

Volume 4, Number 3
Fall 2008
Top Stories

Dement Follows Reed as Air Force Lead at Corrosion Forums

Reed Departs as Key Member of DoD-Wide Effort

By Cynthia Greenwood

Lt. Col. Robert Reed has helped spearhead Air Force participation in efforts to change the culture surrounding the corrosion prevention and sustainment of weapon systems—an effort overseen since 2005 by the DoD Corrosion Policy and Oversight Office.

Recently Lt. Col. Reed left the helm of the Air Force Corrosion Prevention and Control Office at Warner Robins Air Force Base (AFB) and became operations officer and chief of F-15 Avionics Flight for the 568th Aircraft Sustainment Squadron at Robins AFB. His successor, Lt. Col. Frank Dement, will serve as the Air Force's principal voice in joint Service discussions of DoD corrosion prevention policy.

In participating in DoD Corrosion Office efforts, Lt. Col. Reed served most prominently on two committees, one that addresses policy matters and another that handles metrics, impact, and sustainment (MIS) issues, including a multi-phase landmark cost of corrosion study. (Participants refer to these committees as working integrated product teams [WIPTs].)

Three years ago, when the DoD Corrosion Office began tri-annual forums involving Lt. Col. Reed and other military and industry corrosion experts, the Air Force had unique experience to lend.

"The Air Force was a key contributor to the OSD (Office of the Secretary of Defense) corrosion effort in the early days," Lt. Col. Reed said. "We were the only Service that had a corrosion office, and we had accumulated experience in this area before the days of DoD acquisition reform. We had also been doing cost of corrosion studies since the early 1990s. We offered the OSD effort resources such as old military handbooks and standards for corrosion prevention and control and a baseline methodology for doing cost of corrosion studies."

"We had completed four cost of corrosion studies by the time OSD kicked off its own multi-phase study, and this helped the group put fundamentals in place and capture our lessons learned," he added. "Essentially the MIS WIPT built upon the basic Air Force package in developing OSD's more elaborate cost of corrosion studies, which are proving highly effective."

About six months ago, Lt. Col. Reed saw impressive progress in the DoD Corrosion Office's method of allocating funds to projects combating corrosion in the Army, Navy, Air Force, Marine Corps, and Coast Guard equipment. "The DoD Corrosion Office's recent studies are capturing the high cost drivers and the roots of the most costly problems," he said.



Lt. Col. Robert Reed

"Towards the end of my tour, I was pushing hard to use cost of corrosion data to help the Air Force choose which of our own projects to fund," he said. "Early on, we were picking Air Force projects and receiving matching DoD dollars on projects based on perceived need. But we also saw that some of our high-priority projects weren't being funded. Now that participants in the DoD corrosion effort will have all of the cost of corrosion data and understand where the Pentagon's money needs to be spent, the Air Force should become more competitive in applying for DoD matching funds for our critical projects."

Lt. Col. Reed concluded: "Within the next six to seven months, the MIS WIPT will have a full set of data on all military services, allowing DoD corrosion experts to accurately identify where we should be investing our dollars. Moving forward, DoD will fund corrosion projects that give the public the best value, not just the best return on investment."

Before Lt. Col. Dement assumed the helm of the Air Force Corrosion Prevention and Control Program in May 2008, he worked closely with his predecessor to understand the Air Force's role in the DoD Corrosion Policy and Oversight Initiative.

"At future OSD corrosion forums, I will focus on producing an Air Force Strategic Plan for corrosion mitigation, using the results of the Air Force cost of corrosion study and the OSD strategic plan, in order to effectively stabilize and potentially reduce the \$1.5 billion in corrosion-related maintenance, which the Air Force spends every year," Lt. Col. Dement said. "While our main emphasis is on Air Force corrosion issues, we plan to coordinate with the other Services, particularly about common airframe issues. OSD has provided us with some seed money to kick off phase one of our mitigation plan."



Lt. Col. Frank Dement

As chief of the Air Force Corrosion Prevention and Control Program at Robins AFB, Lt. Col. Dement leads an experienced team of civilian and military engineers, maintainers, and support contractors. He serves as the Air Force's single focal point for all system corrosion guidance and policy.

His office maintains six general series corrosion technical orders; transitions technology to depot and field users; conducts corrosion maintenance site surveys; supports weapon system and Air-Force level corrosion prevention advisory boards; and conducts cost of corrosion maintenance studies, among a host of other responsibilities.

"Our office will focus on engaging with our ongoing and upcoming acquisition programs more effectively to ensure that effective corrosion prevention is included as early as possible in life-cycle planning," Lt. Col. Dement said. "This is our best opportunity to produce game-changing effects. We will also adopt a corporate approach to reducing hexavalent chromium, given impending OSD policy and the European Union's (EU) reform effort (related to the EU chemicals policy) known as REACH (Registration, Evaluation, Authorization and Restriction of Chemicals). We plan to identify opportunities to reduce corrosion-related inspection and repair in our existing weapon systems, such as the use of corrosion environment monitoring sensors in

support of the High-Velocity Maintenance initiative at the Robins Air Logistics Center, which is targeting a 50 percent reduction in C-130 programmed depot maintenance in order to significantly increase aircraft availability. We also aim to refocus our maintenance site surveys to look at significant corrosion drivers associated with specific weapon systems, support equipment, and bases."

Before assuming his current post, Lt. Col. Dement served as the Air Force Research Laboratory Commander's Representative to the Air Logistics Centers. Dement holds bachelor's and master's degrees in aeronautical engineering and has worked on such diverse systems as the Titan IV, Atlas II, Pegasus SLV, F-5, C-17, F-117, F-22, T-38, and A-10.

In his new position, Lt. Col. Reed is second in command of a 60-member sustainment squadron directing the logistics management of more than 650 F-15 aircraft in six major commands. He also leads, plans, and manages avionics logistics and technical support needed to sustain all F-15s. While he served as chief of the Air Force Corrosion Prevention and Control Program (then a major), his leadership and innovation were instrumental in improving Air Force aircraft fleet

availability, while reducing worldwide corrosion supportability costs. He led the execution of an Air Force Special Operations Command corrosion survey team that discovered and corrected mission-crippling corrosion on the wings of C-130 aircraft long before any war fighters or missions were affected. He proposed realistic sheltering solutions for mitigating environmental impacts on deployed aircraft support equipment, which reduced corrosion by a factor of four and saved more than \$3 million in maintenance costs.

Lt. Col. Reed's creative problem-solving led to innovative solutions for pervasive fleet corrosion issues. His plan to increase wash cycles from 120- to 180-day increments for aircraft based in temperate climates reduced maintenance workload, while increasing aircraft availability by 4,000 days per year. Lt. Col. Reed's efforts also helped establish the first-of-its-kind Headquarters Air Force Corrosion Advisory Board, while his work across sister Services and OSD helped unify a \$2 billion corrosion program.

Lt. Col. Reed has a Bachelor of Science degree in engineering mechanics from the U.S. Air Force Academy and a master's degree in engineering management from Southern Methodist University.