SPECIAL NOTICE

The abstract sections of the monthly supplements of *Aeronautical Engineering* can be bound separately. Individual abstracts can be located readily by means of the page numbers given at each entry, e.g., p 0559 A82-44940. To assist the user in binding Supplements SP-7037(145) through SP-7037(156), a title page is included in the back of this Cumulative Index.
A CUMULATIVE INDEX
TO
A CONTINUING BIBLIOGRAPHY ON

AERONAUTICAL ENGINEERING

This Cumulative Index supersedes the indexes contained in supplements [SP-7037(145) through SP-7037(156)] published by NASA during 1982.
This index is available as NTISUB/141/093 from the National Technical Information Service (NTIS), Springfield, Virginia 22161 at the price code of $10.00 domestic; $20.00 foreign.
INTRODUCTION

WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7037(145) through NASA SP-7037(156) of Aeronautical Engineering: A Continuing Bibliography, NASA SP-7037, and its supplements have been compiled through the cooperative efforts of the American Institute of Aeronautics and Astronautics (AIAA), and the National Aeronautics and Space Administration (NASA). Entries prepared by the two contributing organizations are identified as follows:

1. NASA entries by their STAR accession numbers (N82-10000 series).
2. AIAA entries by their IAA accession numbers (A82-10000 series)

HOW THIS CUMULATIVE INDEX IS ORGANIZED

This Cumulative Index includes a subject, personal author, and corporate source index.

HOW TO USE THE SUBJECT INDEX

Two types of cross-references appear in the subject index:

1. Use (U) references indicate that the subject term is not “postable,” i.e., not a valid term, and that the following term or terms are used instead. For example:
   AIRCRAFT PROTUBERANCES
   U PROTUBERANCES
   FLIGHT PERFORMANCE
   U FLIGHT CHARACTERISTICS

2. Narrower Term (NT) references refer the user to more specific headings in the same subject area, under which additional material on the subject may be found. For example:
   FLOW RESISTANCE
   NT AERODYNAMIC DRAG
   NT FRICTION DRAG
   NT SUPERSOONIC DRAG

In addition, a searcher may use the title or title and title extension in the index to narrow further his quest for particular items, this is because subject terms can readily include more than one class of document. For example:

AIRLINE OPERATIONS
   All-weather operations, including pilot role, instrument landing systems and guidance aids.
   Airport congestion as constraint on air travel, considering runway capacity and adjusted demand

illustrates a case where two references on different topics are listed under the same subject term.

HOW TO USE THE PERSONAL AUTHOR INDEX

All personal authors used in the abstract-section citations in the individual Supplements appear in the index. Differences in translation schemes may require multiple searching of the index for variants of an author’s name. For example:

EMELIANOV, M. D.
and
YEMELYANOV, M. D.
HOW TO USE THE CORPORATE SOURCE INDEX

The corporate source index entries are abridged versions of the corporate sources used in the abstract-section citations in the individual Supplements. The corporate source supplementary (organizational component) does not appear in the index. For example:

BOEING CO., SEATTLE, WASH. MILITARY AIRCRAFT SYSTEMS DIV. (Source citation entry)
BOEING CO., SEATTLE, WASH. (Source index entry)

HOW TO USE THE CONTRACT NUMBER INDEX

All contract numbers that are identified in the abstract-section citations in the individual Supplements appear in this index. Changes by agencies in the style in which contract numbers are presented may require multiple searching for variants. For example:

AF 33(615)-71-C-1758
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HOW TO USE THE REPORT/ACCESSION NUMBER INDEX

All report numbers that have been assigned by the corporate source, monitoring agency or cataloging activity appear in this index. Variations in initial cataloging may result in different report number series. For example:

TP-924
ONERA-TP-924

IDENTIFICATION OF DESIRED SUPPLEMENT

The abstract and descriptive cataloging for any accession number selected from the indexes may be found in the appropriate Supplement. The page-number range of each Supplement appears on the inside front cover of this index. Once the range of page numbers containing the selected accession number is located in the second column, the desired Supplement number will be found in the first column. For example:

Page 559 will be found in Supplement 156.

AVAILABILITY OF DOCUMENTS

Information concerning the availability of documents announced in Aeronautical Engineering supplements is found in the Introduction to the most currently issued supplement.
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The title is used to provide a description of the subject matter. When the title is insufficiently descriptive of the document content, a title extension is added, separated from the title by three hyphens. The NASA or AIAA accession number is included in each entry to assist the user in locating the abstract in the abstract section of the supplement. If applicable, a report number is also included as an aid in identifying the document.
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Dynamic Environmental Qualification Techniques
Technology overview for advanced aircraft arnaaent
Prediction of aerodynamic loads on aircrafts vith
Two-dimensional apparent masses for cross-flow
Taking the drag out of bombs
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Mind tunnel studies of store separation with load
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Fatigue methodology - A technical management system for helicopter safety and durability

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Standardization of helicopter fatigue methodology - A manufacturer's view

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Helicopter rotor load prediction

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Principles of achieving damage tolerance with flexible maintenance programs for new and aging aircraft

Prediction of fatigue crack propagation in plane specimens and thin-walled structural elements of aircraft wing skins under programmed loading

Flight trials of the Aircraft Fatigue Data Analysis System (APFAS) MK 2 prototype

Effects of cyclic loading on projectile impact damage

Corrosion Fatigue - conferences

Mechanisms of corrosion fatigue - of high strength aluminum alloys

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Fatigue life of lugs under service loading - Test results and predictions

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In-flight computation of helicopter transmission fatigue life expenditure

Effect of fretting on estimates of safety against airframe fatigue

A method for predicting the lifetime of gas turbine blades

Inclusions and service induced cracks in a mature population of gas turbine engine bearings

Random spectra fatigue crack life predictions with or without considering load interactions

Bolted field repair of graphite/epoxy wing skin laminates

On the sonic fatigue life estimation of skin structures at room and elevated temperatures

Application of damage tolerance technology to type certification

The Agusta's solution of AB'S's hypothetical fatigue life problem

The challenge of standardizing fatigue methodology

Application of fatigue, crack propagation and strain survey testing to the CH-46 aft rotor drive shaft

A method of determining safe service life for helicopter components

Hughes helicopters - Fatigue life methodology

Fundamentals of helicopter fatigue life determination

Hypothetical fatigue life problem - Application of Aerospolite method

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Fracture mechanics technology applied to individual aircraft tracking --- durability and structural life estimates

Evaluation of crack growth rates for service life tracking

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Turbine blade cohesive structural and life analyses

Control of gas turbine power transients for improved turbine airfoil durability

A method for observing the deterioration of airframe life in operational conditions

Acoustic emission - An emerging technology for assessing fatigue damage in aircraft structure
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Comparison of different fighter aircraft load design and experimental verification of the superclean superalloy powders by the rotating development of a structural integrity according to defects and their effect on the behavior of gas turbine discs.

Fatigue analysis of composite materials using the effect of fighter attack spectrum on composite production weldbonding on the A-10 aircraft on rolling-element bearing life analysis of computing system configurations for redundancy management.


A fatigue crack growth theory based on strain energy density factor and a crack growth model under spectral loading for fatigue testing.


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The thermal expansion of turbine blades is critical for ensuring proper fit and function. Methodologies for evaluating the effectiveness of these coatings are ongoing. The thermal expansion accommodation in high-temperature environments is a topic of study to ensure components can withstand the stresses. 

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MT Mission
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