

SELECTED PROJECT PORTFOLIO

Project: Aircraft Carriers Noise Reduction Program
Operator: U.S. Navy
Notes: Reduce Noise Levels during Flight Operations on Gallery Deck to Lower Potential of Noise Overexposure in Personnel

Services Provided:

- Conducted complete acoustic and vibration surveys on US Navy Aircraft Carriers during flight operations, including the use of acoustic array technology, to quantify noise levels and identify transmission paths into compartments below the flight deck.
- Developed verified advanced acoustic modeling tools to accurately model the source/path/receiver, which were then used to develop optimized noise control treatments.
- Designed and installed treatments (including spray-on damping material) based on analysis and test results to reduce noise levels in selected compartments.
- Carried out an extensive measurement program to validate the effectiveness of the treatments.

Results:

- The ability to predict noise levels both before and after noise mitigation treatment using acoustic modeling was validated along with the effectiveness of the treatments. The US Navy is currently implementing these treatments on a wider scale on its aircraft carriers.