

SERDP/ESTCP Metal Finishing Workshop

Wrap-Up Discussion

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Overarching Issues *By: Keith Legg*

Summary Points

- Cultural/financial issues, competition for resources are barriers
- Need to change the traditional costs/benefits analysis – because many benefits are unquantifiable. Make case for effect of PEL in cost-benefit analysis.
- Need a champion at the right level – one who will receive credit if things go well.
- Implementation funding is not standardized across DoD. Need to encourage long-term investment.
- It is expensive to change specifications, especially because the cost cannot be spread over many vehicles the way it can in the automotive industry.
- Need to spend money on implementation on sub-scale—some sort of transition between dem/val and full-scale implementation. Perhaps do implementation at one base for 1-3 parts, then develop guidelines and training to be used when full-scale implementation occurs. NADEP-Jax did this. The more difficult full-scale implementation is, the harder this would be.
- Fasteners are a major issue; need to see what industry provides.
- Data Needs
 - o Need a central source of data – currently data is not located in a single location. The software industry has a centralized method for disseminating information. Follow its example, or that of the Steel Joist Institute.
 - o Test for: hydrogen embrittlement, corrosion → round-robin testing.
 - o Encompass multiple, diverse research needs into a JTP. The JTP should not be so broad that it takes a lot of resources and time to complete; also individual branches, weapon systems, POs, PMs, SMs, etc., can add their own special tests to the basic JTP if they want.
 - o Need to identify the technical data that should be provided the design engineers. For instance, one lab has a corrosion prevention control guidebook with compatibility properties in the appendix.
 - o Need to develop non-program-specific data. Need a validated database. Someone will need to maintain it.
 - o Need to develop property curves – this represents a fundamental lack of data. Will require greater collaboration among departments and between corporations.

Additional summary points added after meeting:

- Funding cycles for RDT&E not synchronized with POM cycles - have to request implementation, capital funding (e.g., for facilities, equipment) many

- years in advance - also money comes in different “colors” from different sources/programs.
- Low volume of parts to be coated represents a small market for developers and vendors
 - Specifications often refer to 10-50 year old technologies and not performance requirements: performance requirements can change with time, with weapon system, and with use
 - Changing drawings, technical orders, work instructions, manuals, and so on, is a costly and time consuming effort.

Summary of Questions/Answers

- Do the trends of increasing life cycle of materials, decreasing repair of materials and amounts of resources used (leading to increased sustainability) fit with ESTCP?
 - o Answer - Somewhat.
- How do we facilitate the open exchange ideas and encourage people to work together and volunteer to talk about data? Need something similar to joint technology exchange; regular conferences are insufficient.
- Need to find a way to reach designers who are not aware of options for change.
- Need to evaluate options in commercial industry, considering differences between military and commercial standards.
- How can the needs of safeguarding proprietary information be balanced with the interest of collaboration between the Navy and DoD? DoD errs on side of restricting exchange of sensitive innovation. Try to use software to share information with the community.
- How do we work with people “outside of the group,” particularly with corporations? (Concern regarding “proprietary” data.)
- If we’re spending 2-3% of GNP on corrosion and wear issues alone, there is a financial incentive for reviewing options. The HUMV is cadmium-free; this should be possible across DoD.