

World's largest butanediol production base reduces commissioning time by half to achieve quicker time to operation

RESULTS

- Commissioning time reduced from six months to three
- Work reduction by moving to predictive maintenance rather than reactive maintenance
- Quicker time to market for an environmentally friendly chemical



APPLICATION

Production of 1,4- butanediol (BDO), an industrial chemical used as a solvent and building block in bioplastics, elastic fibers, and polyurethanes. Bioplastics that are formed from BDO are entirely biodegradable.

CUSTOMER

Inner Mongolia Dongyuan Technology Co., Ltd. (Dongyuan) is the world's largest producer of BDO and is a strong implementer of green, low-carbon, and recycling practices.

CHALLENGE

BDO, a building block for completely biodegradable bioplastics, was in high demand by Dongyuan's customers. Because time was of the essence, the company aimed for a fast start up for its new facility in Inner Mongolia.

To meet the need for this environmentally friendly chemical, Dongyuan designed an execution plan that adopted the highest industry standards and revolved around intelligence and digitalization in the early stage of project planning. They anticipated that their new BDO-production project would implement the modern execution plan.

"The high degree of cooperation between our users and Emerson has enabled a smooth project. Emerson's advanced applications play an important role in this project."

Project Manager

SOLUTION

Dongyuan chose Emerson's solution, which includes the DeltaV™ control system, AMS Device Manager asset management software, engineering, services, and training. The combination delivered Dongyuan the power to reduce start-up time as well as move away from reactive maintenance and toward predictive maintenance — thereby reducing economic losses that can arise from device issues.

During commissioning, the combined functionality of the DeltaV system and AMS Device Manager improved the device binding configuration, testing, and documentation — critical to reducing commissioning time by 50%. Emerson further worked with the Dongyuan team to tailor AMS Device Manager specifically for the BDO project to cover multiple application scenarios such as device performance monitoring and device documentation management.

Today, Dongyuan operators and related maintenance personnel can use AMS Device Manager to diagnose potential device problems using convenient and traceable tools at anytime from anywhere. AMS Device Manager software also helps them devise effective solutions for instruments and valves that need to be repaired and replaced. These capabilities not only greatly reduce labor costs, but also reduce the difficulty of outdoor inspections that personnel encounter during the extremely cold winters in Inner Mongolia.

For additional information on AMS Device Manager, go to [Emerson.com/AMSDeviceManager](https://www.emerson.com/AMSDeviceManager).

“Using the online configuration function of the AMS Device Manager, the user can modify and test the loop in the maintenance workshop or the central control room — even in the office — without querying the circuit wiring diagram or checking the wiring on site, thereby avoiding human error, improving maintenance safety, and reducing start-up time.”

Plant Manager



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