**Jul 29, 2014 Technology Forum – Engine Erosion\Corrosion Coatings**

Gas turbine engine maintenance costs DoD approximately $7.5 billion annually. With DoD being challenged to reduce costs and improve readiness, engine maintenance is a significant focus area to explore and implement cost saving initiatives.

Low engine power is the #1 cause for unscheduled engine removals, with compressor degradation being a leading contributor. Replacing compressor airfoils during maintenance repair operations, due to corrosion, is also leading cost driver.

Erosion resistant/corrosion resistant (ER/CR) compressor coatings have recently been developed and are designed to reduce wear on compressor airfoils in gas turbine engines, reducing overhaul and maintenance requirements and providing operational fuel savings. DOD has been involved in multiple demonstrations and has several programs actively working to transition ER/CR coatings to gas turbine engines associated with helicopters, fixed wing aircraft and M-1 tanks. An earlier study projects that a decrease in engine erosion depot maintenance through the investment and application of ER technology can result in a significant return on investment and reduce the cost of gas turbine engine ownership.

The purpose of this forum is to exchange information amongst the DOD and industry partners on the benefits, challenges, and results of using these protective coatings. We will discuss the best practices of transitioning ER/CR coatings, what other applications can benefit, and examine what next steps will efficiently promulgate this cost-cutting technology.