

EXECUTIVE SUMMARY

This was the eighth meeting in a series on Human Factors in Aviation Maintenance and Inspection sponsored by the Federal Aviation Administration. The purpose of this two-day meeting, held November 16 and 17, 1993, was to discuss changes and advances in aviation maintenance operations.

The meeting was divided into three sections. The first section dealt with changes and advances in air carrier procedures. The presentations covered the following topics:

- Reorganization of British Airways Maintenance Organization
- Application of computer-based training to improve maintenance training efficiency
- Changes in worker relationships by emphasizing teamwork, empowerment and process simplification
- Changes in environmental regulations that affect maintenance operations.

The second section covered technology advances supporting aviation maintenance. The presentations covered the following topics:

- An experiment to investigate the reliability of eddy-current inspection
- A project using the Flight Control Maintenance Diagnostic System (FCMDS) to improve technician diagnosis of system problems
- A pen-based computer demonstration of the Performance Enhancement System (PENS) for Aviation Safety Inspectors
- The project to develop MEDA (Maintenance Error Decision Aid), a "human-centered" methodology to investigate maintenance error
- A workcard design on a portable computer-based system
- Development of an audit program for human factors issues in aircraft inspection
- A study of the effects of work postures in confined areas.

The third section was devoted to advances and issues impacting the maintenance work force and included the following topics:

- Work force procedures and maintenance productivity at Southwest Airlines
- The TWA-IAM/FAA Conformance Committee Procedures program.