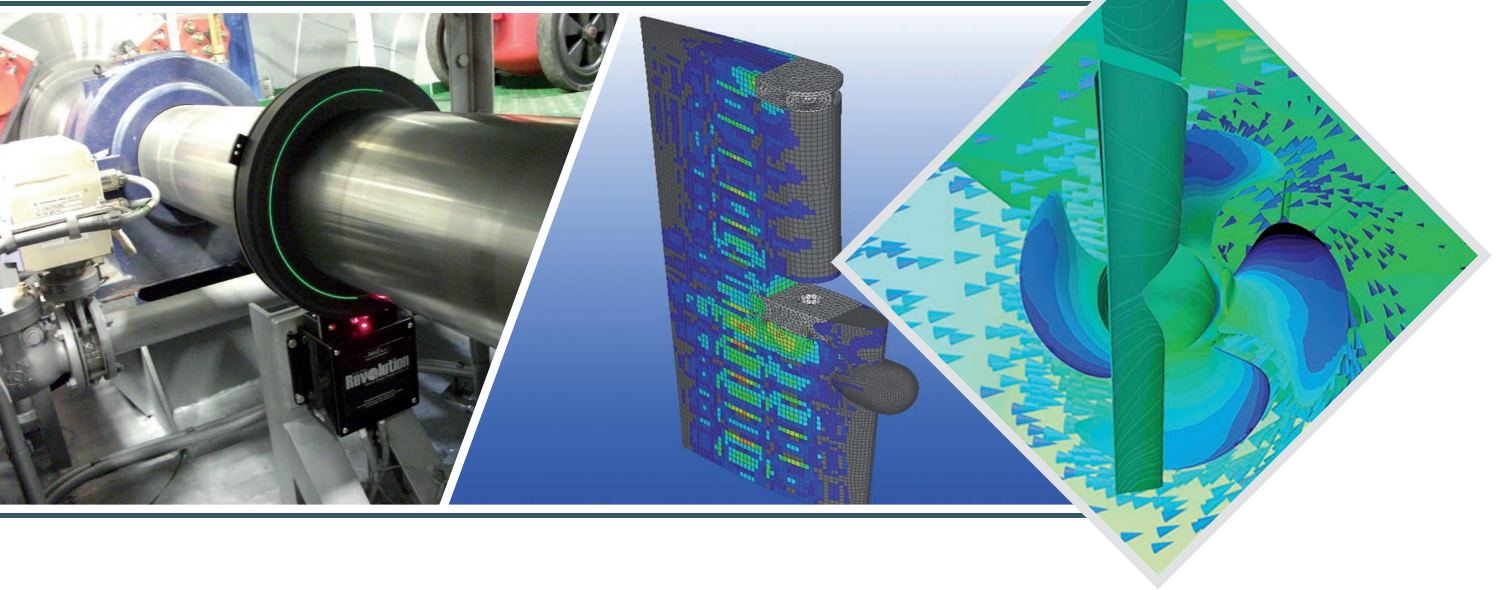
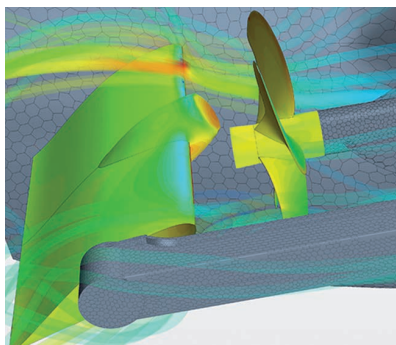


SHIP PROPULSION ENGINEERING



- CFD SHIP HYDRODYNAMICS
- DESIGN AND FEM SIMULATION
- SHIP PERFORMANCE ANALYSIS

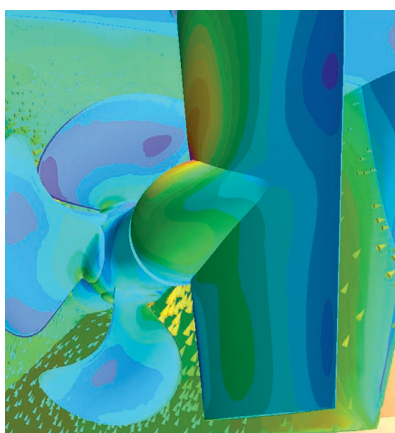


CFD Ships Hydrodynamics

- Ship resistance & powering prediction.
- Hull form optimization.
- Wake calculations & appendage alignment.
- Self-propulsion & bollard pull analysis.
- Seakeeping Manoeuvring & dynamic position analysis.
- Added resistance due to waves.
- CFD simulations for offshore.
- CFD aerodynamics, exhaust, comfort and HVAC.

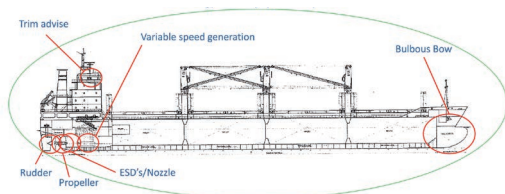
Design & FEM simulation

- Propeller design.
- CPP blade design.
- Propeller 3D scanning.
- Shafting design.
- Rudder design.
- Mechanical systems design & calculations.
- FEM calculations.
- Axial, whirling and vibration analysis on shafts.
- Nozzle design.



Ship performance analysis

- Energy audits.
- EEDI and EEOI verification.
- Ship performance simulator.
- Trim optimization analysis.
- Power measurement on shafts.
- Noise and vibration.



VICUSdt offers an independent advice to shipowners, shipmanagers and charterers always looking for the best ROI and technical solutions.

We can propose different retrofits for your ship, taking into account their feasibility of installation in existing vessels:

- Bulbous bow
- FP Propellers + CPP blades
- Rudders + ESD's
- Variable speed generation for combinator mode
- Trim advise

For shipbuilding and shipping industries, **VICUSdt** provides complete hydrodynamic engineering services with an integral service that includes hydrodynamic optimization for the complete ship. Hydrodynamic analysis capabilities are also applied to the offshore and marine energy sector, carrying out advanced simulations for the oil and gas industry.

Our experience covers also other sectors like hydro power and wind energy, where fluid dynamics is a key aspect for system optimization or development of new technology like advanced water turbines.

When it comes to more conventional engineering services, we can provide tailor-made solutions for different fields of engineering in a very fast and cost efficient way, from the concept stage to manufacturing and including detailed drawing development and FEM calculations.

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