

FAA ACCEPTS SURFACE ENHANCEMENT TECHNIQUE

FAA Accepts Low Plasticity Burnishing (LPB) and Grants Aircraft Repair Facility Certificate to Surface Enhancement Technologies for the Repair and Alteration of Commercial Aircraft Components.

10/12/2009, Cincinnati, OH-After rigorous evaluation and review, including a fatigue performance demonstration, the FAA has accepted LPB processing for the repair and alteration of commercial aircraft components. In addition, they have awarded Surface Enhancement Technologies (SET), part of the Lambda Technologies group, the Air Agency Certificate 5LMR258B which authorizes SET to operate as a Part 145 repair station. This designation enables SET to provide the limited specialized service of LPB processing of aircraft components to improve fatigue performance.

Review of the LPB process was coordinated with The Engine and Propeller Directorate and with the FAA Chief Scientist and Technical Advisor (CSTA) for Metallurgy. The evaluation included FAA inspectors witnessing fatigue testing where LPB restored the fatigue strength of 300M landing gear steel with damage of 0.030 in. deep. The repeatability and quality provided by the LPB closed-loop process contributed to the FAA's acceptance of LPB as a surface enhancement treatment for the improvement of fatigue performance. LPB has been repeatedly shown to provide phenomenal improvement in damage tolerance, whether from FOD, fretting, corrosion pitting, or stress corrosion cracking.

This acceptance and authorization by the FAA brings about a new era in which residual stress can be used by design to improve the performance of aircraft components. John Cassidy, Surface Enhancement Technologies QA Manager, observed, "The timing could not be better for bringing this powerful technology to the aging aircraft fleet. There are huge potential cost savings available from improving damage tolerance and reducing inspection frequency with LPB." In this era of aging aircraft and weak economy, LPB solutions are now available to extend life and reduce operating, inspection, and maintenance costs of commercial as well as military aircraft.

Lambda Technologies is an innovative group of companies incorporating a world-class research laboratory and engineering facilities to develop and optimize surface treatments that improve component life and performance. For additional information on the LPB process or to discuss potential applications, contact John Cassidy at (513) 561-0883 or visit www.lambdatechs.com.



Rick Hermanns, FAA General Aviation Frontline Manager, Awarding Paul Prevéy of Lambda Technologies the FAA 145 Certificate