

Bodal Chemicals AMBC

Modern Water successfully commissioned its first All Membrane Brine Concentration (AMBC) plant in India in 2018. This followed the completion of the successful pilot trials of Modern Water's AMBC technology at the same site in 2017.

Project Description

The project was undertaken in partnership with Advent Envirocare Technology Pvt Ltd (AETPL), one of the leading companies in India, focused on the technically challenging industrial wastewater market. Modern Water have had a Joint Development and Commercialisation Agreement with AETPL in place since 2016. AETPL fully recognised the impact Modern Water's AMBC process, which is based on Modern Water's proprietary forward osmosis and related processes, would have in significantly reducing the costs of zero liquid discharge (ZLD) plants.

Bodal Chemicals Ltd is a major international company in the production of dye intermediates and dyes, with one of its manufacturing facilities at Vadodara, Gujarat, India. The AMBC system was built into a new wastewater treatment facility at the existing Bodal Chemicals' wastewater treatment plant. The key element to the expansion of the ZLD plant was the integration of the AMBC process. The order for the full scale AMBC plant was placed following successful pilot/demonstration trials on the site in early 2017.

Dye wastewaters are notoriously difficult to treat. The wastewater treatment plant has an influent capacity of 320 m³/day, with a number of different treatment steps prior to introduction to the AMBC. The raw water total dissolved solids (TDS) is approximately 40,000 mg/l with the AMBC producing a concentrated stream of over 125,000 mg/l, while at the same time providing a high quality process water for re-use.

In addition to the licensing and design of the AMBC, Modern Water also provided specialist equipment to AETPL as well as provided commissioning supervision and training of Bodal operations staff.

Following the successful commissioning and acceptance tests the plant is now operated by Bodal staff under the supervision of AETPL for one year.

Key Facts

- Country - India
- Client - Bodal Chemicals Ltd.
- Partner - Advent Envirocare Technology Pvt. Ltd.



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