



NAVOSH AFLOAT SUCCESS STORY

Noise Abatement: DDG 51 Class Laundry Ventilation

Hazardous noise levels had been documented in the laundry on several DDG 51 class ships, beginning with hull DDG 70. A supply duct that traversed the laundry was designed with three air diffusers set in the bottom of the run of duct, vice branching the duct with diffusers on each branch. In order to adjust the airflow to allow sufficient flow to the farthest diffuser at the end of each duct, perforated metal plates were installed inside each diffuser, parallel to the direction of airflow. Air flowing at greater than 2,000 feet per minute (fpm) across these perforated plates created a new complication – exposure of laundry personnel to hazardous noise levels, ranging from 87 to 92 decibels, A-weighted scale (dBA) near the duct. Removal of the plates without adding turn vanes did not reduce the noise levels to within acceptable levels of 84 dBA or less, and effected the ventilation balance.

After testing confirmed that redesign of the ducting could significantly reduce noise levels; PEO TSC approved a change to rework the ducting. The redesign is being installed on DDG 70 and later hulls and is being considered for backfit. This elimination of a source of hazardous noise will result in removal of all S-2 division personnel, approximately 20 personnel per ship, from the Hearing Conservation Program. POC at PEO TSC is Gus Constant at (703) 602-3476, extension 342.