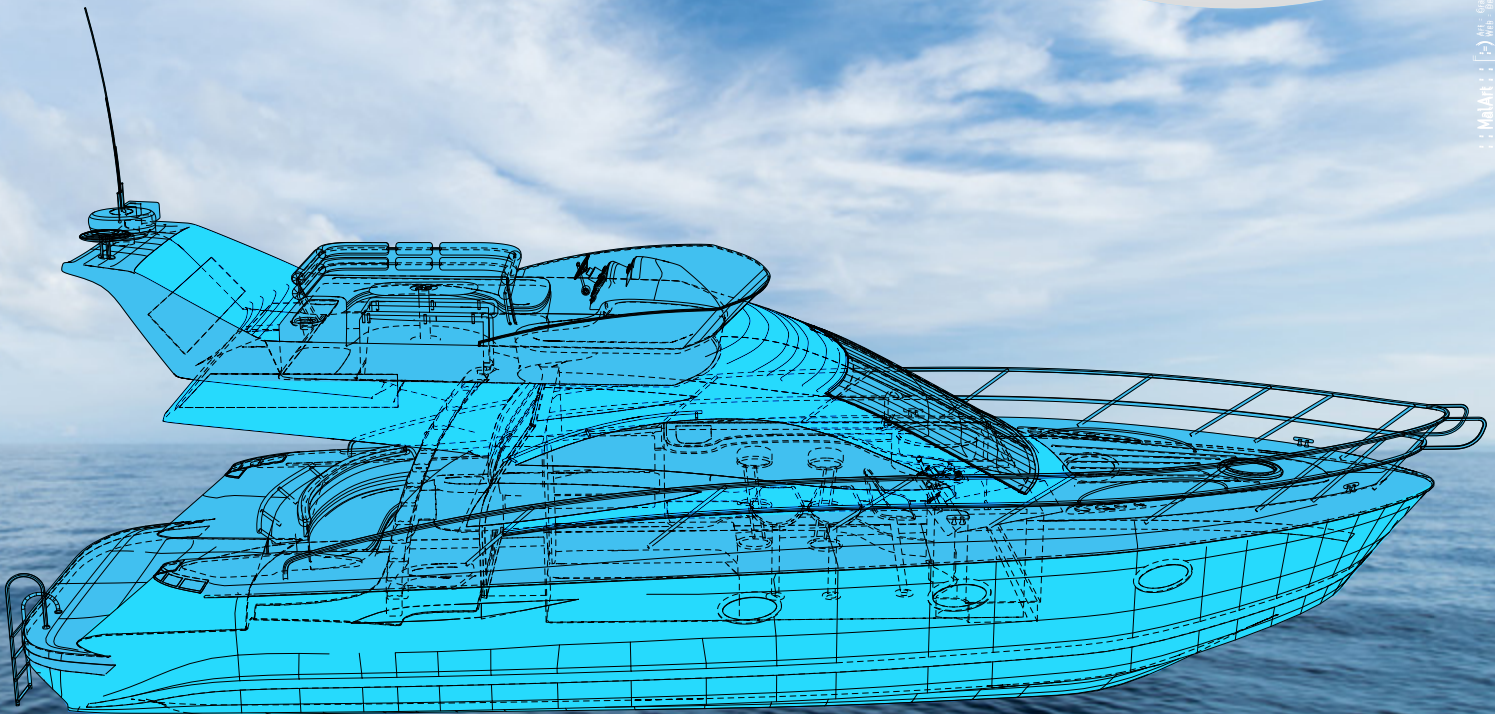


# Engineering

*Thermo-Acoustic Design and Analysis  
Onboard Testing and Verification  
Design and Development*



**MCoating Engineering** designs, develops, and provides integrated systems for thermal and acoustic insulation in the yacht industry. We employ processing software for predictive analysis based on calculation algorithms derived from information provided by designers.

The analysis of data and related considerations relies on dynamic charts generated from the intersection of collected information. The acoustic and thermal quality of vessels, along with well-being conditions, are aspects often overlooked in design and implementation. MCoating Engineering and its partners aim to contribute to these aspects by analyzing such factors.

Additionally, we conduct on-board checks both before and after the application of our products during sea trials.

### The 3D Structural Design and Vibration Analysis using the Finite Element Method (FEM) include:

- 3D Structural Model;
- Scantling Plans;
- FEM Model Generation;
- Modal Analysis;
- Frequency Response;
- Analysis of Frequency Spectra;
- Suggestions for Structural Improvements.

### The Noise Analysis is carried out following these steps:

- Analysis of Structural and Airborne Noise Sources;
- Geometric Arrangement and Material Characteristics;
- Irradiation and Coupling Factor between the Ship Structure and Arrangement;
- Evaluation of Noise Levels;
- Drawing of Acoustic Insulation and Flooring Plans for Noise Level Reduction;
- Analysis of Vibration and Noise Levels Prediction and Noise Control Plan;
- Analysis of Vibration and Noise Levels Prediction and Insulation Study;
- Global Strength Analysis, Vibration and Noise Levels Prediction, and Insulation Study;
- Study of Noise and Vibrations and Sea Trials;
- Global Hull Analysis, Vibrations, and Noise.

**Mcoating Engineering**, together with its partners, can manage various aspects preceding the construction of a yacht.

- General Design
- Naval Design
- Material Sizing
- Detailed Hull Design
- Structural Design
- Supervision during the construction phase
- Final Testing
- Interaction with classification authorities

- DAMEN
- CRANCHI YACHTS
- ITALIANVESSELS
- NUMAMARINE
- ITSG ITALIAN SEA GROUP
- BENETTI
- OVERMARINE
- CRN - FERRETTI
- RIVA PERCING
- FINCANTIERI YACHT
- LURSEN YACHT
- MANGUSTA
- AMER
- PERINI YACHT
- KNRM NEDERLAND
- RIJKSWATERSTAAT NEDERLANDS
- ITALIAN COAST GUARDS
- WIDER YACHS
- CODECASA
- SWEDISH NAVY
- GERMAN POLICE

