

Status of DoD Program on Replacement of Hard Chrome Plating With Thermal Spray Coatings on Aircraft Components

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The U.S. Department of Defense (DoD) tri-service/industry Hard Chrome Alternatives Team (HCAT) is currently partnering with two other DoD organizations [the Joint Group on Pollution Prevention (JG-PP) and the Propulsion Environmental working Group (PEWG)] to execute projects to qualify advanced thermal spray coatings as a replacement for hard chrome plating. Because of different materials and performance requirements, the individual projects are associated with landing gear, propeller hubs, hydraulic actuators, helicopter dynamic components, and gas turbine engine components. Working with OEMs and other DoD stakeholders, Joint Test Protocols (JTP) have been or are being developed that delineate all of the materials and component testing required for the qualification and implementation of the thermal spray coatings. Results will be presented for the testing in the landing gear and propeller hub projects, and overviews of the JTPs in the other projects will be presented. Information related to development of standards and preparation of cost/benefit analyses will also be presented.

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