THE FIRST MXDA PLANT IN EUROPE



SUCCESSFULLY PROVIDING PERMITTING AND EPCM SERVICES WHILST NAVIGATING CHALLENGES

Project Scope

Mitsubishi Gas Chemical Company, Inc. (MGC) strategically expands its Meta-xylenediamine (MXDA) production in Europe to meet demand in epoxy, polyamide, and isocyanate sectors. In ensuring the success of this ambitious project, MGC enlisted the help and expertise of Bilfinger Engineering, which offered a comprehensive permitting and EPCm (engineering, procurement, construction, and project management) scope for the construction of the new facility in Rotterdam, the Netherlands. The result is a compelling success story.

The main goal of this project was to secure essential permits and establish a blueprint for constructing an MXDA plant in compliance with Dutch and European regulations. Commencing in April 2019, the journey faced its initial challenge as replicating the existing plants in Japan proved unfeasible within Dutch and European requirements. This led to necessary adjustments in both design and process.

Services Provided:

- Permitting
- EPCm (Engineering, Procurement and Construction management)
- Project Management



Client: MGC Speciality Chemicals Netherlands B.V. Location: Rotterdam, the Netherlands Market: Chemicals Key feature: First MXDA production plant in Europe for the client Plant capacity: 25,000 MTA

Output: Meta-xylenediamine (MXDA)

Addressing unforseen complexities

As Bilfinger Engineering delved further into the process, two significant developments emerged: the Council of State (Raad van State) ruling on nitrogen-related issues in the Netherlands and the imminent arrival of the Environmental Act (Omgevingswet), incorporating stricter emission standards. This posed a substantial task for permit acquisition.

Nevertheless, our Consultancy (HSE engineering) and Engineering teams addressed the unforeseen complexities. Employing an integrated approach, Bilfinger Engineering swiftly and flexibly found a solution within the specified timeframe while providing extensive support to MGC.

Sustainability & Efficiency

Aligned with the new Dutch nitrogen laws, the plant underwent substantial optimization. Bilfinger Engineering conducted a thorough Environmental Impact Assessment (EIA), navigating challenging dialogues to ensure compliance with evolving regulations. As a result, emissions were significantly decreased, achieving a notable 10% reduction in CO2 emissions, among other pollutant reductions. Bilfinger Engineering takes pride in the substantial decrease in nitrogen deposition, a success achieved through seamless collaboration among our consultants.

Trusting client relationship

Throughout the project we introduced the client to diverse conditions, explored alternatives, and evaluated environmental advantages. On top of that, cultural differences emerged between Japanese and Dutch experts working together. However, transparent communication with detailed information ensured that this did not affect the results.The client relationship was primarily built on the trust that MGC placed in Bilfinger Engineering's capabilities, a trust that was proven valid.



"We think the entire team has excellent capabilities and a high level of speciality. Especially when finding a solution for Nitrogen deposition. We are very thankful to the team for helping us." - Mr.YoshitakaTanaka, General technicaladvisor at MGC Specialty Chemicals Netherlands B.V

