



By Dora Laine

Elan Marine Reduces Development Time with CATIA V5



More about Elan Marine

Elan Marine has been designing and producing luxury long-range power boats and sailing yachts since 1949.

Its first sailing yacht, the ELAN 31, produced in 1983 set the foundation for bigger yachts to come. Then in 1994 Rob Humphreys, a renowned yacht designer began collaborating with Elan Marine. In 2004 they developed a new family of performance cruisers called Impression range. The Impression 344 received the "European Yacht of the Year 2006" award.

The following year the Elan 340 of the renewed Performance range of sailing yachts was awarded "European Yacht of the Year 2007". In the power boat range, Elan Marine decided to expand its brand portfolio in 2001 and to strengthen its position on the powerboat market. The Power range was born in 2003 with the Elan Power 35 and in 2005, the Elan Power 42 was launched. Both boats were designed by world-famous designer Tony Castro.

www.elan-yachts.com

Elan Marine designs innovative, high performance power boats and sailing yachts while simultaneously keeping an eye out for comfort as illustrated by its boats' luxurious interiors and materials. Constantly searching for ways to improve the quality of its products, Elan Marine recently adopted CATIA V5 as the unique solution for its entire development process.

With headquarters in Begunje, Slovenia for all design work as well as production of its sailboats and a shipyard in Obrovac, Croatia for the production of its power boat product lines, Elan Marine employs 320 people in the sailing yacht division and 110 for power boat production. It exports its products all over the world and produces, annually, approximately 300 sailing yachts and 80 power boats and develops two new sailing boat models and one new power boat model per year.

INCREASING QUALITY AND INNOVATION

Elan Marine knows that in order to remain competitive it constantly has to innovate to present the market with innovative products and a new model each year. Elan Marine also places the quality requirements of its customers at the forefront of its development process whether it involves satisfying the needs of experienced

» Thanks to CATIA, we have reduced errors by 60%.

sailors for high performance boats or those of customers whose focus is more on comfort and amenities. These requirements, of course, must be built into the boats while keeping development and production costs at a minimum.

A new boat project begins by analyzing market information from research studies conducted by its marketing department and sales network. Research and development begins by creating preliminary sketches, basic drawings and conceptual illustrations. Once the basic concept is validated Elan Marine submits the preliminary work to its designers, Rob Humphreys or Tony

Castro, who produce basic 3D surfaces and drawings of the future boat. Elan Marine's designers and engineers then detail every part of the boat in preparation for the construction of physical models at the workshop. Simultaneously, the 3D digital mock-up of the future boat is created and fine-tuned until the final 3D mock-up, with all the components of the future boat, is obtained. Molds are then created and a prototype is produced which, once tested, is presented to the customer. Feedback from testing and customers is then incorporated into the model before going to production. This process, from start to finish, is performed using CATIA V5 solutions for yacht design.

INCOMPATIBLE SYSTEMS HINDERED EFFICIENCY AND ACCURACY

"Before adopting CATIA V5, we were having problems due to the fact that we were using different software products that were not only incompatible with one another but also incapable of handling the design of complex products", said Matej Meglic R&D Project Manager, Elan Marine. "Most importantly we were not able to design a complete boat using a single software solution thereby forcing us to deal with data transfer problems and loss of information", he adds.

In 2006, Elan Marine starting using CATIA V5 for surface and solid modeling, analysis, drafting, realistic rendering, bill of materials and

documentation creation. With one solution, it was able to cover the entire development process and increase the precision and quality of its designs. The first boat entirely developed using CATIA V5 was the Impression 514, its biggest and most expensive boat.

Elan Marine received valuable support from CadCam Lab, Slovenia, during its transition to CATIA V5. They provided services ranging from pre-sales analysis and evaluation, assistance during the initial pilot project, user training and implementation of the system. "We continue to provide Elan Marine with support whenever they need it, for example in developing design methodologies," said Renato Sladovic, CATIA PLM Sales & Support, CadCam Lab. "We consider our relationship more as a partnership than as a client-vendor relationship", he adds.



TANGIBLE BENEFITS IN A SHORT AMOUNT OF TIME

Elan Marine has recorded many improvements in its overall process. The first pilot project was accomplished faster using CATIA V5 and accuracy was improved by 20%. "Thanks to CATIA V5, we have reduced development time by 20 - 25% allowing us to roll out three projects per year - two sailing yachts and one power boat", said Matej Meglic. "Our efficiency has increased and we have reduced errors by 60%", he adds. By using one solution for its entire development process, Elan Marine has better control over its documentation and there is no loss of data. Plus, for customers that require special options in their boat, Elan Marine is able to make customizations very quickly.

Future trends at Elan Marine include implementing ENOVIA SmartTeam for data and documentation management. It also plans to adopt CATIA Solutions for composite design as well as CATIA V5 NC Solutions for machining parts that are used for the production of the boat's structure. Elan Marine is currently developing its all new Elan Power 48 and Elan 450 entirely with CATIA V5 +)

For more information:
www.cadcamlab.si