Engineering services

AMS Advanced Mechanical Solutions

At AMS, we deliver advanced engineering and design services tailored to the marine and industrial sectors. Our team combines a solid aeronautical background with deep expertise in naval architecture and composite materials, ensuring precision, reliability, and traceability at every stage of design and production.

From feasibility to certification, we support our clients in developing lightweight, efficient, and cost-effective structural solutions, always conceived through close collaboration and a rigorous engineering approach.

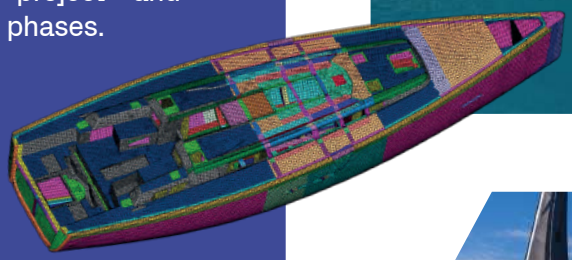
STRUCTURAL ENGINEERING & SCANTLINGS
Comprehensive structural design and analytical verification of hulls, decks, and stiffeners according to all major class rules. Calculations are performed using both standard and proprietary software, ensuring maximum accuracy, safety, and efficiency.

A detailed Scantlings Report supports the certification process, defining structures that are fully compliant while minimising weight and cost in line with the selected construction technology.
Within AMS, Finite Element Analysis (FEA) is a standard part of every scantlings and structural dimensioning process, guaranteeing that all components are verified and optimised before production.

This integrated approach — from concept to as-built configuration — ensures traceability, reliability, and precision across all engineering phases.

FEASIBILITY STUDIES

Technical and economic feasibility studies support clients in defining the most effective development strategy before project execution. Each study analyses production methods, timelines, and cost implications, helping identify the optimal balance between performance, manufacturability, and efficiency. This early evaluation provides a solid foundation for every project and streamlines subsequent design phases.



FINITE ELEMENT ANALYSIS (FEA)

Advanced Finite Element Analysis is used to simulate real operating conditions for both metallic and composite structures, identifying weak points and validating design solutions before production.

This process allows AMS to optimise stiffness, reduce weight, and improve overall structural performance, significantly reducing both development time and cost.

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