

JSC "Zelenodolsk Design Bureau" Accelerates Approval with ESI IC.IDO



Challenge

When Zelenodolsk Design Bureau designed compartments for marine vessels, approval was a lengthy process. How long depended on the complexity of compartments and the number of departments contributing to design. Full size models of packed compartments were constructed in dedicated mock-up sections, which required a considerable investment in time and money.

Benefits

ESI IC.IDO supported Zelenodolsk Design Bureau in improving the quality of their end product and project documentation. Time spent on corrections made in the final stage of the design process has been reduced, profitability has improved, and end customer value is enhanced.

Story

JSC "Zelenodolsk Design Bureau" (ZDB), founded in 1949, is part of the United Shipbuilding Corporation in Russia. Today, they specialize in developing projects for ships, boats and other marine vessels, for the Russian and overseas markets and they provide services in the areas of design, construction support, development of modernization projects, design assistance & consultation, and experiments & trials.

"We have considered various alternative systems and approaches to optimize the compartment acceptance process, including VR systems with game engines which provided very high level graphics and visualization quality. However, they appeared to be unsuitable for the engineering and construction tasks to be performed. We have chosen ESI IC.IDO, which allows us to make effective decisions not only in the construction domain, but also with ergonomic studies."

S.I. Reshetov

Deputy Director General – Strategic Development
JSC "Zelenodolsk Design Bureau"

One of the challenges they encounter is to get approval for their design of vessel compartments – a process which often involves the costly and time consuming activity of building physical. As these projects require input from various groups and departments within the organization, from electrical engineering to ventilation, approval is often a lengthy process. This inspired the company to search for a collective decision-making software solution. One condition for choosing a VR solution was that Zelenodolsk Design Bureau could to continue to rely on their CAD (Computer-Aided Design) models (developed in Aveva Marine, a CAD software focused on the marine industry) without significant adaptation. Ultimately, their goal was to ensure that their compartment designs fulfilled the construction requirements of complex marine construction projects.

After seeing ESI IC.IDO at various marine industry exhibitions, the Zelenodolsk Design Bureau considered this application for their own needs. After detailed evaluation they promptly came to the conclusion that IC.IDO would fulfill their requirements for Virtual Reality Prototypes that could be used to reduce their reliance on construction of physical mock-ups in their design review processes.

By implementing IC.IDO virtual reality software, all teams involved in the decision-making process are now able to iterate on the design at the same time. They have also improved the quality of their end product, as well as the related marine project plans and construction documents. "Implementation of the solution allows us to quickly and effectively decide on the complex construction tasks which require a collective approach. Lead time for approval has shortened significantly," says S.I. Reshetov, Deputy Director General – Strategic Development.

Today, Zelenodolsk Design Bureau has successfully integrated IC.IDO into the customer approval process for vessel compartments initially designed in Aveva Marine.



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