



ADVANCED SURFACE ENGINEERING TECHNOLOGIES
FOR A SUSTAINABLE DEFENSE

ASETSDEFENSE WORKSHOP 2018
SUSTAINABLE SURFACE ENGINEERING FOR AEROSPACE AND DEFENSE

AUGUST 21-23, 2018

COLORADO BALLROOM B, 2ND FLOOR
GRAND HYATT DENVER
DENVER, CO 80202



MONDAY, AUGUST 20, 2018

3:00 – 7:00 PM

Check-in & Registration
Colorado Foyer, 2nd Floor

TUESDAY, AUGUST 21, 2018

7:00 AM	Check-in & Registration <i>Colorado Foyer, 2nd Floor</i>	Breakfast <i>Colorado Ballroom A, 2nd Floor</i>
8:15 AM	Welcome and Introduction	Robin Nissan, <i>Weapon Systems & Platforms Program Manager, SERDP & ESTCP</i>
Session 1: Defense Needs and Approaches, Environmental Issues		
8:30 AM	We Need Your Ideas, Products, Services and Platforms: The New Way of Doing Business with the Navy & Marine Corps	Matt Sheehan, <i>Navy CPP Executive</i>
8:50 AM	Cadmium and Hexavalent Chrome Reduction Strategy and Roadmap	Scot Bryant, <i>Noblis</i>
9:10 AM	International Aerospace Environmental Group (IAEG) Hazardous Chemical Replacement Projects	Jennifer Branton, <i>Boeing Research & Technology</i> Steve Gaydos, <i>Boeing Research & Technology</i>
9:30 AM	Impact Assessment, Cr6+, and Roadmap for Chromium	Drew Rak, <i>Noblis</i>
9:50 AM	Understanding the Derivation and Impact of Occupational Exposure Levels: CrVI Example	Mark Johnson, <i>US Army MEDCOM APHC</i>
10:10 AM	Break	
Session 2: Progress in Replacement at Depots and OEMs		
10:30 AM	EU REACH Authorization – Challenges for the Defense Industry and Potential Solutions	Kai-Sebastian Melzer, <i>Ni Institute (Belgium)</i>
10:50 AM	Updates on Sustainable Surface Finishing and Coatings for Army Weapon Systems	Noah Lieb, <i>Jensen Hughes</i> Pat Taylor, <i>Jensen Hughes</i>
11:20 AM	Cd and Alternatives for Electrical Connectors	Mark Smith, <i>Souriau</i> Robin Montpellier, <i>Amphenol-Socapex (France)</i>
11:40 AM	Sustainability Analysis and its Application to ZnNi	Michael Bruckner, <i>Noblis</i>
12:00 PM	Lunch <i>Colorado Ballroom A, 2nd Floor</i>	
1:00 PM	Development of MIL-STD for ZnNi Plating, Low Hydrogen Embrittlement Electrodeposition on Landing Gear	Dave Frederick, <i>Hill AFB</i> Craig Pessetto, <i>ES3</i>
1:20 PM	Integration of LHE Alkaline Zn-Ni into NAVAIR Overhaul and Maintenance Facilities	Jack Benfer, <i>NAVAIR FRCSE</i> Jay Randolph, <i>ES3</i>
1:40 PM	Cd and Chrome VI Elimination Technologies for Aircraft Components Using Multiple Advanced Coatings and Auxiliary Processes	Clayton Elliott, <i>USAF Warner Robins Air Logistics Complex</i>
2:00 PM	REACH and F-35	Scott Fetter, <i>Lockheed-Martin Aeronautics</i>
2:30 PM	Trivalent Alternatives Under Evaluation at Boeing	Kristen Williams, <i>Boeing Research & Technology</i>
2:50 PM	Replacement of Cadmium and Hexavalent Chrome in DoD Ground Systems: Clean Coatings for Common Hardware & Corrosion Control	William Slocumb, <i>BAE Land Systems</i>
3:10 PM	Break	
Session 3: Corrosion 1 – Accelerated Corrosion Testing and Tracking		
3:30 PM	Accelerated Corrosion Test Development	Jim Dante, <i>SWRI</i>
3:50 PM	USAF Corrosion Test Development	Chad Hunter, <i>Wright Patterson AFB</i>
4:10 PM	Beyond Chamber Testing: A Dynamic Approach to Interrogate Current and Future Coating Chemistries for DoD	John Escarsega, <i>Army Research Laboratory</i> Tom Considine, <i>Bowhead Total Enterprise Solution, LLC</i>
4:30 PM	Modeling Galvanic Corrosion in Cadmium and Zinc-Nickel Plating Systems using Mixed Potential Theory	Kristen Williams, <i>Boeing Research & Technology</i>
4:50 PM	New Accelerated Corrosion Test Methods for Atmospheric Corrosion on Aluminum Aircraft	Ekaterina Badaeva, <i>Boeing Research & Technology</i> Nels Olson, <i>Boeing Research & Technology</i>
5:10 PM	Adjourn	
6:00 – 8:00 PM	Poster Session & Networking Reception <i>Colorado Foyer, 2nd Floor</i>	

Side Meetings listed on page 4.

WEDNESDAY, AUGUST 22, 2018

7:00 AM	Check-in & Registration <i>Colorado Foyer, 2nd Floor</i>	Breakfast <i>Colorado Ballroom A, 2nd Floor</i>
Session 4: Corrosion and Wear Coatings		
8:15 AM	Low Impedance Passivates for Electrical Connectors	Matt O'Keefe, <i>Missouri University of S&T</i>
8:35 AM	Replacement Materials for Hexavalent Chromium Conversion Coatings - Qualification and Implementation Processes	Paul Robinson, <i>AMCOM G-4</i> Fred Lafferan, <i>Army Research Laboratory</i>
8:55 AM	Aluminum Alloys Optimized for Sacrificial Protection	Julia Russell, <i>NAVAIR PAX</i>
9:15 AM	nCo-P Composite Coating	Ilya Srivastava, <i>Integran Technologies</i> Jon McCrea, <i>Integran Technologies</i>
9:35 AM	Break	
Session 5: Joint Session with ONR SBA – Corrosion and SCC Modeling and Prediction		
10:00 AM	Overview of SBA Combined Loading Efforts	Bill Nickerson, <i>ONR</i>
10:30 AM	Galvanic Compatibility Assessment: New Methodology and Standardization	Victor Rodriguez-Santiago, <i>NAVAIR PAX</i>
11:00 AM	Curve-Crossing for Material Selection	Siva Palani, <i>Corrdesa</i>
11:30 AM	Development of a Computational Modeling Framework to Support Prediction of Cumulative Galvanic Corrosion Damage in Aircraft Structures	Tom Curtin, <i>CMI BEASY</i> Robert Adey, <i>CMI BEASY</i>
12:00 PM	Lunch <i>Colorado Ballroom A, 2nd Floor</i>	
Session 6: Repair: Localized, Structural, Additive Manufacturing, Machining		
1:00 PM	Fume Suppressants and Other Regulatory Issues for Platers	Christian Richter, <i>The Policy Group/NASF</i>
1:20 PM	New and Proposed Changes to ASTM F519 Hydrogen Embrittlement Test Method	Steve Gaydos, <i>Boeing Research & Technology</i>
1:40 PM	Portable Cold Spray Repair Development	Tim Eden, <i>Pennsylvania State University</i>
2:00 PM	Cold Spray for Hard Chrome Replacement	Aaron Nardi, <i>Army Research Laboratory</i>
2:20 PM	Computer Aided Engineering Approach in Nickel Electroforming Process to Fight Off the Effects of Abrasive Sand on Rotorcraft Erosion Shields Performance	Agnieszka Franczak, <i>Elsyca (Belgium)</i>
2:40 PM	Use of Brush Plating and Anodizing for Aerospace and Defense	Danijela Milosevic-Popovich, <i>SIFCO</i>
3:00 PM	Non-Drip Brush ZnNi for Touch Up for Localized Repair	Chris Venturella, <i>UDRI</i>
3:20 PM	Break	
3:40 PM	Selective Electroplating Improvement for a Localized Protection of Aerospace Components	Luzmarie Youngers, <i>NAVAIR FRCSE</i> Jack Benfer, <i>NAVAIR FRCSE</i>
4:00 PM	Advances in Low Energy Welding (Electrospark Deposition)	Nigel Scotchmer, <i>Huys Industries Ltd</i> Foss Jiao, <i>Huys Industries Ltd</i>
Session 7: Chrome-Free Paint Systems and Depainting		
4:20 PM	E-2/C-2 OML Flight Testing of Deft/PPG 084 NC Primer	Julia Russell, <i>NAVAIR PAX</i>
4:40 PM	A Plasma Electrolytic Process to Remove Polymeric Coatings without Damaging Non-Ferrous Metallic Substrates	Michael Froning, <i>USAF - Material Command</i>
5:00 PM	Adjourn	

Side Meetings listed on page 4.

THURSDAY, AUGUST 23, 2018

7:00 AM	Check-in & Registration <i>Colorado Foyer, 2nd Floor</i>	Breakfast <i>Colorado Ballroom A, 2nd Floor</i>
Session 8: Other Topics		
8:15 AM	Electrochemical Machining to Remove SCCP Coolants in Manufacturing	Chris Humiston, <i>Benet Labs</i>
8:35 AM	Chlorinated Paraffin in DoD Metalworking Fluids / ESTCP Alternate Machining Technologies Waterjet	Frank Campo, <i>Benet Labs</i>
8:45 AM	Green Waterjet Machining Technology	Peter H.T. Liu, <i>OMAX Waterjet Corp.</i>
9:00 AM	C-COAST Corrosion Test Facility	Ted Sheridan, <i>NRL Key West</i>
9:20 AM	Accelerated Corrosion Test Method Development for Protective Coatings and Materials	Eliza Montgomery, <i>NASA</i> David Walters, <i>PPG</i>
Breaking News		
9:50 AM	Combination Anodize/Electroplate Hybrid: A New Coating for Light Metal Components	Glen Slater, <i>Cirrus Materials Science (NZ)</i>
10:00 AM	Trivalent Chromium Passivation - Enhancement of the Layer Formation by Surface Active Substances	Nabil Zaki, <i>Surtec International</i>
10:10 AM	Break	
Session 9: Joint Session with ONR SBA – Corrosion Control Coatings		
10:30 AM	Al-Rich Primer Development	Brenna Skelley, <i>NAVAIR PAX</i>
11:00 AM	Durable Sol-Gel Surface Treatment to Control Cathodic Current Density	Adam Goff, <i>Luna Innovations</i>
11:30 AM	HP Cold Spray for Corrosion/Crack Repair	Luke Brewer, <i>University of Alabama</i>
12:00 PM	Closing Remarks	Robin Nissan, <i>SERDP & ESTCP</i>
12:05 PM	Adjourn Main Meeting	



SIDE MEETINGS

Day	Time	Title	Lead	Room
Tuesday	12:00–1:00 PM	Navy Side Meeting <i>(Invitation Only)</i>	Matt Sheehan <i>Navy CPP Executive</i>	Mt. Harvard 3 rd Floor
Wednesday	12:00–1:00 PM	Cd Replacement	Matt O’Keefe <i>Missouri University of S&T</i>	Mt. Harvard 3 rd Floor
Wednesday	12:00–1:00 PM	PFOS Fume Suppressants	Christian Richter <i>The Policy Group/NASF</i>	Mt. Yale 3 rd Floor
Wednesday	6:00–7:30 PM	Discussion on Regulatory Issues	Drew Rak, <i>Noblis</i>	Colorado Ballroom B 2 nd Floor
Thursday	1:00–4:00 PM	Working Group on Corrosion Analysis and Test Methods	Keith Legg, <i>ASETSDefense</i>	Colorado Ballroom B 2 nd Floor
<i>A discussion on corrosion test development programs and whether to form a Working Group to help coordinate and share data. This may include corrosion test development, corrosion prediction, corrosion measurement. All attendees interesting in corrosion testing, analysis, prediction are welcome to attend.</i>				