

Marine

Inocean

Offshore oil vessel specialist advances agility, innovation and business goals with NX and Teamcenter

Products

NX, Teamcenter

Business challenges

Develop special naval solutions for the North Sea and beyond

Integrate complex construction tasks across operations

Combine different construction elements while meeting schedules/due dates

Keys to success

Use NX to advance innovation and accelerate turnaround of highly advanced offshore products and services

Collaborate effectively with international divisions, partners and customers

Implement change management process seamlessly across operations

Results

Easy, fast and secure implementation of product changes, corrections and updates in real time



Inocean designs some of the most extreme and large seagoing vessels for the world's harshest marine environments using Siemens PLM Software solutions

Challenging the Arctic Sea

From underdog to major player, Inocean is now developing complex drilling and floating production storage and offloading (FPSO) vessels for companies operating in oceans all over the world.

Eighteen years ago, Thomas Eckey and Jon Erik Borgen started their company in a backyard office in Oslo. They were determined to build advanced offshore units. In the years since, the company been involved in major marine and offshore

projects all over the world, and has recently landed a contract for developing a drilling ship for Statoil, the Cat I.

The Cat I rig must be designed to operate in Arctic ice up to 1.2 meters thick. This and other challenging, major projects have enabled Inocean to become one of the leading players in the offshore business.

Meeting ecological and economical drivers

Inocean delivers a wide range of specialized vessels and technologies to offshore oil companies. The company is using Siemens PLM Software's NX™ software, NX Nastran® software and Teamcenter® software to develop its solutions.

"Regardless of size, the jobs always require detailed planning, continuous

Results continued

More agile workforce across locations

Higher quality and greater innovation built into deliverables

Improved best practices via integrated digital product development platform, with significant error reduction throughout operations

New business



Inocean CAT I is tailored for Arctic operations in rough, ice-infested waters.

“We are ship and naval architects, designers and innovators – people with highly different and specialized skills. Siemens PLM Software’s NX is contributing to improved cooperation and interchange within our team.”

Frode Kaafjeld
Chief of Communication
Inocean

adjustments, safety and quality assurance,” says Reidar Berthelsen, who heads up Architecture and Computer-Aided Design (CAD) at Inocean. He explains, “In addressing today’s ecological and economical environments, there is no room for errors or delays. We have to meet very high standards; NX is crucial to our processes and critical to accelerating innovation. We are using NX for hull generation and as the main tool for developing our 3D models. Previously, we used Rhinoceros software and Autoship for hull generation and, to some degree, Autodesk Inventor software for 3D-modeling.”

As part of the ship development process, Inocean also needs to understand how the ships’ designs will perform under certain conditions. To do this, Inocean uses simulation because physical testing would be cost-prohibitive and almost impossible to do quickly with such large structures. By using NX as a product engineering

platform, Inocean is able to reduce the number of CAE tools it uses while also adding productivity to the simulation team. “We are using NX Nastran for our non-linear structure analysis, mainly due to potential ship collisions. Using the 3D model generated with NX CAE for analysis enables a streamlined process. Previously, we used Abaqus for analyses, which was expensive. Moreover, we’ve realized a meaningful cost advantage in limiting the number of software providers.

“Product engineering is an iterative process, and considering the number of parts that are part of a vessel assembly, managing each component revision and knowing which part is the latest across hundreds or thousands of components is challenging to manage. Teamcenter offers us important project management value. With the link between NX and Teamcenter, we now have safe version control. Prior to Teamcenter, we didn’t have an effective

“I don’t think our constructions would be feasible without NX.”

Nils Erik Werenskiold
Chief Designer
Inocean

Solutions/Services

NX

NX Nastran

www.siemens.com/nx

Teamcenter

www.siemens.com/teamcenter

Customer's primary business

Inocean offers design and engineering services to the maritime industry worldwide. Its core competence is engineering studies and project execution for offshore platforms and marine structures across the oil, gas and renewable industries.

www.inocean.no

Customer location

Oslo

Norway

Branch offices in Poland and Sweden

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Reidar Berthelsen
Head of Architecture and CAD
Inocean

Using Siemens PLM Software, Inocean now operates a more agile workforce across locations.

way to manage our 3D models. In addition, Teamcenter enables our non-CAD users, such as project managers, to easily review models, perform quality checks and create persuasive presentations."

Merging tradition with advanced technology

While Siemens PLM Software's solutions are essential to delivering products according to ever-demanding cost requirements and schedules, especially in terms of innovation, some traditional approaches remain intact at Inocean. The company recently advanced a unique approach to vessel design by hiring a car designer, Nils Erik Werenskiold, to develop new ideas for long-established Norwegian shipbuilding traditions. "I still use pencils, felt-tip pens and paper to make the first drawings," he says. "I may alter the design a bit before I fully engage the software." Werenskiold is especially enthusiastic about NX for innovation purposes, noting: "NX offers exceptional design advantages and advanced possibilities. In fact, I don't think our constructions would be feasible without NX."

An increasing number of the staff at Inocean has gained or is quickly gaining skills using NX. Today, designers at its Poland and Norway offices are using NX. Frode Kaafjeld, the company's chief of communications, notes, "We are ship and naval architects, designers and innovators – people with different and highly specialized skills. Siemens PLM Software's NX is contributing to improved cooperation and interchange within our team."

Kaafjeld points out that with NX, the company has achieved a higher level of process efficiency: "Across operations, we are more efficient, and we are expecting more as our team employs the advanced capabilities of Teamcenter and NX."

Ultimately, using Siemens PLM Software, Inocean is experiencing smooth sailing in keeping its customers happy and increasing business.

Siemens PLM Software

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