

Design and Performance optimization Hull with different speed and Pitching Angle

THE CLIENT

A UAE- based client offering an array of customized solutions to Military, Law enforcement and commercial organization around the world.

THE BUSINESS NEED

Our client was seeking engineering design assistance for hull body along with Performance optimization through CFD simulation. Final design need to be validate with different hull speed, Wave height and pitching Angle.

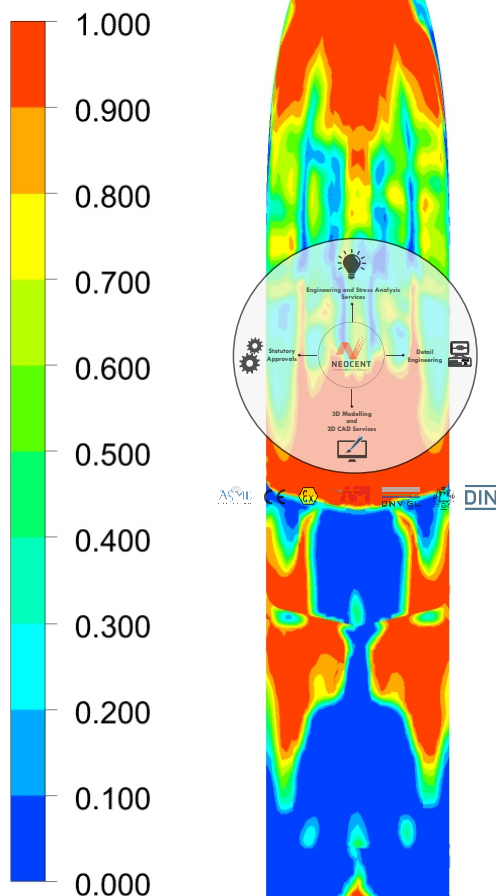
Detail Engineering : Mechanical design calculation, Shape / Aerodynamic study and calculation, Wave Generation and Wave Acceleration calculation.

NEOCENT SOLUTION & DELIVERABLE

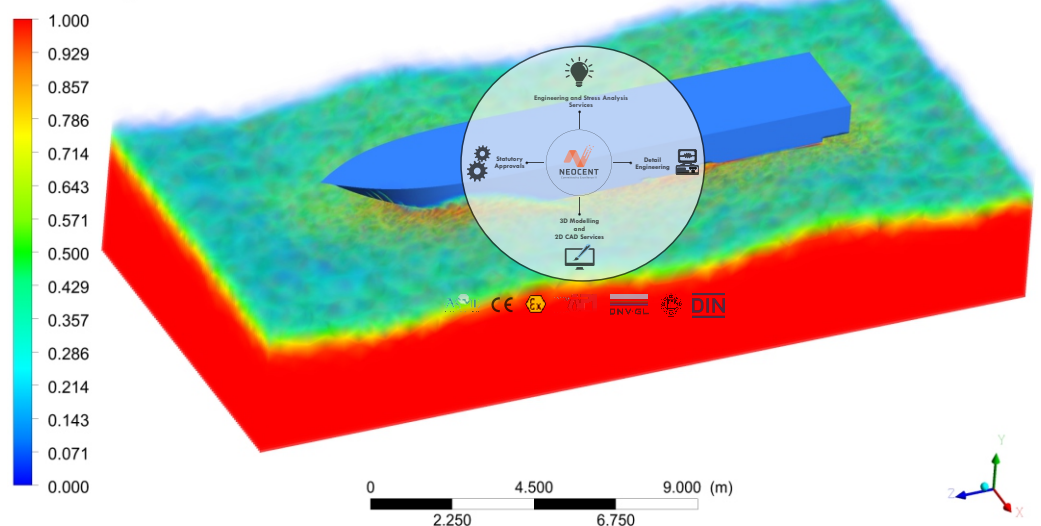
CAD Detailing : G.A. Drawing , Details drawing ,3D Modeling.

Analysis : CFD simulation and Optimization on Hull with Different Speed of Hull (Aerodynamics behavior and reduction of drag force, Different wave Height and Pitching Angle (Stability of hull during pitching and wave height), Bottom hull step optimization for better lift and speed up.

Water.Volume Fraction
Contour 1



Water.Volume Fraction
Volume Rendering 1



Neocent Engineering Services is a multi-discipline engineering services company. Established in 2015, we offer high-quality engineering support solutions to global EPC organizations across some of the industries listed: Automotive, Aerospace, Turbo machinery, Heavy engineering, HVAC, Oil & Gas, Material handling and Process industry.

Neocent provides detailed engineering services to EPC, EPCM, OEM, and PMC as long-term turnkey projects. Our EPCM services include Project Management, Feasibility Studies, Conceptual & Basic Engineering, Detailed Design, Procurement, Construction Management, Commissioning & Start-up, and Operations & Maintenance.

Neocent Engineering's service offering, include;

- Engineering and Stress Analysis Services
- Details Engineering
- 3D Modelling and 2D CAD Services
- Statutory Approvals

Neocent CFD Consulting Services

We provide the best and most comprehensive Computational Fluid Dynamics (CFD) analysis services. We excel in providing precise modelling to aid an accurate CFD analysis and propose effective engineering solutions.

Our Turbo machinery / Rotating machine CFD Analysis Services include:

- Aerodynamics Analysis
- CFD Combustion Analysis
- CFD Fluid-Structure interaction(FSI)
- CFD Heat Transfer Analysis
- CFD HVAC Analysis
- CFD Hydrodynamics Analysis
- CFD Multi phase Flow Analysis
- CFD Turbo-machinery Analysis

We help engineering design validate the geometry through virtual simulation prior to production and avoid last-minute hassles. To ensure accuracy in results, we also perform validity checks such as convergence analysis, boundary conditions review and hand calculations, allowing manufacturers to validate their designs faster.

In brief, clients come to us when they need high-quality work executed and documented to withstand the most rigorous reviews.

Contact Details

Email : sales@neocentengineering.com

Website : www.neocentengineering.com

Linked in : <https://www.linkedin.com/company/neocent-engineering>

India Contact : +91- 8000 860 806

Canada Contact : +1 (226)961-5067

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