

Volume 2, Number 3  
Fall 2006  
Top Stories

## Three Military Services Fight Corrosion Together

### *CorrDefense Featured Interview*

Three military services have set a broad precedent for working together to share knowledge, fight corrosion, and preserve valuable aircraft and DoD assets. *CorrDefense* spoke to **Craig Matzdorf, Naval Air Systems Command's senior corrosion engineer**, about the history of this successful partnership, which has saved enormous taxpayer dollars for more than two decades.



***CorrDefense:*** We understand that before the Joint Council on Aging Aircraft (JCAA) formed in 2002, there were various successful, informal attempts by Naval Air Systems Command (NAVAIR), Army Aviation and Missile Command (AMCOM), the Air Force, the Coast Guard, NASA, and the Federal Aviation Administration (FAA) to share corrosion prevention technologies. Can you describe one or two of these efforts?

*Craig Matzdorf*

- ***Matzdorf:*** Back in the late 1980s, the Joint Working Group on Corrosion Prevention and Control (JWG-CPC) was formed to facilitate corrosion prevention and control technologies across Services and agencies. In the mid to late 1990s the Air Force partnered with the Federal Aviation Administration to establish the first Aging Aircraft Conference, which has grown in membership to become the joint DoD/FAA/NASA Aging Aircraft Conference. The conference has its 10th meeting scheduled for April of 2007.

***CorrDefense:*** How did the JCAA's Corrosion Steering Group get started? What value did it provide to the American taxpayer, and why was it necessary?

- ***Matzdorf:*** The Corrosion Steering Group has its roots with the JWG-CPC and was established to do a couple of key things: baseline and work on key, joint corrosion issues such as corrosion preventive compounds (CPCs) and disseminate information about corrosion problems and solutions to the joint community. The benefits from this include eliminating redundancy of work, development of joint requirements, completion of common assessment requirements, and joint implementation. All these factors make better use of resources and speed the evaluation and implementation of new technologies across the Services. I've been involved with the Corrosion Steering Group since 2003 and I've served as its chairman since last year. I plan to keep the focus of the group on key, joint Service problem areas, helping to baseline or "roadmap" technology areas the group considers most important, and then secure funding to work on areas within the roadmap that are unfunded.

***CorrDefense:*** I understand the Corrosion Steering Group has spearheaded a number of joint initiatives involving the three Services. What kind of information and technology exchange resulted from the CSG's early efforts?

- ***Matzdorf:*** A good example is the Corrosion Preventive Compound Roadmap that was created and used to prioritize efforts for the Corrosion Steering Group as well as individual services. Based on joint-service input, two CPC specifications, MIL-C-81309 and MIL-C-85054, were revised to include more stringent corrosion and other requirements. These specifications are maintained by NAVAIR but used by all the services. In the end, everyone should get better CPC products that reduce corrosion on our aircraft.

**CorrDefense:** "How did the CSG help with the formation of the AMCOM NAVAIR Corrosion Partnership (ANCP)?"

- **Matzdorf:** The key members of the ANCP were the Corrosion Steering Group leads for both services that jointly developed the agreement and execution plan for NAVAIR to provide engineering and technology support to the Army's RESET Program (see "[Keeping Helicopter Crews Safe](#)").

**CorrDefense:** Since the DoD Office of Corrosion Policy and Oversight formed, how has the partnership grown and improved? What other programs have been accomplished under the partnership?

- **Matzdorf:** The OSD Corrosion Integrated Product Team (IPT) has provided a mechanism for the Corrosion Steering Group to communicate corrosion policy and guidance much more effectively at the top level. The development of the Corrosion Guidebook and, subsequently, the Aerospace Appendix K by the steering group has been very influential for us in guiding new platform design and helping with fielded platforms. This appendix has set the stage for other product areas to lay out lessons learned for future spiral versions of the *Corrosion Guidebook*.

OSD has also helped us do larger-scale efforts, such as AvDEC's antenna gasket technology and Improved Magnesium Coatings, which none of us could get internal funding to do on the same scale. This has fed into the Defense Logistics Agency's Reliability Program, which is now supporting Corrosion Steering Group-endorsed efforts. These two sponsors make a great 1-2 combination to attack large-scale corrosion problems that no single service can usually afford.

**CorrDefense:** What are some notable technologies implemented DoD-wide that arose from OSD funded, Corrosion Steering Group-led projects?

- **Matzdorf:** The premier example is AvDEC conductive gaskets. The Services each had performed field demonstrations but were struggling to implement them broadly. I developed the proposal for OSD Corrosion IPT support for this, which has now led to very broad implementation of the gaskets across DoD, including new aircraft. Other technologies include Tagnite 8200 for magnesium components and the Metalast aluminum anodizing process. Technologies performing well that we plan to implement in the next one to two years include new melamine cleaning pads, the mildew remover kit, higher performing CPCs qualified to MIL-PRF-81309 and MIL-L-87177, advanced non-chromate primers and topcoats, and open-air aircraft shelters.

**CorrDefense:** How has the Corrosion Steering Group influenced how NAVAIR, AMCOM, and the Air Force approach their long-range planning?

- **Matzdorf:** The development of the CPC roadmap base-lined all the current and planned activities in the services. This helped secure funding for the specification changes and split up the work under the roadmap to avoid duplication. For 2007, we are developing a new roadmap for "Cleanability." This will be used in a similar fashion as the CPC roadmap, with particular focus on securing funding for parts that are critical to solve joint Service problems that are currently not funded. In the future, we plan to tackle other technology areas based on highest priority.

**CorrDefense:** As Service partners, NAVAIR, AMCOM, and the Air Force have also undertaken to revise DoD's specifications and qualified products list (QPL) testing. Why is this important?

- **Matzdorf:** Keeping specifications up to date is critical to supplying the best corrosion-fighting products to the field, while still meeting the stringent operational requirements. As better products are introduced, corrosion requirements in specifications can be adjusted so that QPLs represent the best available product for a given specification.

**CorrDefense:** As a result of OSD and Defense Logistics Agency support, each of the three Services has taken the lead in managing joint projects since 2005. Can you highlight what a few of these efforts have accomplished?

- **Matzdorf:** I've mentioned the AvDEC and magnesium coatings efforts that NAVAIR has led. A new effort I am leading is for sheltering and dehumidifying aircraft. Each Service is evaluating sheltering and dehumidification in a different way. The results of the field testing will help us to decide how to implement the technologies across the Services.

AMCOM has led the AMCOM-NAVAIR Corrosion Partnership effort. Through this project we have been able to jointly assess the new melamine cleaning pads and develop a mildew remover kit. In addition, this effort is supporting a broad assessment of MIL-L-87177 CPCs compared to MIL-PRF-81309 CPCs in electrical applications.

The Air Force is leading efforts to complete a geographic assessment of the corrosivity of sites all over the world, where DoD assets are located, particularly aircraft. The data from this study has been useful in deciding where to implement new technologies such as extended wash cycles and maintenance intervals for applying CPCs. The Air Force is also demonstrating and validating the performance of a new magnesium-rich primer. This product has a unique potential to perform, as well as chromated primers in certain applications, and may protect magnesium components in a way that no other current products can.

**CorrDefense:** In your view, will this joint-Service partnership continue to evolve, or will this type of joint effort live or die by a specific funding source such as OSD? In other words, does the partnership transcend a specific program?

- **Matzdorf:** I believe the Corrosion Steering Group will continue independent of any funding source. It has been in existence in various forms for over 20 years and as long as there are joint corrosion problems, there will be good reason for the group to work together to solve them.