LG Water Solutions Awarded Major SWRO Membrane Contract for World's Largest Fertilizer Complex in Morocco

LG Water Solutions, LG Chem's business unit specializing in water treatment and the manufacturer of NanoH2O™ reverse osmosis (RO) membranes, has secured a supply order of seawater RO (SWRO) membrane elements through a local EPC for an expansion of a seawater desalination facility at the OCP Jorf Lasfar Complex.

Located approximately 20 km south of El-Jadida, on the Atlantic coast of Morocco, the site is currently the world's largest fertilizer complex. LG Water Solutions will supply over 18,000 units of LG SW 440 R high-rejection membranes for the SWRO system with a production capacity of 246,000 m3/day, where the desalinated water will be used for industrial purposes within the complex and supply potable water to around 1.5 million people in the towns of Safi and El Jadida.

LG Water Solutions has been supplying RO membrane elements through several global EPCs for modular SWRO plants in the Jorf Lasfar complex and Safi in Morocco since 2022.

The expansion project, named Jorf Wave 2 Desalination Plant, is integral to OCP Group's water sustainability program aimed to alleviate water stress in the region, where desalination via reverse osmosis has become a proven method of sustainably managing water resources.

Furthermore, with energy consumption as one of the biggest limitations in desalination, LG Water Solutions' industry-leading salt rejection NanoH2O™ RO membranes will help lower feed pressures while maintaining high productivity, reducing energy use and the emission of greenhouse gases.

Since the inception of its business, LG Water Solutions has built a solid track record in the global RO market, for instance, accruing more than 5,000,000 m3/day of contracted SWRO capacity between 2016 and 2023. Recently, LG Water Solutions expanded its footprint into various industrial sectors, especially sites seeking to improve water stewardship.

Last year, LG Water Solutions supplied over 10,000 RO membrane elements to the Citic Guoan project, China's largest salt lake-based lithium carbonate production site.

The project owner, TUS-Qingyuan, aims to produce 20,000 tonnes of battery-grade lithium carbonate annually, enough lithium to build batteries for nearly 500,000 electric vehicles (EVs). LG Water Solutions' RO membranes are crucial in TUS-Qingyuan's advanced lithium extraction technology, which recovers lithium from salt lakes.

In Chile, LG Water Solutions has improved the operational efficiency of the RO systems at Minera Escondida, the world's largest copper mine.

The plant initially used RO membranes from a different manufacturer, but Minera Escondida needed to improve the operational efficiency of the RO system. The plant owner, BHP Billiton, replaced one of its SWRO trains with LG NanoH2O™ RO membranes at the end of 2021, and as a result, delivered superior performance, enabling the facility to operate under lower feed pressures, reducing energy usage and operational expenses. This positive outcome led to a subsequent replacement order.

Approximately 1% of the world's population currently depends on desalinated water to meet its daily needs, but the UN expects this number to grow to 14% by 2025. LG Water Solutions' groundbreaking Thin Film Nanocomposite (TFN) RO technology, supported by a dedicated expert team delivering excellent technical and commercial support, is aligned with the growing demand to secure clean water sources.