

Corrosion Control and Maintenance through Applicator Training and Applied Research

Corrosion damage costs the Department of Defense (DoD) between \$10-\$20 billion each year, impacting military readiness and safety. Increased corrosion prevention and control efforts are needed to adequately address the wide-ranging and expensive effects of corrosion on tactical equipment and weapons systems. Proper preparation of substrates and effective application of coating is the single most important step in reducing overall corrosion costs. Having properly trained coating applicators is the most cost effective way of mitigating this problem.

The Iowa Waste Reduction Center (IWRC) at UNI has established Spray Technique Analysis and Research for Defense (STAR4D) as the premier comprehensive coating applicator training program in the United States for the DoD and its contractors. Trainees, supervisors and instructors, as well as DoD members throughout all ranks, promote STAR4D training as integral to the continued success of coatings facilities across the country for improving applicator skills, decreasing hazardous emissions and reducing corrosion, thus saving millions of dollars.

Today, over 3,300 DoD and contract employees from all branches of service have been certified by STAR4D. Training is conducted either in Cedar Falls or at one of six satellite sites strategically located at military facilities across the country.

In order to continue to provide training and applied research to the DoD, UNI's goal is to secure long-term program sustainment and transition STAR4D from congressionally funded to a services-supported program.

Facility:

16,000 ft² facility located in the Cedar Falls Technology Park

Variable-speed conveyor line with five-stage parts washer, liquid paint booth, powder coating booth and combination infrared/convection cure oven

Drive-through blast/preparation booth, paint booth and infrared cure oven capable of handling a vehicle the size of a Humvee

Wide assortment of liquid and powder coating application equipment including plural component systems

State-of-the-art classroom and virtual-reality training systems

Capabilities:

Applied research on pretreatment, surface preparation, coating application, cure time and overall process controls

Training and certification for military and federally contracted painting facilities

Custom development of training curriculum for public and private industry coating facilities

