Solution Brief

Optimize Production and Operating Margins with Cordant™ Process Optimization

Introduction

Dynamic operating conditions and external factors such as the cost of energy and materials can significantly impact production, yield, and energy efficiency. This can make it difficult to meet production targets and negatively affects financial and environmental performance.

Cordant™ Process Optimization helps organizations overcome these challenges beyond traditional tools and technology to realize the full potential of their plants.

What is Cordant™ Process Optimization?

Cordant™ Process Optimization leverages a unique combination of data-driven process modeling, AI, and advanced optimization techniques to continuously improve production rate, yield, energy efficiency, and overall operating margins.

Benefits

Key business Capabilities of Cordant™ Process Optimization

Model, simulate and optimize processes in real time

Develop non-linear process models leveraging pre-built templates to model complex processes. Rapidly deploy models in production and generate setpoints in real-time to optimize and ~~predict~~ close gap-to-potential while ensuring all process constraints are met. Models adapt automatically to changing plant performance over time, accounting for changes such as equipment degradation.

Unify decision-making across multiple ~~personas~~disciplines

The application provides an intuitive user interface to enable on-demand scenario planning and continuous tracking of gap vs potential by panel operators, unit supervisors, and process and APC engineers. This helps unify decision-making, ensure the implementation of recommended setpoints, and drive continued optimization to get the most from your plant.

Optimize all types of production processes

Cordant™ Process Optimization can be applied plant-wide to a ~~wide~~ large variety of

industrial processes. Process expertise is embedded in the product with process-specific templates to configure ~~models for specific processes~~solutions for specific industrial sectors.

Scale insights across the enterprise

Cordant™ Process Optimization is part of a broader, integrated suite of industrial asset performance management solutions that provide~~s~~ actionable insights to evaluate scenarios, anticipate outcomes, ~~evaluate scenarios~~ and strategically choose actions to reduce risk and failure, optimize process, and improve sustainability.

Offered as a modular and composable solution, Cordant™ enables organizations to address specific use cases, including asset health, asset strategy, defect elimination, process optimization, and energy and sustainability management. The solution's composability also means organizations can seamlessly expand capabilities as their needs evolve.

Outcomes

Drive more value from your operations

1-2% Increased production

Identify optimal setpoints for plants to maximize production while accounting for process and equipment constraints.

5-10% **Reduction in specific energy consumption**

Optimize operations to reduce energy use and costs by simulating process and pricing changes using different constraints, parameter values, and economics.

1-2% **Increased margin**

Increase margin with plant-wide real-time economic optimization, focused on optimizing yield and product revenue and minimizing energy costs.

About

Cordant™ Process Optimization has delivered proven value across a number of applications.

Ammonia Production

Optimized levers such as plant load, reformer outlet temperature, and gas-to-air ratio to increase customer's production between 1-2% and reduce energy consumption

LNG

Increased production between 1-2% and reduced energy consumption while also maximizing customer's margin based on market price and demand of NGL components and gas.

Gas Processes

Identified refining optimization opportunities expected to deliver benefits totalling 0.20-0.40 $/bbl.

Run your plant at its full potential
Learn more

Contact us to learn more about Cordant™ Process Optimization and how it can help you model, simulate, and optimize process in real time for production and efficiency gains.