

# Arab Water World <u>xpelobel ple</u>

تشرين الاول (أكتوبر) ٢٠٠٦ مجلد

العباد والصرف الصحي وتحلية العباد والطاقة في الثيرق الأوسط وشمال أفريقيا – عقد ١٧٧ Serving the Water, Wastewater, Desalination & Energy Sectors in the Middle East & North Africa

## **KEEPING FACE** WATER: What's being done to -use our resources

• BRAIN AND BRAWN: Premium membrane technology roundup p.10

## A SPECIAL TREAT FROM JAPAN



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Membrane Technology

**FEATURES** 

تكنولوجيا الأغشية

### A clean slate for OEE



An integral part of desalination equipment consists of its membranes which have to perfectly suit the liquid separation processes. Each membrane is a specific filter which lets some water flow through while retaining dissolved minerals.

The constant improvements of membrane materials are of crucial importance to maintain the cost-effective reverse osmosis technology and thus not to be replaced by other desalination technologies like electrodialysis.

One of the recent industry achievements was increasing

membrane tubes average lifetime to 5 years. Other modifications are steadily made on membrane materials. Currently preferred membrane materials are cellulose

acetate (CA), hollow fibers bundled together and for seawater desalination in particular polyamide thin film composites (PA). To assure the continuous performance of these membranes, they must be cleaned on average four times a year and need to be replaced at most every seven years.

For Ozone Ecological Equipments (OEE), the detailed knowledge of feeding water characteristics is indispensable for choosing the appropriate membrane since seawater consistence differs heavily depending on the geographical region. The Mexican Original Equipments Manufacturer (OEM) is specialized in designing personalized water treatment solutions. Known for applying the latest technology standards including Energy Recuperation Systems and delivering high quality equipments, OEE has become one of Latin Americas leading companies in water treatment plants in the course of the last 8 years. Every year, OEE is successfully realizing several desalination projects, lately among others for Veneagua in Venezuela and the Mexican company PEMEX. Constantly augmenting the oil effectiveness of its solutions, one of its main objectives in every project is reducing the cubic meter production cost for drinking water.

OEE focuses on realizing desalination projects for agriculture, oil platforms, and hotels with the vision to be known and respected internationally for its high-technology solutions. ■

تختص شركة Ozone Ecological Equipment المكسيكية بتعسيم حلول شخصية لمعالجة المياه. أصبحت الشركة إحدى الشركات الرائدة في محطات معالجة المياه في أميركا اللاتينية. في السنوات الثمانية الأخيرة. وهي تقوم بتنفيذ مشاريع تحلية المياه عدة في المنطقة.

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#### Watching Dubai like an Eagle

**Eagle Electromechanical Co. L.L.C.** (EECO), UAE-based leading company in water and wastewater treatment works, have recently been awarded Dubai Sports City Sewage Treatment Plant with capacity of 25,000 m<sup>3</sup>/ day. The contract scope includes design, build, and 12 years operation and maintenance.

The award was based on the evaluation done by **Clifton Coney Group** (Project Management) and **Hyder** (UK Based Consultant) between different companies and technology.

Eagle's proposal was based on MBR Technology in association with **Zenon**, a Canadian company that is considered the MBR world leader and have the biggest MBR references all throughout the world. MBR is an advanced wastewater treatment technology with an extremely small foot print that completely removes pathogenic organisms and provide consistent effluent quality meet the most stringent standards for wastewater reuse across the world. The treated effluent will be used for irrigation and make up water for the Sports canal.

Eagle Electromechanical (EECO) has recently completed a string of prestigious projects that demonstrate its commitment to the Environment and lead to increase the amount of treated domestic sewage to be reused for irrigation and landscaping which drastically help to reserve water resources in Dubai. commissioned the first phase of Expansion of the Sewage Treatment Plant which designed and built for  $30,000 \text{ m}^3$ / day with 10 year contract for Operation and Maintenance.

At the Arabian Ranches of **EMAAR**, Eagle commissioned last November the sewage treatment plant of 6,000 m<sup>3</sup>/day based on Extended Aeration Process.

At Jebel Ali Free Zone, Eagle commissioned in last April the sewage treatment plant of 4,500 m<sup>3</sup>/day. The plant was based on SBR Technology (Sequence Batch Reactor).

At Dubai Silicon Oasis, Eagle signed contract for design, built, 3 year operation for a fast track sewage treatment plant of 3000 m<sup>3</sup>/ day for first phase, where Eagle succeeded to complete the plant within 5 months under the supervision of Project Consultant, Khatib & Alami.

At the Gardens of Nakheel, Eagle

منحت شركة Eagle Electromechanical Co. LLC عقد محطة معالجة مياه الصرف الصحي لمدينة دبي الرياضية بقدرة ٢٥, ٢٠، ٢٥م مكعب يومياً. بذلك، يكون على شركة معالجة المياه ومياه الصرف الصحي. أن تقوم بتصميم ويناء المحطة بالإضافة إلى تشغيلها وصيانتها لمدة ١٢ عاماً.

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