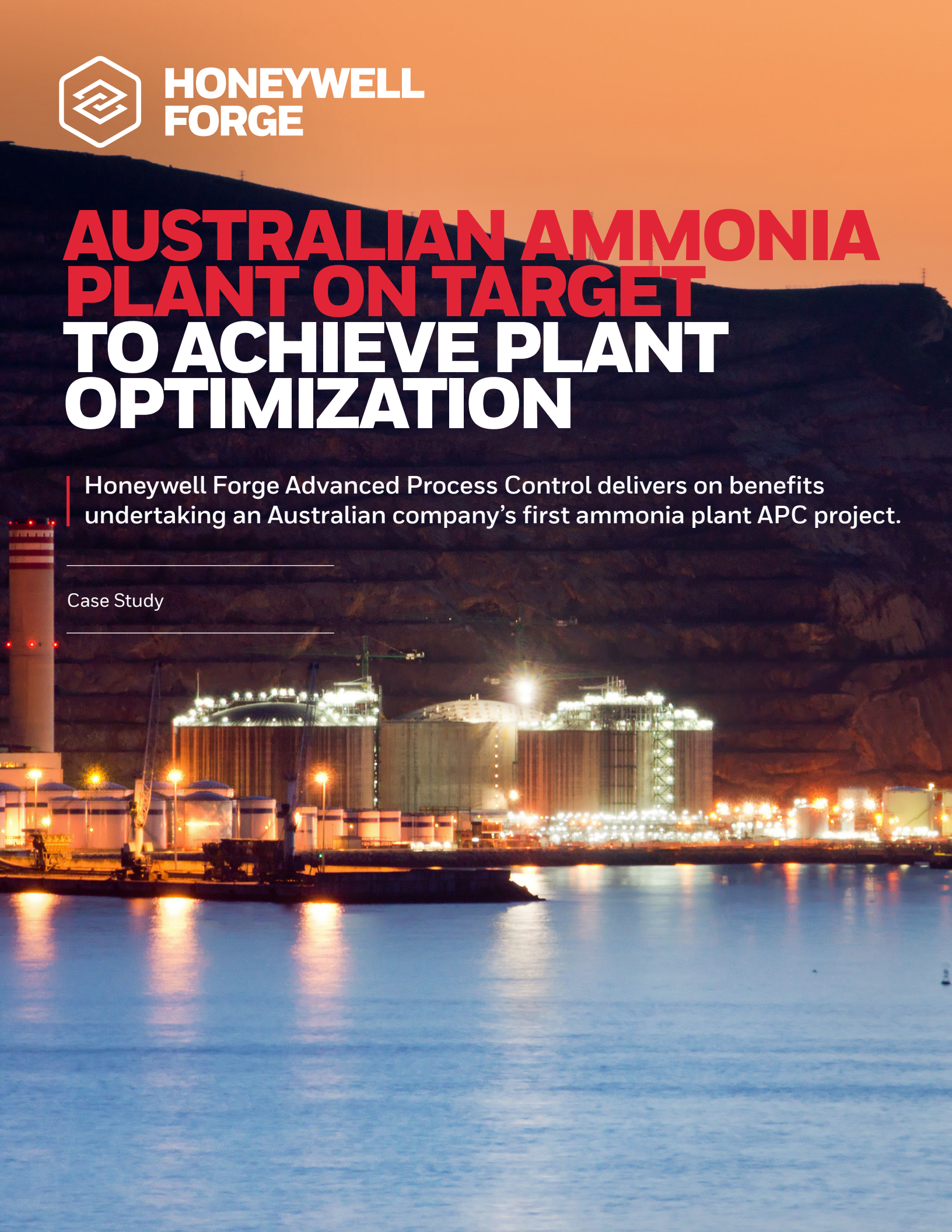
HONEYWELL FORGE

AUSTRALIAN AMMONIA PLANT ON TARGET TO ACHIEVE PLANT OPTIMIZATION

Honeywell Forge Advanced Process Control delivers on benefits undertaking an Australian company's first ammonia plant APC project.

Case Study



OVERVIEW

Western Australia is home to one of the oldest production sites of this company's plant for the manufacture of ammonia, nitric acid, and ammonium nitrate for both domestic and global distribution, and production of organic and inorganic nitrates. Ammonia is an important material with numerous uses in both industry and agriculture. The Australian company's ammonia plant can produce 255,000 metric tons per year, store 40,000 tons, and features a world-class environmentally efficient design.

CHALLENGE

Working with an aging, high-cost asset, the company sought to optimize their ammonia plant operations by achieving increased production needed to support domestic consumption and reduce ammonia imports. This Australian ammonia plant could guarantee timely transportation and delivery to the customers due to their location advantages, but needed a strong, local engineering team to work closely throughout the optimization project and overcome the process challenges they were facing.

Based in Perth, Honeywell employs engineers experienced in Advanced Process Control (APC) who were able to leverage strong, long-standing relationships with existing customers throughout Australia. Honeywell was then able to successfully demonstrate the technical strengths and lifecycle cost benefits of its suite of offerings along with its proven capability to provide integrated service for software, hardware and engineering – Honeywell Forge APC (Profit Controller and Profit Optimizer) - and was the chosen provider to undertake the APC project.

As the first ammonia APC in Australia in recent years, the Honeywell team sought the advice and expertise from other global teams to gather the required background on similar implementations. From there, they worked closely with the Australian company utilizing the plant start-up to conduct step-tests and model identification and introduced a lean commissioning process resulting in minimal schedule impact.

BENEFITS & RESULTS

As this was their first APC project, a critical factor in this company's optimization planning was the need for guaranteed benefits. Honeywell presented itself as the only vendor willing to guarantee this – a minimum of 1% ammonia production increase - along with a lean and efficient project execution method with fixed, lump sum pricing.

Post commissioning, ammonia production increased *1.5%. During the initial 12 months of operation, as part of the benefit sustenance guarantee, Honeywell continued to monitor and fine-tune the application in collaboration with their process engineers, yielding a **2.4% improvement for ammonia production.

Due to the immediate return on investment, The Australian company engaged Honeywell for a new project to identify potential benefits in their nitric acid plants. A new APC project is now underway and is progressing well.

*Observed results over the initial 6-month period after commissioning.

Observed results at the end of the 12-month period after commissioning.

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