



SOFTWARE - NAUTICUS™ MACHINERY

HHM RELIES ON NAUTICUS MACHINERY

Customer story - Hudong Heavy Machinery

Hudong Heavy Machinery Co., Ltd started using Nauticus Machinery in 2006, and has benefited from gains in efficiency, reduced costs and the quick and accurate calculations that the software offers.

The decision that HHM made in 2006 to rely on DNV GL's Nauticus Machinery was based on thorough investigations and comparisons of different software solutions. They were looking to solve shaft alignment problems on large vessels.

HHM has used Nauticus Machinery in no less than 100 projects for shaft alignment analysis, including for container ships, VLCCs, large bulk carriers and multi-purpose vessels.

"The interface of the software is clear and easy to handle. It covers both basic alignment calculation and verification such as gap and sag, jacking and whirling. Axial vibration calculation is also

included. Most importantly, the calculation results match the actual installation in the projects," says Senior Engineer Sun Xun at Hudong Heavy Machinery Co., Ltd.

The modules used are Nauticus Machinery Shaft Alignment and Nauticus Machinery Shaft Fatigue, that they started using in 2013.

More than 20 years of experience

Mr Sun started working at HHM in 1990, after majoring in mathematics. His experience in propulsion systems including shaft alignment and torsional vibration stretches over 23 years.

“As the number of Nauticus Machinery users is increasing in China, DNV GL and DNV GL - Software have earned a good reputation in the industry. DNV GL is a trustworthy partner.”

Sun Xun, Senior Engineer, Hudong Heavy Machinery

“The most impressive development of Nauticus Machinery is that it now has the function to analyse the strength on shaft components due to ice impacts for ice class vessels,” he says. “DNV GL is one of few companies that can do analysis on ice-class ships. We now use Nauticus Machinery Shaft Fatigue to efficiently determine the load-carrying capacity on the shaft due to ice impacts according to ice-class requirements,” he says.

HHM, the first Nauticus Machinery Shaft Alignment customer in China, has also been satisfied with other timely developments in the software, catering to market needs.

“DNV GL - Software support responds quickly and solves the problems efficiently,” he says. Every year HHM attends the software user conference, which is a valuable chance to communicate with peers in the industry.

Expanding use of Nauticus Machinery

HHM is looking to expand its use of Nauticus Machinery. “We hope that the Nauticus Machinery Torsional Vibration Calculation Tool can support us in developing a four-stroke diesel engine. In addition we are interested in the Nauticus Gear Rating & Faceload Tool, and we hope it can help us on the design and strength analysis of gear boxes,” he says.

During the seven years of using Nauticus Machinery, HHM has gained a lot of experience. “We have used Nauticus Machinery in many successful cases and projects. More and more diesel engine manufacturers, shipping yards and design institutes have started to use this professional software. As the number of Nauticus Machinery users is increasing in China, DNV GL and DNV GL - Software have earned a good reputation in the industry. DNV GL is a trustworthy partner,” he says. “We expect to have more cooperation and assistance from DNV GL.”

HHM IN BRIEF

Hudong Heavy Machinery Co., Ltd is located at Pudong New Area on the south bank of the Huangpu River. Main products include low-speed and medium-speed diesel engines, generators, stationary power plants, diesel engine spare parts, large casting and steel structure components, and machinery and engineering products. HHM, the leader on the Chinese market, is one of few engine builders in China able to manufacture medium-speed diesel engines above 10000 BHP power rates. With over 2 million BHP yearly output capacity of manufacturing heavy duty marine diesel engines, HHM plays a core role in the marine power business.

PROFILE

- Customer name: Hudong Heavy Machinery Co., Ltd.
- Web address: www.hhm.com.cn
- Market: Maritime machinery and engineering
- Employees: 1353
- Solution/product: Nauticus Machinery

BRIEF ACCOUNT

Why we chose DNV GL - Software

- Nauticus Machinery is based on the latest rules and long-term practical engineering experience
- User-friendly interface and easy to learn
- Supports all kinds of propulsion systems including “Ice-class” vessels
- Efficient modelling function and high-speed calculations
- Accurate, reliable results with advanced report printing
- Systematic training and good after-service with technical support

This is what we gained:

- Efficient calculations
- Time-saving in modelling, calculation, analysis, approval
- Cost-saving for on-site shipbuilding and research and development
- Good tool for communication with shipyards, design houses and classification societies
- Effective software for beams and shells
- Good and flexible support