

The following technical paper abstract information was recently submitted in connection with session DOD101,Coatings/Corrosion Control

Offer Number: 14DOD-0042

Paper Title: Portsmouth Naval Shipyard Coatings/Corrosion Control Improvements

Author:

Debbi Desjardins

Portsmouth Naval Shipyard

New Hampshire

( 207 )438 1300

[debbi.desjardins@navy.mil](mailto:debbi.desjardins@navy.mil)

Abstract: 1. Background: Portsmouth Naval Shipyard is a naval installation whose mission is the safe overhaul, repair and modernization of LOS ANGELES and VIRGINIA-Class nuclear-powered submarines. It has been a challenge to get new employees, who are a high percentage of the workforce, proficient in a timely, effective and safe manner. The Coatings and Coverings Division (Code 970) hires large numbers of painters and blasters. Prior to the establishment of the Code 970 Learning Center, employees received traditional classroom lectures followed by on-the-job training. While this provided the opportunity to observe experienced mechanics perform critical tasks, there were limited hands-on opportunities for the students. In this model, exposure to work assignments would be reliant upon the current stage of the project (e.g. a 20-month long submarine engineered). This project platform did not create the "safe-to-fail" environment necessary for trainees to build confidence, and mature into proficient mechanics.

2. The Learning Center: With the expansion of the Continuous Training Development Program, Code 970 capitalized on the opportunity to improve the learning model. Utilizing two tanks salvaged from a decommissioned submarine, the Learning Center was designed and constructed with the assistance of new employees. This was a prime training opportunity utilizing other shop and codes new employees (i.e. the structural shop welders and shipfitters to build and weld the frame and prepare the tank for the learning center). Subject Matter Experts (SMEs) experienced firsthand the challenges of having new workers assigned to their projects. Their vision of what a newly assigned employee should have for requisite knowledge and skills when assigned to a project served as the basis for the design and development of the curriculum. This innovative approach created "safe-to-fail" training environments critical for developing worker skills, proficiency, and competency to fill critical workforce needs.

3. Learning Center Curriculum: Training mirrors all project requirements to facilitate a complete learning experience working on actual submarine structures. Students are assigned to an SME who demonstrates all work evolutions of a project from basic preparation tooling to finish work. SMEs work with students throughout the process, starting with safety and personal protective equipment requirements, using training Technical Work Documents with built in anomalies, imparting advice while building their proficiency, knowledge, skills and abilities to accomplish work safely and with first time quality. Quality Assurance supports with in-process and finish inspections of students work and benefits by training new inspectors.

4. Effectiveness: The Learning Center construction was completed and the first training session commenced in February 2014 with approximately 20 students participating in the six to eight week program. Return on investment of the program has exceeded expectations; teams consisting of new employees achieved planned schedules for critical path tank work on two availabilities with first time quality, USS CALIFORNIA (SSN 781) and USS ALEXANDRIA (SSN 757). Additionally, utilizing expired materials, (e.g. paint, fairing compound, adhesives, and tile) keeps costs to a minimum and reduces hazardous waste program disposition costs.