

# New Winch Will Enable Less Expensive Maintenance of RMS Component

**Status:** Pending Implementation

## PROBLEM / OBJECTIVE

The Navy's Remote Minehunting System (RMS) consists of a Remote Multi-Mission Vehicle (RMMV) towing an AN/AQS-20 Volume Depth Sonar. Currently there is no winch that meets Navy requirements for conducting shipboard periodic maintenance on the RMS tow cable. The winch that most closely met the requirements was more expensive and required extensive non-recurring engineering and integration. A Navy Metalworking Center (NMC) project team developed and tested a winch and ruggedized container that meets all functional, dimensional, and environmental requirements and costs less to construct. The winch and container will be implemented by the RMS Program Office (PMS 403) and In-Service Engineering Agent (ISEA) to support RMS operations and deployment.

## ACCOMPLISHMENTS / PAYOFF

### **Process Improvement:**

The project team started with a search of commercial off-the-shelf winches that would meet the specific requirements, but found none. They then developed a winch, leveraging the knowledge and experiences of Appleton Marine, Inc., to achieve winch requirements. Midway through the program, additional requirements were levied to make the system I-Flyaway capable. The project team addressed these additional requirements by developing an integral container around the winch to minimize weight while maintaining structural integrity. The system will be transitioned to the ISEA to support RMS operations.

### **Implementation and Technology Transfer:**

Implementation is scheduled for July 2016, when the Tow Cable Maintenance Winch (TCMW) is transitioned to the ISEA for maintenance of the RMS tow cable. Based on successful factory acceptance testing in March 2016, NAVSEA asked that the winch be transferred to NSWC Panama City Division for use with the RMS.



The TCMW will provide a means for shipboard maintenance of the cable between the RMMV and the towed minehunting sonar system. (NMC photo).

### **Expected Benefits and Warfighter Impact:**

- Achieved a unit purchase price of < \$200K
- Adjustable cable speed and tension
- Reduced labor required for cable maintenance
- Improved operational safety

## TIME LINE / MILESTONE

Start Date: February 2014  
End Date: July 2016

## FUNDING

Navy ManTech Investment: \$0.0M  
Cost Share: (TIPS) \$1.5M

## PARTICIPANTS

PMS 403  
PMS 420  
Naval Surface Warfare Center, Panama City Division  
Lockheed Martin Mission Systems and Training  
NMC  
Appleton Marine, Inc.  
ONR Navy ManTech

This article was prepared by the Navy Metalworking Center, operated by Concurrent Technologies Corporation, under Contract N00014-10-D-0062 to the Office of Naval Research as part of the Navy ManTech Program. Approved for public release; distribution is unlimited.