

AMOG Consulting

Engineering Consultancy

Australia



www.amog.com.au



INVENTOR™, ANSYS®, AQWA®, CFX®

Overview

AMOG uses a simulation-driven design process to accelerate the engineering and design development time and to meet industry demands for a more robust and optimised product.

The ANSYS state-of-the-art analytical software offers the ability to interchange simulation and test data between different high specialized engineering disciplines.

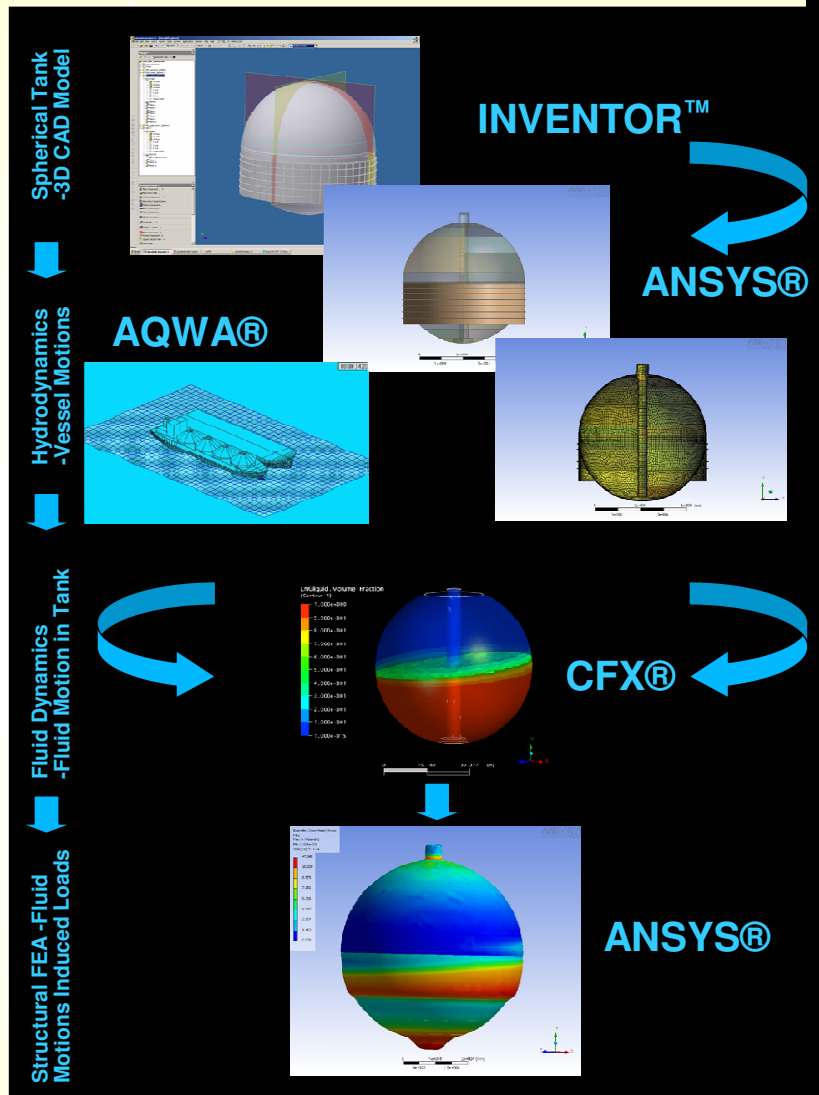
3D parameterised CAD models are used for pre-processing and are exchanged with different ANSYS simulation software packages. This process allows specialist in their respective engineering discipline to stream line the simulation process, exchange data and to communicate design changes through one and the same 3D model.

AMOG Consulting offers a broad range of specialist services to marine construction companies, government organizations, engineering and environmental consultants and the offshore oil and gas, mining and process and defence sectors in high technology niche areas.

Testimonial

"We have successfully integrated ANSYS in our simulation-driven design process and eliminated time costly model preparation and data exchange protocols. This process, especially in the concept phase, enables us to gain a deeper insight in the dependencies between the different engineering disciplines."

Holger Kelle
Senior Engineer



Challenge

Acceleration of the simulation-to-design process in an high technology multidisciplinary engineering environment.

Improve quality by utilization of one 3D-CAD Model for all engineering disciplines.

To provide clients with more robust and advanced designs within their budgets.

To create a bridge between CAD hydrodynamic, fluid dynamic and structural simulations.

Solution

AMOG uses Autodesk Inventor to generate detailed parameterised 3D-CAD models that are exchanged with different ANSYS simulation software packages. The model is modified in Design Modeller and meshed in Workbench Simulation or CFX-Mesh. Via the ANSYS Classic APDL language the mesh is exported for hydrodynamic assessment to AQWA or for fluid dynamic assessments to CFX. The AQWA results can be directly used as an input into CFX and CFX results are used as loads in Workbench Simulation without having to manually transfer the load data.

Benefits

The described process, to generate and exchange data in a multidisciplinary engineering environment, takes significantly less time than would have been required to generate a multitude of models for each simulation environment.

This process alleviates our highly specialized engineers, allowing more time to be spent on quality control, interpretation of results and for the optimisation of the design.