The Shipboard Automatic Watchstander (SAW): Utilization of Nonintrusive Load Monitoring for Shipboard Automation

by

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Submitted to the Department of Mechanical Engineering
on May 12, 2017, in partial fulfillment of the
requirements for the degrees of
Master of Science in Mechanical Engineering
and
Master of Science in Naval Architecture and Marine Engineering

Abstract

This thesis presents results from operational testing of Nonintrusive Load Monitoring (NILM) systems aboard active US Coast Guard units. Monitoring the ships' electrical system from centralized power distribution points, data collected by the NILMs provide information for: 1) human activity monitoring, 2) energy score keeping, and 3) condition-based monitoring. This thesis shows results from data gathered over two years from both conventional contact current and voltage sensors and novel "noncontact" sensors. This thesis presents the current state of automation available from NILM systems in marine environment applications.

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