AMMTIAC Success Story

Making the Air Fleet Safer and Easier to Maintain

http://ammtiac.alionscience.com

Customer:	US Air Force Nondestructive Inspection Program Office, (AFRL/RXS-OL)
Challenge:	The Air Force required an independent third party to assist in reviewing and updating their nondestructive evaluation procedures and tools, which are used to maintain the Air Force's high standards for flight safety and aircraft maintenance.
Approach:	The Air Force chose AMMTIAC not only for its technical expertise in non-destructive evaluation (NDE) technologies, but also for the unique perspective afforded the IAC through its knowledge of Air Force tech orders and procedures; accrued over the years as part of its information collection mission. AMMTIAC reviewed inspection procedures for several aircraft; including the A-10, B-52, C-5, C-130, F-15, KC-135, and T-38; observed the practices of inspection personnel in the field for each platform; and then updated inspection procedures. AMMTIAC also evaluated the efficacy of current inspection tools and subsequently developed prototypes of improved inspection probe kits. AMMTIAC performed a Quality Assurance Proficiency Assessment (QAPA) on these prototype tools to validate their capabilities and speed their transition to the fleet.
Value:	AMMTIAC's efforts will improve the detection limits of over 75 procedures and the reliability of all inspections audited. The results indicate that the new prototype Raised Head Fastener (RHF) probes improve the crack detection capability by 60% over the current pencil probes, while improving the inspection speed by a factor of two. Newly prototyped edge probes also improved detection capability by over 60%. The new surface probes show an improvement of 50% in detection capability and will improve the inspection speed by a factor of four. The data

	generated and lessons learned during this project are being preserved in AMMTIAC's library so that they may one day be employed in the development of future systems.

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