



## PRODUCT DATA FOR CHAMPION YACHTS

### ► THOMAS OTTO

judel/vrolijk & co is a design agency that's brought forth many a champion racing yacht. The service provider relies on the solution CATIA V5 for Yacht, because it best supports the ever greater complexity of the development projects and the increasing industrialization of yacht building.

For people who want to experience the freedom of the seas on their own exclusive yacht, the design agency judel/vrolijk & co is just the right address. The Bremerhaven-based company is also one of the top choices for competitive sailors: judel/vrolijk & co are among the 5 most reputable yacht builders in the global industry. Developing all designs in close collaboration with clients and shipyards, the company makes racing yachts, production boats, cruising and classic yachts.

Until three years ago, the company's developers ran a whole series of isolated applications, somehow coping with the interface problems that inevitably arose. Among these problems were red-

user know-how up to productive use. judel/vrolijk & co were supported by the consulting and software specialist CENIT, which has years of sector-specific expertise and thus possesses deep process

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undancies, duplications and a confusing data management system – different data formats might contain different information levels. In addition, data exchanges options between these tools were at best limited.

### ► CROSS-BOARD SOLUTION CATIA V5 FOR YACHT

In 2007, judel/vrolijk & co's design chief Tim Ulrich decided it was time to take a step towards modernization. One of the objectives: the development process should finally become consistent. That same year, the design agency therefore installed six CATIA for Yacht licenses. CATIA was introduced project by project, so as to avoid interrupting the normal run of work and to successively build

know-how. Thanks to CENIT's consulting, implementation, and training, the time losses and the general friction involved in the transition could be kept to an absolute minimum.

Design chief Ulrich is highly satisfied with the result: “Today, with CATIA, we can organize large amounts of data from complex projects with great clarity. We now have a setup in which all our users can find their way through the 3D CAD models – and they consist of a maze of components!” The system enables users to save project-relevant data directly to the model. The engineers can thus easily document the current project and the evolving product knowledge within the CAD model itself, and reuse the information in future customer projects.

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judel/vrolijk & co offers its clients the full package of processing steps as they unfold on the virtual boat model. The Dassault Systèmes tool has made the entire process more efficient: "Except for a few fringe aspects, the yacht solution lets us achieve a consistent, cross-board process, covering the hull lines, hydrostatic calculations, deck and structural

expertise in yacht design. But they too have to keep a close eye on costs.

"Our lead times are so short and our budgets so narrow that we have to strictly limit ourselves to those things that are indispensable for building the yacht", says the design chief. In such lean development projects, CATIA's great

growing engineering and documentation requirements without letting our project times get out of hand. With our work, we make it easier for the shipyards to build yachts quickly, at competitive prices, and in compliance with legal provisions."

The benefits of the V5 PLM yacht building model thus lie in high process security, because before any worker handles a plank, the designers have validated the full range of upcoming building processes on their screens. CATIA thus permits an optimal cost structure in series construction, and lets judel/vrolijk & co keep designing champion yachts for future regattas.

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geometries, ergonomics evaluations, derivations from blueprints, system planning, collision control and knowledge management", says Ulrich.

## ▶ CATIA SUPPORTS INDUSTRIALIZED SHIPBUILDING

Recent years have seen a clear shift in responsibility for these full-range development process chains: from the shipyards to the yacht designers. Elements that the shipbuilders once inserted directly into the protomodel are now developed within the CAD model and then manufactured using 3- and 5-axis milling machines or vacuum infusion technology. These operations require high-grade 3D CAD data from which the manufacturing data can be generated in just a few steps. Only if such data is available can production be automated and thus become more cost-efficient. The business success of design agencies like judel/vrolijk & co is rooted in the fact that modern software tools can accurately mirror their long years of

processing depth offers judel/vrolijk & co plenty of support. For example, with V5 the transition from the intuitive (yet parameterized) surface layout to detail and deck design is continuous. "For us, the optimal solution is to merge the information within the CATIA model. The model then cycles through the various steps of the emerging yacht and is incrementally enriched with our knowledge", says Ulrich.

## ▶ EASIER CERTIFICATION THANKS TO V5 PLM

A growing portion of this knowledge is needed to design boats in tune with all aspects of the EU's new guidelines for yacht building. As a consequence of these regulations, the share of the work judel/vrolijk devotes to technical documentation has meanwhile grown to more than 25 percent. The team has less and less time available for actual development work. Ulrich: "CATIA V5 enables us to manage these constantly

## ▶ JUDEL/VROLIJK & CO

has distinguished itself for more than 30 years by designing and engineering successful yachts that are found as top finishers at most major regattas around the world. Boats by judel/vrolijk & co dominate the TP 52 class, considered the most challenging racing category after the America's Cup. judel/vrolijk & co is also well-established internationally as a top builder of fast cruising yachts, fast power boats and production boats. [www.judel-vrolijk.com](http://www.judel-vrolijk.com)

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