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DoD Metal Finishing Workshop

Sponsored by ESTCP and SERDP

May 22-23, 2006

L'Enfant Plaza Hotel

Washington, DC

Plating and other metal surface finishing is a common and critical step in the manufacturing and maintenance of many defense weapon systems and platforms. Metal finishing is used to modify surface properties such as corrosion resistance, wear, hardness, and to achieve surface build. Applications across DoD are wide spread; on aerospace platforms, tactical vehicles and naval platforms as well as on weapons systems such as gun barrels. The increasing environmental and occupational health concerns as well as the compliance costs and liability associated with heavy metals such as hexavalent chrome, cadmium, and nickel have driven DoD to search for alternatives. The replacement of hazardous materials in plating and metal finishing activities has been and remains a high priority for DoD. SERDP, ESTCP and the Services have invested significant resources in the last 10 years to develop, demonstrate and transition a number of environmentally preferable alternatives to traditional plating and metal finishing.

Workshop objective: The objective is to strategically guide future environmental research development testing and evaluation (RDT&E) investments and to support the transition of demonstrated technologies in the area of metal plating and finishing.

1. Examine the current state of practice in the Defense manufacturing and maintenance community,
2. Identify the current and emerging regulatory and other pressures both within the US and abroad,
3. Review the current non-hazardous alternatives for metal finishing and plating practices,
4. Identify the perceived gaps in performance which limit the transition of non-hazardous alternatives,
5. Identify technical, financial and other barriers to the implementation of less-hazardous or environmentally benign alternatives.

Metal finishing treatments to be covered: Chrome plating, cadmium plating, Cr^{6+} metal finishing processes. Chromate processes include conversion of cadmium plate, Cd alternatives and other corrosion protective treatments, pretreatment conversion coating of Al and Mg alloys, and chromic acid anodizing, but **not** Cr^{6+} in paint systems such as chromated primers and SermeTels. Ni will be discussed in a limited manner to assess its present and future significance.

Workshop structure: The workshop is intended to be highly interactive, with a limited number of invitees chosen for the contributions we expect them to be able to make. Participants will include DoD engineers from depots and other DoD agencies, defense manufacturers, and technical experts from other industrial and academic organizations. The workshop is designed to solicit as much information as possible from people who face these technology replacement issues every day, in order to understand what does and does not work for different systems, and where gaps remain.

Participants will receive read-ahead materials, and are encouraged to come prepared to share their knowledge and experience, and to provide whatever written information they can release regarding their own applications, problems and concerns.

This workshop will be a unique opportunity for DoD and industrial users to make their voices heard on what does and does not work, and on the direction that future investments in metal finishing should take.

Topical Agenda (May 22, 08:00 – May 23, 17:00)

General summaries
1. Keynote: "Bridging the Valley of Death for Materials and Processes in Defense Systems"
2. Environmental issues and corrosion – Pentagon view
3. SERDP/ESTCP program overview
4. Current and upcoming environmental and health regulations
5. Summary of clean alternatives to hard chrome, cadmium and chromates
Background maintenance overviews (with read-ahead materials)
1. Tactical Vehicles
2. Gun Barrels
3. Aerospace and missiles
New platforms (with read-ahead summaries)
1. Joint Strike Fighter
2. Naval systems
3. UAVs and UCAVs
4. Future Combat System and Stryker
Breakout Sessions (by application)
1. Hydraulic and pneumatic actuators
2. Turbine engines for vehicles, ships, aircraft
3. Structural (load-bearing) components
4. Gun barrels, small and standard components (fasteners, pins, etc)
Breakout Sessions (by material)
1. Chrome plating (line-of-sight)
2. Chrome plating (non line-of-sight)
3. Cd plating (line-of-sight and non line-of-sight)
4. Cr^{6+} pre- and post-treatments

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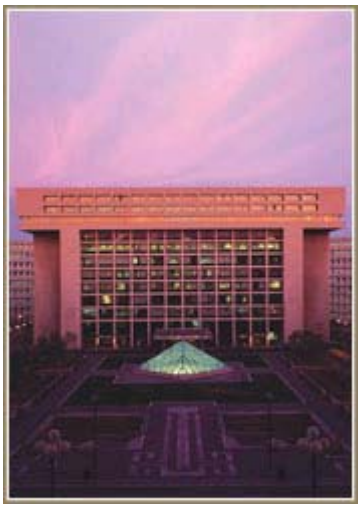
Hotel information

The workshop will take place at the L'Enfant Plaza Hotel in the heart of Washington, DC, which is easily accessible from the Metro.



Address:

L'Enfant Plaza Hotel

480 L'Enfant Plaza, SW

Washington, DC 20024

Phone: 1-202-484-1000

Web site:
http://www.lenfantplazahotel.com/index.cfm

Room rates:

$194 (2 double beds)

$214 (1 king sized bed)

Ask for the "Metal Finishing Workshop" rate.

These rates are slightly above the government per diem, but are within the allowable overage.

Cut-off date for group rate: April 24, 2006

Registration:

Please respond to Courtney Hagen, chagen@navista.net, phone (202) 530-5910, providing the following information:

Name:

Affiliation:

Phone:

e-mail:

Postal address:

This meeting is open only to US citizens, and is by invitation only. Please indicate in your e-mail if you are a US citizen.