

SECTION I

INTRODUCTION



## INTRODUCTION

MIL-F-8785B, "Military Specification, Flying Qualities of Piloted Airplanes" was issued in August 1969. Together with amendments dated March 1971 (interim) and September 1974, this document presents the current generally-applicable flying qualities requirements for US military airplanes. Many requirements soon became less applicable because of advancing technology, particularly the use of the flight control system to modify classical airplane responses. A revision effort was conducted within the Flight Dynamics Laboratory from 1973 through 1975. After an internal and a government-agency review, the proposals\* were issued for industry review in early 1978.

An AFFDL-sponsored symposium/workshop was held to bring together government and industry representatives directly connected with development, use or application of MIL-F-8785B. As an integral part of the review cycle, a primary objective of the symposium was to solicit comments and objections/endorsements to the proposed revisions. Formal and informal presentations were solicited on both MIL-F-8785B and the revisions. Working sessions were also organized to discuss the revisions from three technical viewpoints: design, flight test and analytical methods. The comments and discussion will be considered in drafting an Amendment 3 to MIL-F-8785B. When Amendment 3 has been coordinated and published, it will be the last version in the current specification series. After that a change in format is planned to a Prime-Standard with a back-up Handbook. Such revisions are in prospect for all military specifications, with the object of reducing confusion and eliminating unnecessary requirements. The Standard will typically have blanks in place of numerical requirements, while the Handbook will contain the information to fill in the blanks for a particular airplane. It will have justification for each requirement, recommended criteria (maybe with alternatives) and

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\*"Proposals for Revising MIL-F-8785B, 'Flying Qualities of Piloted Airplanes,' " AFFDL-FGC Working Paper, February 1978.

substantiation. A second objective of the symposium was, therefore, to provide initial inputs to the longer-term revision process. Since the current revision items only form a partial list, part of the task was to identify remaining deficiencies in the present specification. Comments were also solicited on future requirements. Finally working sessions were organized specifically to consider the future.

This report presents the papers as submitted by the various authors from both industry and government. In addition, government moderators were appointed for each working session to record the comments. Summaries of the significant discussions and opinions in the working groups are presented as submitted by the moderators. Editorial comment is presented in Section X, Summary and Concluding Remarks. Finally Appendix A is a list of attendees with affiliations, and Appendix B is a paper not presented at the symposium but judged to be appropriate, relevant to some of the discussion concerning flight testing to the requirements.