



NAUTICUS MACHINERY

ROLLS-ROYCE VALUES TEAMWORK WITH DNV GL

Customer story - Rolls-Royce

At Rolls-Royce Marine's Centre of Excellence (CoE) in Kristinehamn, Sweden, Nauticus Machinery Shaft Alignment is used mainly for shaft alignment, but also for whirling and axial vibration calculations. One of the aspects of the software and services that Rolls-Royce appreciates most is the close contact with the Nauticus development team.

"It's very positive for us to have close contact with DNV GL's development team," says Lina Järåsen, Team Leader Shaft Analysis at Contract Management, Rolls-Royce AB. "We are able to give feedback, and we feel like we're able to influence the development process of the software. We've had good contacts at DNV GL for many years," she says.

Rolls-Royce has 45,000 employees globally. Rolls-Royce Marine is the second largest division and has 6,500 employees in 34

countries. Rolls-Royce Marine is a world leader in maritime solutions, with manufacturing in the UK, Scandinavia and North America. There are 30,000 vessels in operation that either have Rolls-Royce design or equipment.

Rolls-Royce has been using Nauticus Machinery Shaft Alignment since 2006, and Ms Järåsen has been using the software since 2008. She started at Rolls-Royce in 2007 with a background in mechanical engineering, and working originally on mechanical

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Lina Järåsen, Team Leader, Shaft Analysis at Contract Management, Rolls-Royce

design. She started working with shaft analysis after one year with the company. She is also partly involved in larger projects as a project engineer focusing on technical aspects, in addition to her role in shaft analysis at the Rolls-Royce Marine Centre of Excellence (CoE) in Kristinehamn.

Shaft alignment calculation software
She says that Nauticus Machinery Shaft Alignment represents a highly specialised area of knowledge. “These calculations are not very common. They are highly specific for our industry, and it’s good to work with people who have the expertise,” she says.

There are currently three users of Nauticus Machinery Shaft Alignment at her division. She is the team leader. The other two Rolls-Royce users are doing shaft alignment full time. Calculations for approximately 60 projects are performed every year. In addition, all three offer technical support for the sales support and custom design group.

Reliable software for troubleshooting

“I would like to point out how important it is to have reliable software,” she says. “We are working on a lot of projects in different stages. The yards are always on a tight schedule. It is very good to have reliable software for troubleshooting and also for everyday calculations,” she says.

One strength of the software is its ability to calculate many different conditions within the program. One model can include numerous various conditions, such as static and running condition, with settings chosen by the user to fit the specific project. Except for different static and running conditions, this could be used to calculate how different states of the vessel – such as different draft conditions – affects the bearing loads at different parts of the shaft line.

Hull deflection calculation

“Sometimes we also calculate how hull deflections affect the bearings – and all of the conditions with different bearing offsets are included in one model. This is very useful for us,” she says.

The new release of Nauticus Machinery Shaft Alignment has also been met with approval – especially the new user interface. There are many new features, which the team at Rolls-Royce are currently trying out for use in their every day work.

Software support team responds quickly

Software support has had quick response. They have used the support via email. “We’ve been pleased so far with quick responses – this is also extremely important.”

They are also looking to start using the Torsional Vibration Calculation tool, but have only recently started to get acquainted with this software.

ROLLS-ROYCE IN BRIEF

Rolls-Royce is a global company providing integrated power solutions for customers in civil and defence aerospace, marine and energy markets. It offers a worldwide network of offices, manufacturing and service facilities. In the past decade, Rolls-Royce has transformed its business. The company has become more global and diversified, with over half the order book coming from the Middle East and Asia. Rolls-Royce has 45,000 employees globally.

The Marine division of Rolls-Royce constitutes about 20 percent of the group’s business and has 6,500 employees in 34 countries. There are 30,000 vessels in operation that either have Rolls-Royce design or equipment.

PROFILE

- Customer name: Rolls-Royce
- Web address: www.rolls-royce.com
- Market: Marine – ship design and equipment systems
- Employees: 45,000 globally
- Solution/product: Nauticus Machinery

BRIEF ACCOUNT

Why we chose DNV GL:

- Extensive domain expertise
- Possibility to calculate many different conditions within the program
- Rolls-Royce gains from specific input to DNV GL’s development team

This is what we gained:

- Cooperation with the development team
 - One model can include many different conditions
 - Support team offers quick response time
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