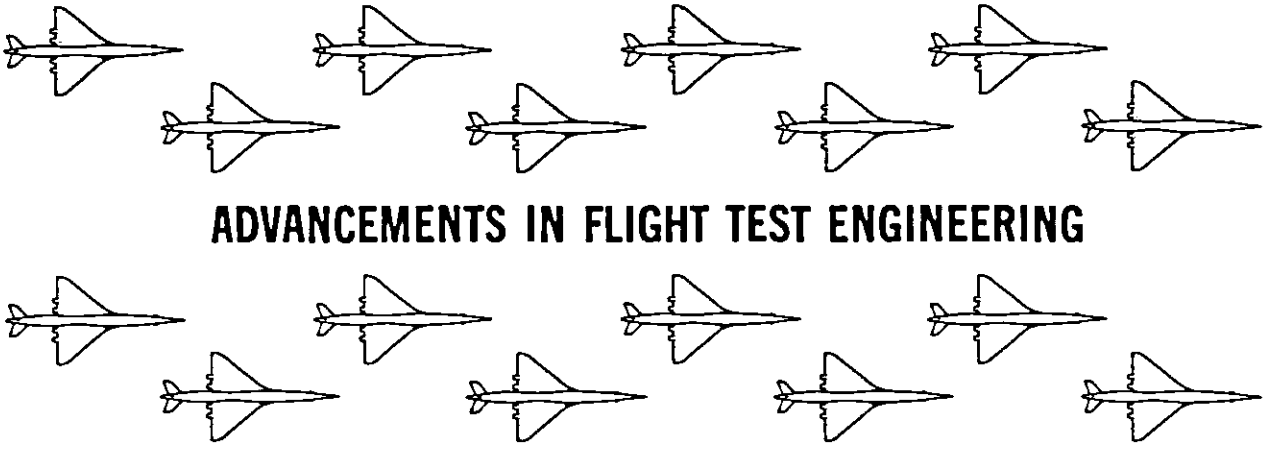
SOCIETY OF FLIGHT TEST ENGINEERS

FIFTH ANNUAL SYMPOSIUM PROCEEDINGS

7-9 AUGUST 1974



ADVANCEMENTS IN FLIGHT TEST ENGINEERING

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FOREWORD

The aerospace industry continues to advance and develop improved manned and unmanned aircraft. Comprehensive test and evaluation programs are mandatory for development of today's sophisticated airframes and systems. Advancing to meet this challenge, the flight test profession is utilizing unique combinations of precision equipment and engineering skills; to this end, the theme "Advancements in Flight Test Engineering" has been adopted for the 1974 SFTE Symposium.

The 1974 SFTE Symposium has provided the forum for exchange of information regarding advancements in test techniques, systems test, environmental testing, and data acquisition and processing.

E. G. Hoffmann

"KELLY" JOHNSON AWARD

The second annual award for outstanding achievement in Flight Test Engineering is presented to Mr. Ronald A. Magnuson, an active member and officer of the North Texas Chapter and employed at the Bell Helicopter Company as a Flight Test Engineer.

The distinguished Clarence "Kelly" Johnson of Lockheed Aircraft was the recipient of the Society's first annual award at the 1973 Symposium for excellence and outstanding achievement in the field of Flight Test Engineering. This award will be presented each year and will bear the name "Kelly Johnson Award" to honor his extraordinary contributions to the aircraft industry.

The 1974 Symposium Banquet was the forum for the award to Ronald A. Magnuson. Ron joined Bell Helicopter Company in 1969 following graduation at the University of Minnesota with a Bachelor of Science and Master of Science in Aeronautical Engineering. The North Texas Chapter unanimously recognized Ron's achievements on the King Cobra Helicopter test programs. He served in the triple role as Test Director, Flight Test Engineer with its many responsibilities, and liaison between the Military Potential Evaluation Team and Bell personnel. He contributed significantly to the engineering and test development of the "nodal beam" concept for vibration isolation which is being employed on the Bell Model 214A Medium Utility Helicopter as production hardware for the first such application. His personal drive, devotion, and demonstrated flight test engineering excellence at Bell are a credit to the flight test engineering profession. Ronald A. Magnuson is worthy of the second annual "Kelly" Johnson Award presented at the Fifth Annual Symposium of the Society of Flight Test Engineers.

GUEST OF HONOR/BANQUET SPEAKER
DR. RICHARD T. WHITCOMB

Dr. Whitcomb is Head of the Transonic Aerodynamics Branch of NASA's Langley Research Center in Hampton, Virginia. He graduated with honors from Worcester (Massachusetts) Polytechnic Institute in 1943 and immediately joined the National Advisory Committee for Aeronautics (NACA) as an aerodynamicist in the Langley wind tunnels. His most widely known contributions are the "Area Rule" and the NASA Supercritical Wing. The "Area Rule," which is exhibited in the familiar "Coke bottle" shaped fuselages, earned him the Collier Trophy in 1954 for the greatest achievement in aviation. In October 1973 in White House ceremonies, he received the National Medal of Science, the U.S. Government's highest honorary scientific award: "for his discoveries and inventions in aerodynamics which have provided and will continue to provide substantial improvements in the speed, range and payload of a major portion of high performance aircraft produced throughout the country." The most recent of his awards was presented to him on June 3rd of this year by NASA in the form of $25,000 for invention of the supercritical wing. This award is the largest ever given by NASA to an individual.

CONTENTS

CONTENTS (CONT)