

# Press Release

## Replacement for Cadmium Plating for Aircraft Landing Gear

### ESTCP 2015 Project-of-the-Year Award for Weapons Systems and Platforms

**Mr. David Frederick, 417th SCMS, USAF Landing Gear Team, December 7, 2015:** Mr. David Frederick of the 417th Supply Chain Management Squadron (SCMS), Landing Gear Team, at Hill AFB, Ogden, Utah, together with his team, demonstrated the use of low hydrogen embrittlement (LHE) zinc-nickel (Zn-Ni) for a wide variety of applications. Replacement of cadmium plating in aircraft landing gear manufacturing and maintenance is a high priority for the Department of Defense (DoD). Military aircraft maintenance depots use cadmium plating extensively to apply corrosion resistant coatings to various high-strength steel aircraft components during manufacture, repair, and overhaul.

The LHE Zn-Ni coatings for military aircraft landing gear that were successfully demonstrated and transitioned by this project will help eliminate environmental and worker safety concerns associated with cadmium used in DoD plating operations.

The LHE Zn-Ni meets or exceeds all acceptance criteria for coating quality, adhesion, fatigue, corrosion, and hydrogen embrittlement. Based on test results and in field performance tracking, LHE Zn-Ni has been implemented into the Air Force overhaul facility and is being adopted by industry as an alternative to cadmium plating.

For this significant work, Mr. Frederick and his project team received the 2015 ESTCP Project-of-the-Year Award for Weapons Systems and Platforms

#### Project Team:

##### USAF Hill AFB OO ALC

- Mr. David Frederick
- Mr. Ron Montgomery
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- Mr. Nate Hughes
- Ms. Debbie Hall
- Ms. Ruth Schaefer

##### USAF Wright-Patterson AFB

- Mr. Thomas Naguy

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- **Mr. Harry Willingmyre**
- **Mr. Tarek Nahlawi**

##### Boeing Research and Technology

- Mr. Steve Gaydos
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##### NASA Corrosion Technology Laboratory

- Mr. Kurt Kessel
- Mr. Jerry Curran

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- Mr. Doug Wisner
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- Mr. Kelly Smith

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