

DSM Deploys Plant Performance Management to Increase Yields 5%, Reduce Startup Times 20%

Specialty chemical producer deploys aspenONE PM&E across multiple plants to monitor the process, improve quality, and maximize asset utilization for manufacturing excellence.

DSM Pharmaceutical Products is a global supplier of high-quality manufacturing services to the pharmaceutical industries, and DSM Fine Chemicals at Linz, Austria, consists of several multipurpose plants.

To improve its competitive position in the marketplace, DSM implemented a manufacturing excellence initiative.

Because of the multipurpose nature of the Linz site, a key challenge to achieving manufacturing excellence was managing the complex manufacturing operation, especially product start-up times and yields. The site needed to ensure fast changeovers and maximize asset utilization.

DSM worked with AspenTech partner ISG IT & Automation to deploy the Plant Performance Management Solution based on aspenONE PM&E. This solution monitors key operating parameters to ensure the best product quality and shortest production times.

As a result of implementing this aspenONE solution, DSM has increased yield up to 5 percent, reduced start-up times by as much as 20 percent, and increased daily production output by between 3 and 15 percent.

Customer Profile

DSM Fine Chemicals
Specialty Chemicals Producer

Challenge:

Standardize operating procedures, increase flexibility, increase yield, and achieve faster changeovers in a complex manufacturing environment

Solution:

Plant Performance Management Solution powered by aspenONE PM&E to help manage complex operations

Benefits:

- Increase yield by 5 percent
- Reduce start-up times by as much as 20 percent
- Increase daily output by between 3 and 15 percent
- Ensure easy configuration of the system for producing new products
- Focus operations on identifying and correcting the cause of the top issues



Complexity and Lack of Standards Limit Performance

The DSM Fine Chemicals facility at Linz, Austria, consists of seven plants—five multipurpose facilities, one multiproduct facility, and one continuous process plant—and employs approximately 1,000 people. The mix of products, different multipurpose plants, large workforce, and a lack of common work practices and production performance tools all contributed to increased complexity in managing performance. This resulted in lower yields, longer changeover times, and limited overall production performance at the site. DSM established a goal to increase its competitive position and sought to achieve this goal through an initiative in manufacturing excellence.

In support of the manufacturing excellence initiative, DSM sought to improve the process and provide one common production performance management system across all of manufacturing. In order to manage changeover to new products, they required that the new system have flexible set up and allow the change of process settings by the shop floor.

aspenONE PM&E Delivers Product-Specific, Performance-Focused Operations

DSM selected AspenTech partner ISG IT & Automation GmbH to implement the Plant Performance Management Solution (PPMS). This solution is based on aspenONE PM&E and is the site's common production system across all plants. The goals are to monitor key operating parameters to operate the plant at the economic optimum, assist the site in improving product quality, improve operator efficiency, and improve asset utilization. This solution focuses on product-specific, performance-oriented operations. The site chose to closely monitor four key metrics: process capability, throughput, quality, and yield. The solution enables everyone to see how the process is performing and focus on identifying and correcting the cause of the top issues through KPIs, alerting, visualization, and reports.

DSM Achieves Significant Improvements in Yields and Faster Startup Times

As a result of implementing the aspenONE PM&E solution, DSM is able to adapt new products for manufacturing quickly in each plant. Product changeovers now occur from 5 to 25 percent faster and daily output from the site has increased between 3 and 15 percent. DSM also made process improvements, which increased yield by 5 percent. DSM now has the flexibility and performance management tools needed for managing a broader product portfolio.

About AspenTech

AspenTech is a leading provider of award-winning process optimization software and services. AspenTech's integrated solutions enable manufacturers to reduce costs, increase capacity, and optimize operational performance end-to-end throughout the engineering, plant operations, and supply chain management processes.

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