

degussa.

Leveraging model centrality to drive profitability



Profile

Degussa AG became the largest specialty chemical company in the world after the merger of Degussa-Hüls and SKW Trostberg in October 2002. In fiscal 2001, Degussa achieved 12.9 billion Euros in revenue and employed 53,400 employees within its global organization. Degussa consists of 23 business units separated into 6 divisions: Health & Nutrition, Construction Chemicals, Fine & Industrial Chemicals, Performance Chemicals, Coatings & Advanced Fillers and Specialty Polymers.

Degussa's products are used in manufacturing tires, animal-feed additives, pharmaceuticals, and paints and coatings. The company also makes additives for the food and beverage industries, construction chemicals, personal care chemicals, and super-absorbents.

Business Challenge

"AspenTech® brings detailed modeling knowledge to the business level to drive profitability in the production process."

Ralf Janowsky
Director of Computer-aided
Process Engineering
Degussa AG

Many engineering contractors and chemical producers create process simulation models when new plants are being designed and built. This is not a trivial exercise in terms of cost and manpower, but once the plant is up and running, these models often get 'filed away' or used only by engineering experts.

However, major benefits may be garnered if plant models and simulations are made accessible across the company. Major cost savings may be achieved through:

- More efficient plant operation and scheduling
- Improved ROI across the lifetime of the plant

The opportunity for such benefits prompted Degussa to seek a knowledge-sharing technology that would facilitate global access to its critical simulation models. Degussa's vision was to intensify collaboration and knowledge sharing by making this information accessible to a cross-section of roles, from operators to financial and planning personnel. Deploying a knowledge sharing technology across the organization would foster competitive advantage by mandating work process innovation on an enterprise-wide scale.

Solution

Since early 2001, Degussa has been rolling out a full-scale, multi-site implementation of Aspen WebModels®, providing global access to the substantial amount of process knowledge that the company has accumulated within its Aspen Plus® simulation models over the past 10 years.

Since its implementation, Aspen WebModels has provided critical information for improved production and operations. For example:

- Operators in Degussa's chemical plants in various locations are making use of detailed engineering models created by its process technology and engineering service unit to optimize production.
- Engineers use models of continuous processes at various sites to optimize operations when feed-stock and operating condition changes are made.

"Aspen WebModels allows us to leverage our expert knowledge and provide it in an appropriate, secure format to the local experts at plant level," said Ralf Janowsky, director of computer-aided process

engineering at Degussa. "We believe this technology will provide an important path to help us develop innovative solutions and improve our business performance," he said.

Business Benefits

The key benefits of the web-based system are that a model can be made available to any company location around the world through standard Internet technology, with the user requiring only a PC browser. Each user's view of the full model, which is stored centrally, is carefully tailored to give him or her access to only those parameters that will vary in the plant simulation.

Once these parameters have been selected and input, the simulation run is made on a central server, and the results are presented locally again via the Internet. This promotes system security, as it avoids sending large amounts of data over the Internet. To further increase security, the system is password protected and data encryption is used.

"Aspen WebModels has completely changed the way Degussa looks at the use of our models," Janowsky said. "We have used AspenTech modeling software for over 15 years and built up expertise in plant modeling as a service function. Now, we have as many people as possible using these over the Internet. AspenTech brings detailed modeling knowledge to the business level to drive profitability in the production process," he said.

Increased use of Degussa's models has been stimulated, Janowsky adds, by demands from plant operators for access to the simulations. In the past, providing this access would have meant licensing and installing Aspen Plus locally, with implications for cost and maintaining the integrity of the models, or using less transparent methods such as spreadsheets to send parameters back and forth.

About AspenTech

Aspen Technology, Inc. is a leading supplier of enterprise software to the process industries, enabling its customers to increase their margins and optimize their business performance. AspenTech's engineering solutions, incorporating Hyprotech's technologies, help companies design and improve their plants and processes, maximizing returns throughout their operational life. AspenTech's supply chain manufacturing solutions allow companies to run their plants and supply chain more profitably, from customer demand through to the delivery of the finished product. Over 1,200 leading companies rely on AspenTech's software every day to drive improvements across their most important engineering and operational processes. AspenTech's customers include: Air Liquide, AstraZeneca, Bayer, BASF, BP, ChevronTexaco, Dow Chemical, DuPont, ExxonMobil, GlaxoSmithKline, Lyondell Equistar, Merck, Mitsubishi Chemical, Shell and Unilever. For more information, visit www.aspentech.com.

Vision

In future, says Janowsky, Degussa would like to see Aspen WebModels handling batch process optimization using AspenTech's Batch Plus® solution. This could have benefits not only at the plant operator level, but also at the planning level in improving plant scheduling.

Further affirming its relationship with AspenTech, the company announced in September 2002 that it had signed a 5-year multi-million dollar software license agreement. The agreement demonstrates Degussa's commitment to fully implementing AspenTech's Aspen Engineering Suite™ (AES) of technology as a standard for collaborative engineering and design. The optimized workflow capabilities of AES give open access not only to advanced users, but also to non-experts such as financial and operational decision makers, leveraging best practice knowledge and boosting performance efficiency and productivity on an enterprise level.

"AspenTech is enabling Degussa to leverage its long-term investment in process knowledge capture by facilitating an achievable corporate standard for modeling and optimization," Janowsky said. "This accumulative expert knowledge will be fully utilized throughout the organization, driving the bottom-line value of Degussa's process asset to the business boundary," he said. Added Dorothea Schwarz, Chairman of Degussa AspenTech Expert Committee, "We have a need to deliver the full functionality of AES directly to the desktop of our engineers within a highly distributed organization. This initiative will build upon the collaborative engineering backbone already established by the successful deployment of AspenTech's technology over the years."



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