



Statoil achieves measurable improvements in engineering efficiency for major upstream projects

Profile

Statoil is an integrated oil and gas company with substantial international activities. Represented in 28 countries, the group has more than 23,000 employees. Statoil is the leading producer on the Norwegian continental shelf and is operator of twenty oil and gas fields. The group's international production is enjoying strong growth, and Statoil is a leading retailer of petrol and oil products in Scandinavia, Ireland, Poland and the Baltic states. As one of the major suppliers of natural gas to the European market, Statoil is also one of the world's biggest sellers of crude oil.

Statoil's Process Technology and Mechanical Equipment Group (PME) provides technical support to all Statoil oil and gas fields. The group is involved in concept development, detailed engineering, commissioning and operations. It also plays an important role in developing new technology and holds a number of patents, especially within process technology.



photo by: Dag Myrestrand for Statoil

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Vidar Sørensen
Sector Manager
Process Technology
Statoil ASA

Business Challenges

PME consists of 215 employees, including 40 process engineers, who are focused on providing the best process alternatives during early phase and conceptual design studies. Process alternatives can be derived from as many as 30-40 different concepts to determine the optimal design of offshore process facilities. Statoil realized that the solution being used for early phase studies was not robust enough to meet the company's goals, which included:

- Increased reliability
- Increased production
- Faster time to market

Statoil required a solution that would not only allow it to determine the best process alternatives for getting oil out of the ground; it also needed a lifecycle solution capable of ongoing production optimization. Statoil subsequently decided to evaluate solutions that would help the company meet its operational goals.

Solution

As part of its research, Statoil studied how other companies were benefiting from dynamic simulation. "As a result of our research, we learned that AspenTech is in the forefront among process simulation companies, especially within the oil &

gas industry," said Vidar Sørensen, Sector Manager, Process Technology, Statoil ASA. **"After a selection process, we chose Aspen Hysys® due to AspenTech's broad experience, and the efficiency and reliability of its solution."**

Aspen Hysys met all of Statoil's selection requirements, which included a solution that was user friendly, commonly used by its contractors, and internationally recognized within the oil and gas industry. Other important requirements were ongoing development of the solution and a proven, high level of customer support. "In today's business, yesterday's rules no longer apply. Competition is becoming increasingly intense, and it is imperative that we use the best technology available to remain competitive. At Statoil, we selected Aspen Hysys because AspenTech provides the preferable technology to meet our business needs," said Sørensen.

Today, Aspen Hysys is used by PME to complete conceptual design studies. Utilizing an Aspen Hysys model, Statoil engineers can model process concepts from early phase conceptual design through to detailed engineering. "After implementing Aspen Hysys, we realized how powerful the solution really is as it facilitates the evaluation of numerous process alternatives," said Sørensen.

Following its positive experience with Aspen Hysys, Statoil is evaluating the deployment of AspenTech's integrated software solution for Front-End Engineering Design (FEED). AspenTech's

FEED solution, which combines process simulation, economic evaluation and engineering data management, will create more efficient engineering work processes for major new exploration and production projects.

Business Benefits

“Being able to rapidly evaluate numerous process alternatives will allow Statoil to achieve improvements in engineering efficiency for major upstream projects. Building dynamic models increases the reliability of our results and allows us to focus on our business needs,” said Sørensen. **“By using dynamic models for process optimization, Statoil has increased production by .5% on some offshore production units. We even have instances of increasing production by 2% by operating in a narrower range with smaller fluctuations.”**

“As someone who has worked closely with AspenTech for several years, I can appreciate the technology development by its well qualified and experienced staff,” said Sørensen. “We continue to be impressed by AspenTech’s high level of communication with Statoil whether it is through the responsiveness of its Customer Support and Consulting organizations, or by being regularly informed of new product developments.”

Vision

By early 2006, Statoil plans to integrate its simulation model templates with cost estimation to improve its engineering efficiency for Front End Engineering Design. Adopting an integrated approach will allow Statoil to make better design and investment decisions, while achieving significant improvements in engineering efficiency.

“Selecting the optimal design option for a new offshore platform or process facility requires detailed analysis of various process alternatives and a clear understanding of the investment implications,” said Øivind Nilsen, Vice President of PME, Statoil. “AspenTech’s integrated engineering solution will enable us to cut the time it takes to develop and screen alternative concepts in the conceptual design phase, leading to a reduction in engineering costs and a faster time-to-market.”

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About AspenTech

Aspen Technology, Inc. provides industry-leading software and professional services that help process companies improve efficiency and profitability by enabling them to model, manage and control their operations. The new generation of integrated aspenONE™ solutions are aligned with the key industry business processes, providing manufacturers the capabilities they need to optimize operational performance, make real-time decisions and synchronize the plant and supply chain. Over 1,500 leading companies already rely on AspenTech’s software, including Bayer, BASF, BP, ChevronTexaco, DuPont, ExxonMobil, Fluor, GlaxoSmithKline, Sanofi-Aventis, Shell, and Total. For more information, visit www.aspentech.com.