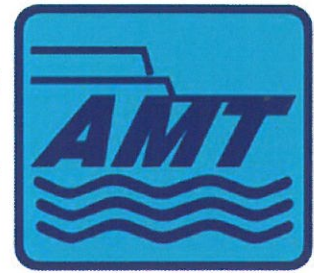


Australian Marine Technologies



Specialty Engineering for Acoustics and Vibration

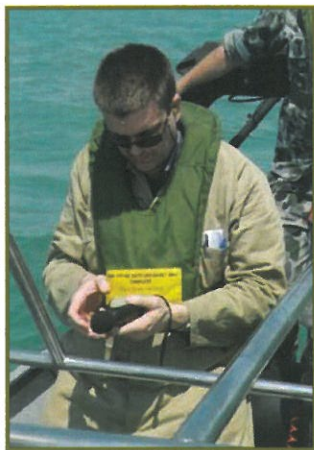
AMT offers a full range of services in the areas of acoustics and vibration across the lifecycle of marine vessels and platforms.

Acoustics

The acoustic performance of marine vessels and platforms is an important consideration for crew performance and comfort. Environmental impact due to underwater and airborne radiated noise and increased vulnerability due to a reduced detection range can all be impacted by poor acoustic performance.

Careful consideration of standards and the development of robust platform and equipment specifications coupled with airborne and structureborne noise prediction during the design, development and manufacture of platforms is critical to achieving compliance.

Development of test specifications and procedures incorporating Australian and International standards followed by noise and vibration testing provides important data for acceptance and trouble shooting of problems.



Airborne noise measurements are an essential element of ensuring compliance with requirements.

Engineering assessments including measurements to AS/NZS 1269, AS 1948 and ISO 2923, prediction and design of modifications and noise control treatments to achieve compliance can be undertaken as well as assessment of noise exposure levels and development of hearing protection programs.

The critical area of underwater radiated noise prediction and problem solving for military and research applications is a specialty of AMT with extensive experience over a range of maritime projects.

Vibration

High vibration levels on marine vessels and platforms can affect crew performance and comfort, acoustic performance and cause structural fatigue and resonances leading to premature equipment failure.

Prediction of vessel vibration levels using Finite Element Analysis and empirical methods, equipment foundation design and resilient mount selection backed up by measurements serve to eliminate excessive vibration levels.



Resilient mounts are used to isolate noise generating equipment from structure to achieve required noise levels. Careful selection of mounts is necessary to prevent unwanted resonances.

Rotating machinery measurements and analysis for condition monitoring and baseline setting can be completed for maintenance assessment purposes.

As requirements for noise and vibration become more stringent to support occupational health and safety, improved crew comfort and habitability, AMT's knowledge base in an integrated approach to solving acoustics and vibration problems enables cost-effective solutions to be provided.