

ADVANCED NAVAL ARCHITECTURE SOLUTION FOR INTEGRATED BOAT DESIGN IN CATIA

Naval architects traditionally use disconnected solutions. Keeping pace with the increasing complexity of designs and faster time-to-market pressure in the marine industry requires an integrated solution that would eliminate the long and cumbersome data exchange as well as the multiple data re-entry that lengthen design time and increase the risk of error significantly.

CENIT Naval Architect - a **CENIT MARINE** product - integrates a complete set of functions to cover the most advanced requirements for weight evolution management, hydrostatic, and stability in **CATIA**. **CENIT Naval Architect** and **CATIA** provide a breakthrough end-to-end solution that streamlines the boat design and engineering process to fully enable the naval architecture design spiral from hull form modeling up to the automatic generation of hydrostatic and stability reports.

► PRODUCT FEATURES

- Advanced hydrostatic and stability (intact and damaged) calculations and real time simulations using MAAT Hydro+ volume-based computation engine
- Preliminary hydrostatic analysis with dynamic impact of mass or hull form modifications on the equilibrium
- Automatic hydrostatic and stability reports generation in compliance with classification societies' criteria. Additional criteria can also be customized for specific reports.
- Selection of hull openings, tanks and capacities, ship silhouette and other calculation input directly in the CATIA model
- Management of Light Ship displacement weight maturity from estimated to computed status
- Creation and simulation of loading conditions for variable loads of tanks, freight, and passengers
- Automatic generation of hull lines drawing showing buttocks, stations and waterlines with automatic annotations

► CUSTOMER BENEFIT

- Superior hull surfaces data quality thanks to the powerful CATIA modeler
- Faster and easier modifications throughout the design spiral thanks to data continuity from preliminary design to detailed engineering
- Faster boat models review and optimization, including the most complex models, based on real-time simulation of hydrostatic and stability variations
- Accurate calculation of complex hull shapes such as hydrojet tunnel or bow thruster thanks to volume-based solver

► SUMMARY

- Combined with CATIA, CENIT Naval Architect offers a unique and powerful innovation platform that integrates the complete process from advanced shapes design to stability, fluid dynamics and structure calculations to facilitate the development of increasingly audacious boat designs.



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