used in a variety of applied technical high-performance processes while at the same time being robust and easy to handle. More than 400 known processes in very different fields of application impressively indicate that these particular materials can do much more than just deionise or soften water.

One of the various application fields is the very important group of about 50 applications related to all kinds of technology that are designed to keep the environment clean and to reduce the content of pollutants in goods intended for direct human consumption. The following are examples of such applications:

A special type of Lewatit® ion exchange resin is used as an organic scavenger for the reduction of COD and color of the treated effluent in various industries for example, textile, tannery, electroplating etc.

A newly developed ion exchange resin is used for the specific removal of hexavalent chromium from the ground water or effluents

**LANXESS India Private Ltd**  
CIN :  
U24119MH2004PTC158377

LANXESS House,  
Plot no A-162, A-163, A-164,  
Road No 27, Wagle Estate,  
Opp. ITI College,  
MIDC, Thane (west) – 400604  
Phone: +91 22 2587 1000 (B)  
Telefax: +91 22 25826742  
[www.lanxess.in](http://www.lanxess.in)  
Email: [infoindia@lanxess.com](mailto:infoindia@lanxess.com)

Sunder Rajan  
General Manager and Head of  
Corporate Communications  
Phone: +91 22 2587 1540 (D)  
[sunder.rajan@lanxess.com](mailto:sunder.rajan@lanxess.com)

Vinay Shrivastav  
Manager –Public Relations  
Phone: +91 22 2587 1553 (D)  
[Vinay.shrivastav@lanxess.com](mailto:Vinay.shrivastav@lanxess.com)

of tannery and electroplating waste. This special resin has up to 2.5 times higher Cr(VI) removal capacities compared with conventional strong base anion exchange resins and selective removal of toxic Cr(VI) with recovery rates up to 99%.

Bleaching and dyeing textile fibers and fabrics without causing any environmental pollution through effluent may sound too good to be true. And yet “minimal liquid discharge” (MLD) and “zero liquid discharge” (ZLD) – i.e. the minimization or complete avoidance of liquid waste – are already a reality thanks to highly efficient water treatment processes that combine reverse osmosis with ion exchange. RO membrane elements of the Lewabrane® brand and Lewatit ion exchange resins from LANXESS play a key role in this.

The textile and leather industries, for example, with their traditionally high water consumption and often severely polluted effluent, represent a major challenge for experts in disposal technology and drinking water production. This is especially true in some parts of India.

“Water treatment is a significant global challenge and at the same time an attractive growth market,” said Jean-Marc Vesselle, Head of the Liquid Purification Technologies (LPT) business unit at LANXESS, in the run-up to this year’s World Water Day (March 22). The market for RO membrane elements is currently projected to grow globally at an above-average rate of 10 percent annually in the coming three years. In the case of ion exchange resins, future growth is predicted to average four percent per year globally. “With cross-technology innovation and continuous investment we shall continue to meet customer requirements and our responsibility in the future,” said Vesselle.

### **Modern wastewater management in Tirupur**

The Indian government has for years been funding initiatives to avoid wastewater and encourage recycling, especially in heavily

**LANXESS India Private Ltd**  
CIN :  
U24119MH2004PTC158377

LANXESS House,  
Plot no A-162, A-163, A-164,  
Road No 27, Wagle Estate,  
Opp. ITI College,  
MIDC, Thane (west) – 400604  
Phone: +91 22 2587 1000 (B)  
Telefax: +91 22 25826742  
[www.lanxess.in](http://www.lanxess.in)  
Email: [infoindia@lanxess.com](mailto:infoindia@lanxess.com)

Sunder Rajan  
General Manager and Head of  
Corporate Communications  
Phone: +91 22 2587 1540 (D)  
[sunder.rajan@lanxess.com](mailto:sunder.rajan@lanxess.com)

Vinay Shrivastav  
Manager –Public Relations  
Phone: +91 22 2587 1553 (D)  
[Vinay.shrivastav@lanxess.com](mailto:Vinay.shrivastav@lanxess.com)

industrialized regions. One example of this are efficient treatment plants in the Indian city of Tirupur in the southern province of Tamil Nadu, the center of Indian cotton processing.

The wastewater situation changed when the responsible authority, the Tamil Nadu Pollution Control Board (TNPCB), developed a treatment process specifically for effluent from cotton dye works as part of a nationwide program. In a Public Private Partnership, the Tamil Nadu Water Investment Company Limited (TWIC) began to implement a number of corresponding projects. As a result, dedicated treatment plants for large textile companies as well as joint plants for small and medium-sized dye works were built. More are under construction. Such plants can be ideally combined with existing production facilities. For newly built factories, specially optimized production processes offer additional possibilities for reusing process water and avoiding effluent beyond end-of-pipe solutions.

In total, nearly 24,000 cubic meters of wastewater are currently being treated in the Tirupur region every day with membrane elements and ion exchange resins from LANXESS.

### **An innovative and efficient method**

In textile mills and common effluent treatment plant (CETP) in Tirupur, for example, Lewabrane® RO S400 HR-type membrane elements and weakly acidic macroporous cation exchange resin Lewatit CNP 80 WS have been used to treat wastewater for a long time now. "We reckon on a life of three to four years for the reverse osmosis elements, which means that the process is also highly attractive from an economic point of view," said Prakash Shanmugam, Head of the Business Unit Liquid Purification Technologies at LANXESS India. "The combination of ion exchange and reverse osmosis is an innovative and efficient way to treat effluent even if it has a very high salt content and a high level of organic contamination," he said, summarizing his recent experience.

**LANXESS India Private Ltd**  
CIN :  
U24119MH2004PTC158377

LANXESS House,  
Plot no A-162, A-163, A-164,  
Road No 27, Wagle Estate,  
Opp. ITI College,  
MIDC, Thane (west) – 400604  
Phone: +91 22 2587 1000 (B)  
Telefax: +91 22 25826742  
[www.lanxess.in](http://www.lanxess.in)  
Email: [infoindia@lanxess.com](mailto:infoindia@lanxess.com)

Sunder Rajan  
General Manager and Head of  
Corporate Communications  
Phone: +91 22 2587 1540 (D)  
[sunder.rajan@lanxess.com](mailto:sunder.rajan@lanxess.com)

Vinay Shrivastav  
Manager –Public Relations  
Phone: +91 22 2587 1553 (D)  
[Vinay.shrivastav@lanxess.com](mailto:Vinay.shrivastav@lanxess.com)

Detailed information about products from the LPT business unit can be obtained online at <http://lpt.lanxess.com/en/home/>. Brochures and the design software LewaPlus® can also be downloaded from there free of charge.

LANXESS is a leading specialty chemicals company with sales of EUR 7.9 billion in 2015 and about 16,700 employees in 29 countries. The company is currently represented at 54 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of chemical intermediates, specialty chemicals and plastics. Through ARLANXEO, the joint venture with Saudi Aramco, LANXESS is also a leading supplier of synthetic rubber. LANXESS is listed in the leading sustainability indices Dow Jones Sustainability Index (DJSI World) and FTSE4Good.

### Forward-Looking Statements

This news release may contain forward-looking statements based on current assumptions and forecasts made by LANXESS AG management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

### Information for editors:

All LANXESS news releases and their accompanying photos can be found at <http://press.lanxess.com>. Recent photos of the Board of Management and other LANXESS image material are available at <http://photos.lanxess.com>. TV footage can be found at <http://globe360.net/broadcast.lanxess/>.

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

**Follow us** on Twitter, Facebook, LinkedIn and YouTube:

<http://www.twitter.com/LANXESS>  
<http://www.facebook.com/LANXESS>  
<http://www.linkedin.com/company/lanxess>  
<http://www.youtube.com/lanxess>

**LANXESS India Private Ltd**  
CIN :  
U24119MH2004PTC158377

LANXESS House,  
Plot no A-162, A-163, A-164,  
Road No 27, Wagle Estate,  
Opp. ITI College,  
MIDC, Thane (west) – 400604  
Phone: +91 22 2587 1000 (B)  
Telefax: +91 22 25826742  
[www.lanxess.in](http://www.lanxess.in)  
Email: [infoindia@lanxess.com](mailto:infoindia@lanxess.com)

Sunder Rajan  
General Manager and Head of  
Corporate Communications  
Phone: +91 22 2587 1540 (D)  
[sunder.rajan@lanxess.com](mailto:sunder.rajan@lanxess.com)

Vinay Shrivastav  
Manager –Public Relations  
Phone: +91 22 2587 1553 (D)  
[Vinay.shrivastav@lanxess.com](mailto:Vinay.shrivastav@lanxess.com)