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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., p0194 N78-16002. To assist the user in binding Supplements SP-7037 (93) through SP-7037 (104), a title page is included in the back of this Cumulative Index.
A CUMULATIVE INDEX
TO
AERONAUTICAL ENGINEERING
A Continuing Bibliography

This Cumulative Index supersedes the indexes contained in supplements SP-7037 (93) through SP-7037 (104).
This Index is available from the National Technical Information Service (NTIS), Springfield, Virginia 22161 for $9.00 domestic, $18.00 foreign
INTRODUCTION

WHAT THIS CUMULATIVE INDEX IS

This publication is a cumulative index to the abstracts contained in NASA SP-7037(93) through NASA SP-7037(104) 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 (N78-10000 series)
2. AIAA entries by their IAA accession numbers (A78-10000 series)

HOW THIS CUMULATIVE INDEX IS ORGANIZED

This Cumulative Index includes a subject index, a personal author index, a corporate source index, a contract number index, and a report/accession number 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 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 SUPERSONIC 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 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 transliteration 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
F33615-71-C-1758

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 331 will be found in Supplement 99

AVAILABILITY OF DOCUMENTS

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  - **Title**: Core compressor exit stage study. Volume 1: Blading design --- turbofan engines
  - **Nasa Accession Number**: p0501 778-25099

The title is used to provide a description of the subject matter. When the title is insufficiently descriptive of the content of the document, a title extension is added separately from the title by three hyphens. The STAR or IAA accession number is included in each entry to assist the user in locating the accession numbers are arranged in sequence with the IAA accession numbers beneath and to the right of the title. Under any one subject heading, the accession numbers are arranged in sequence with the IAA accession numbers appearing first.

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- **Nasa Accession Number**: p0501 778-25099

The page and accession numbers are located beneath and to the right of the title. Under any one subject heading, the identifying the document. The page and accession numbers are located beneath and to the right of the title. Under any one subject heading, the accession numbers are arranged in sequence with the IAA accession numbers appearing first.

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- **Subject Heading**: Community noise exposure resulting from aircraft operations. Volume 3: Acoustic data on military aircraft, Air Force attack/fighter aircraft
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### ABRASION RESISTANCE
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A preliminary wind tunnel investigation of the aerodynamic characteristics of a simplified lift plus lift-cruise multiple aircraft model in the V/STOL flight regime.

An appreciation of the dynamic problems associated with the external transportation of loads from a helicopter - State of the art.

The effects of atmospheric wind gradients on the motion of V/STOL aircraft near the ground.

The PIO problem - Theory and implications to flight test -- Pilot-Induced Oscillation.

Taking into account the effect of elasticity of the structure on the longitudinal short-period motion of an aircraft.

Use of the polynomial method to calculate the parameters of the stabilized maneuver of an elastic aircraft.

Lateral stability of a light aircraft during landing.

YC-15 development and test highlights - Phase III UTTAS testing.

Certifying the Learjet to 51,000 feet.

Optimum tail plane design for artificially stabilized aircraft.

The wind and turbulence measuring system of the V/STOL Simulator.

Theory of bending-torsional self-oscillations of an aircraft wing system.

Nonlinear model of the wind effect on an airplane involving flight vehicle dynamics.

Comparative vibration environments of transportation vehicles.

On lateral stability of aircraft under random parametric excitations due to vertical gusts.

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Fatigue research on bonded carbon fibre composite/steel joints --- examination of aircraft structural materials.

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FLUID FILTERS

STUDY OF UNSTEADY SEPARATED FLOWS ON OSCILLATING AIRFOILS

FLUID FILMS

FLOID DTBAHICS

LOW VISUALIZATION

Numerical flow visualization

Study of airflow into air intake with groundplane

Flow in a hydraulic model of an axial turbomachine

An investigation of strut-wall intersection losses

Flow visualization, volume 1. A bibliography with abstracts

Flow visualization, volume 2. A bibliography with abstracts

Flow breakdown. Some observations in flight on an airfoil

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Development of the can-type gas turbine combustors

The induction driven tunnel T2 at CERBA-CERT

An investigation of strut-wall intersection losses

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Prediction of unsteady separated flows on oscillating airfoils

An experimental investigation of oscillating flows over an airfoil -- rotary wings

Vortex breakdown. Some observations in flight on the HP 115 aircraft

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Flow visualization, volume 2. A bibliography with abstracts

Measurements and analyses of the forces acting on a small aircraft flying in the upwash of a large aircraft

FLOW FILTERS

The effects of vibration on an aircraft fuel density meter

FLOW AMPLIFICATION

Fluid amplifiers

The effect of hydraulic feed systems on the dynamic characteristics of hydraulic amplifiers of helicopter control systems

FLUID BOUNDARIES

Gas-solid interfaces

Boundary layers in dissipative media

Hydrodynamic effect on a contour produced by an ideal incompressible flow of constant vorticity

Numerical implementation of solid-body boundary conditions for the Euler equations -- in fluid dynamics

Movement of a solid profile near a solid boundary

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Airfoils

Axial flow

Aerodynamicists computer systems design

A small aircraft flying in the npwash of a large aircraft

A high-frequency reverse-flow fluidic self-cleaning fuel filter

Comparison tests on the 100-GPM electrokinetic fuel decontaminator and a 100-GPM military standard filter/separator

A cascade in unsteady flow

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Computational fluid dynamics (CFD): Future role and requirements as viewed by an applied aerodynamicist...computer systems design


Some experiments on instability of rotors supported in fluid-film bearings

Analysis and experimental investigation of the stability of intershaft squeeze film dampers. II - Control of instability

An experimental study of the steady-state response of oil-film dampers

Squeeze-film damper characteristics for gas turbine engines

Heat-transfer from two-phase flow to the nozzle walls in the presence of a condensate film on the nozzle surface

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FLUID INJECTION

Fluid injection involves the introduction of a fluid into a system, typically to achieve a specific effect. This can include everything from simple injection into a fluid stream to more complex methods like fluidized bed processing. Fluid injection is used in a variety of applications, such as in combustion systems, where it is used to introduce fuel into the combustion chamber, or in environmental applications, where it is used to inject nutrients into water bodies.

The efficiency of fluid injection can be improved by using advanced techniques. For example, the use of high-pressure injection systems can increase the rate of injection and improve the mixing of the injected fluid with the primary flow. Additionally, the use of pulsatile injection can help to break up the injected fluid and improve its mixing with the primary flow. These techniques are particularly useful in applications where high mixing rates are desired, such as in combustion systems.

In addition to these methods, fluid injection can also be used to control the flow of a fluid. For example, the use of fluid injection to control the flow of a fluid in a pipe can be used to regulate the flow rate or to prevent the formation of blockages. This is typically achieved by using the fluid injection to create a secondary flow that opposes the primary flow, thus reducing its velocity and preventing blockage.

Fluid injection is also used in a variety of other applications, including in the field of fluid mechanics. In this field, fluid injection is used to study the behavior of fluids under various conditions, such as in turbulent flows or in flows with complex geometries. This is typically achieved by injecting a tracer fluid into the main flow and monitoring its behavior using sensors.

The technology for fluid injection continues to evolve, with new methods and techniques being developed to improve its efficiency and effectiveness. This includes the use of advanced materials and coatings to reduce wear and improve the longevity of fluid injection systems, as well as the development of new methods for monitoring and controlling the injection process.

Overall, fluid injection is a powerful tool that can be used to achieve a wide range of effects in a variety of applications. Its use continues to expand as new methods and techniques are developed to improve its performance and effectiveness.
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Use of the polynomial method to calculate the
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p0376 A78-37733

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[ AAS PAPER 77-DHT-72 ] p0469 A78-44146

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cascade in translation
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User's guide for a modular flutter analysis
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[ NASA-TP-787120 ] p0892 A78-28101

Considerations on wing stores flutter: Asymmetry,
flutter suppression
[ AD-A08-H-665 ] p0565 A78-31126

Asymmetric store flutter
p0566 A78-31127

FLUX (RATE FOR UNIT AREA)

D PLUE DENSITY

MT MAGNETIC FLUX

MT DENSITY

MT CURRRENT DENSITY

MT MASONIC INTENSITY

An investigation of wing buffeting response at
subsonic and transonic speeds. Phase 1: F-111A
flight data analysis. Volume 1: Plotted power
spectra

An investigation of wing buffeting response at
subsonic and transonic speeds. Phase 1: F-111A
flight data analysis. Volume 2: Tabulated power
spectra

An investigation of wing buffeting response at
subsonic and transonic speeds. Phase 2: F-111A
flight data analysis. Volume 2: Plotted power
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FLUX MAPPING

D FLUX DENSITY

D MAPPING

D METER

D MEASURING INSTRUMENTS

FLY BY WIRE CONTROL

Navy advanced sensor programs for fly-by-wire
A-192
FLIGHT PERSONNEL
MT AIRCRAFT PILOTS
MT FLIGHT CREWS
MT TEST PILOTS
Some factors influencing Air Force simulator training effectiveness
[AD-A043239]
FLIGHT PLATFORM STABILITY
U AERODYNAMIC STABILITY
FLIGHT QUALITIES
U FLIGHT CHARACTERISTICS
FOAMS
Durability of foam insulation for LMT fuel tanks of future subsonic transports
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MT SELF FOCUSING
Long-distance focusing of Concorde sonic boom
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Some comments on sonic boom focusing
[AD-A78-51172]
FOG
The FAA Slant Visibility Range measurement system
[AD-A78-14996]
Vertical fog classifications and slant/runway visual range ratios
[AD-A78-14997]
FOG DISPERSAL
Technical, economic and operational aspects of an FAA engineering study and feasibility determination for a ground-based warm fog dispersal system
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A modern warm fog dispersal system
[AD-A78-14994]
The Turbocaril process --- fog dispersal techniques
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Values of diffusion coefficients deduced from the closing times of helicopter-produced clearings in fog
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Test report on the application of the Linde fog removal equipment at the Erding air base --- Germany
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MT F-27 AIRCRAFT
MT F-20 TRANSPORT AIRCRAFT
Use of and experience with simulation in the development of the VMT & the YAK 191
[AD-A78-78-083]
FOKESK P 7 AIRCRAFT
U F-27 AIRCRAFT
FOKESK P 2 AIRCRAFT
U F-28 TRANSPORT AIRCRAFT
FOKESK FRIENDSHIP AIRCRAFT
U P-27 AIRCRAFT
FORCE DISTRIBUTION
Influence of spin rate on size force of an asymmetric body
[AD-A78-51937]
The spanwise lift distribution on a wing from flow-field velocity surveys
[AD-A78-11986]
Investigation of a side force due to ablation ---
[AD-A78-12605]
Effects of lengthwise lift distribution on sonic boom of SST configurations
[AD-A78-50457]
Effect of flap deflection on the lift coefficient of wings operating in a highangle configuration
[AD-A78-75059]
An analysis of the force system of a propeller
[AD-A78-11503]
Force measurements on finite wings in oscillatory vertical gusts
[AD-A78-22037]
A finite-step method for estimating the spanwise lift distribution of wings in symmetric, yawed, and rotary flight at low speeds
[AD-A78-15901]
FORCED OSCILLATION
U FORCED VIBRATION
FORCED VIBRATION
Dynamics of a string accelerometer
[AD-A78-20256]
Experimental study on blade bending vibration
[AD-A78-12605]
Forced vibration of thin elastic shells with application to fractional horsepower hermetic refrigeration compressor shells
[AD-A78-32457]
The image contains a page from a document titled "FRACTOGRAPHY." The page is divided into sections for different topics, including "FOREBODIES," "FRACTURE MECHANICS," and "FRACTURE STRENGTH." Each section lists various subtopics and references, indicating a detailed study of fracture mechanics in aerospace engineering.

The page includes references to several studies and reports, covering topics such as fracture analysis of aircraft parts, stress fracture analysis, and fatigue cracking. The content is technical and appears to be aimed at researchers and engineers in the field of aerospace technology.

For example, one reference mentions "Microfractographic fracture analysis of some aircraft parts," while another discusses "Application of fracture mechanics to aerospace design." The page also includes references to studies on the mechanical properties of materials, stress analysis in aircraft structures, and the use of advanced computational methods in fracture mechanics.

The document seems to be a comprehensive resource on the subject, providing a wealth of information for those working in the field of aerospace engineering and materials science.
FREQUENCY SYNCHRONIZATION
Development of a binary frequency synthesis as control element for frequency correction in time-synchronous collision systems without onboard atomic frequency standard avoidance
[p0304 78-20106]

FREQUENCY SYNTHESIZERS
Development of a binary frequency synthesis as control element for frequency correction in time-synchronous collision systems without onboard atomic frequency standard avoidance
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FREQUENCY ASSIGNMENT
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[p0493 78-20297]

FREQUENCY BANDS
U FREQNENCIES
FREQUENCY CONTROL
Development of a binary frequency synthesis as control element for frequency correction in time-synchronous collision systems without onboard atomic frequency standard avoidance
[p0304 78-20106]

FREQUENCY CONVERTERS
U FREQNENCIES
FREQUENCY DISTRIBUTION
F-15 inlet/engine test techniques and distortion methodologies studies. Volume 5: Effect of filter cutoff frequency on turbulence plots
[NASA-CD-140870]
FREQUENCY DIVISION MULTIPLEXING
Test and evaluation of the Dallas/Fort Worth regional communications switching system
[p0032 78-10363]

FREQUENCY MODULATION
BT PULSE FREQUENCY MODULATION
Frequency Ranges
Theory on the two-frequency ranges for the unsteady fluctuations of the turbulent combustion process in a jet-engine combustion chamber. II - Analysis of the characteristic equation, comparison with the experiment
[p0580 78-50778]

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U FREQNENCIES
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New frequency domain methods for system identification
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Frequency domain compensation of a DIRIGED turbofan engine model
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The application of the Booth approximation method to turbofan engine models
[p0183 78-23991]
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FIXED WINGS
FLEXIBLE WINGS
GAN-1 AIRPOD
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