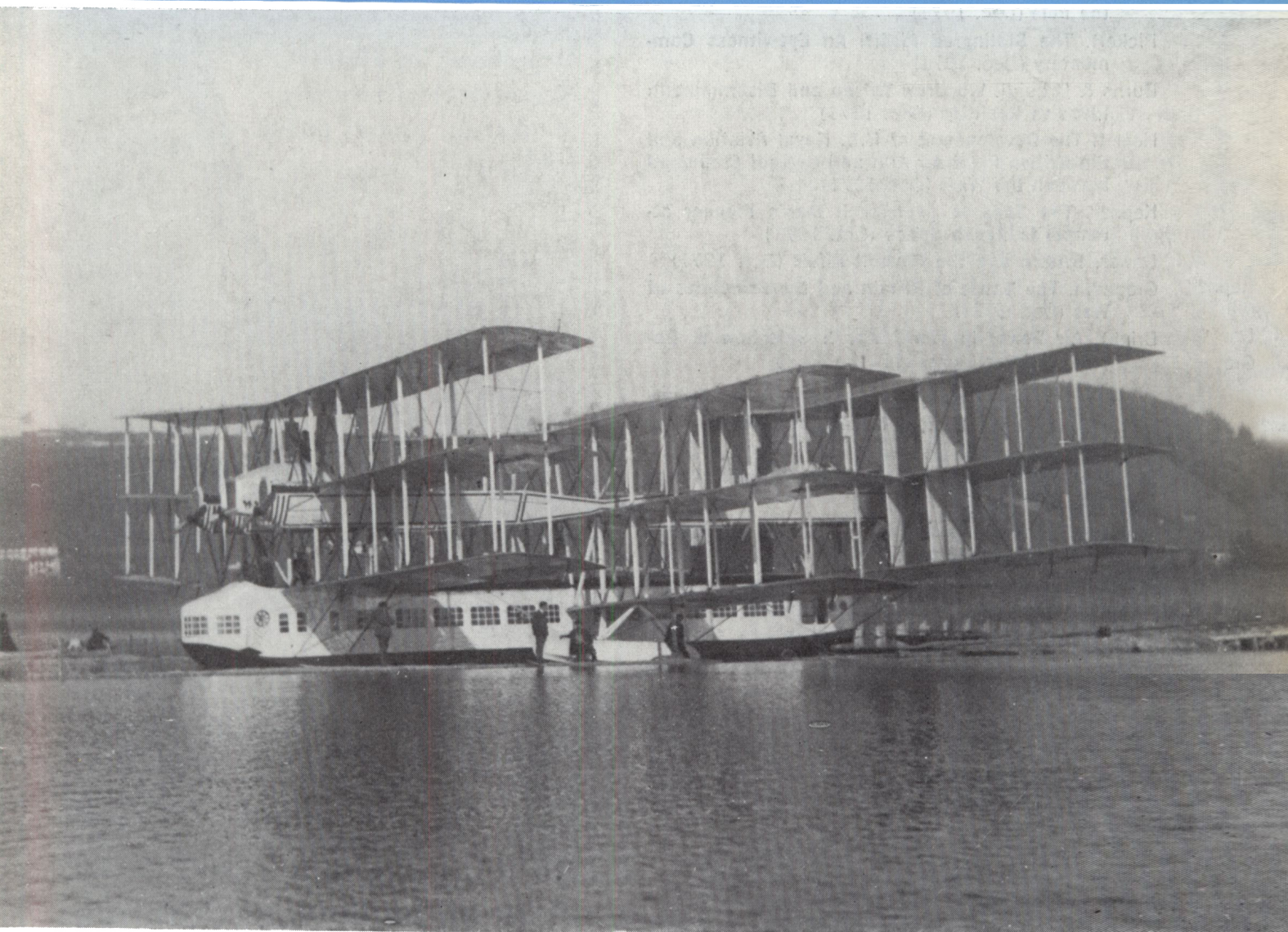


INCLUDING SUPPLEMENTARY PAPERS

FEBRUARY - MARCH 1974

THE
aeronautical
JOURNAL



THE ROYAL AERONAUTICAL SOCIETY

ARE YOU MISSING THE INTERESTING ARTICLES NOW APPEARING

IN THE NEW **AEROSPACE**

HISTORIAN

- Davatz. **The Swiss Air Force: a history** (Dec. 1971)
Morris. **Pioneer Arctic Flying: More than a Race to the Pole** (Dec. 1971)
Pickert. **The Stalingrad Airlift: An Eyewitness Commentary** (Dec. 1971)
Burns & Urquidi. **Woodrow Wilson and Disarmament: Ideas vs Realities** (Dec. 1971)
Hezlet. **The Development of U.S. Naval Aviation and the British Fleet Air Arm and Coastal Command between the Wars** (Oct. 1971)
Kepner. **The Saga of Explorer I: Man's Pioneer attempts to Reach Space** (Oct. 1971)
Dewar. **Britain and the Skybolt Affair** (Oct. 1971)
Gropman. **The Battle of Britain and the Principles of War** (Oct. 1971)
Bright. **Air Power in World War I: Sideshow or Decisive Factor** (June 1971)
Logsdon. **Selecting the Way to the Moon: the Choice of the Lunar Orbital Rendezvous Mode** (June 1971)
Gundelach. **The German Air Force Yesterday and Today** (June 1971)
Dawson. **The Blue Ribbon Panel Report: Unification Orthodoxy Revisited and Revised** (March 1971)
Hatch. **Recruiting Americans for the Royal Canadian Air Force, 1939-1942** (March 1971)
Gray. **The ABM and the Arms Race** (March 1971)
Phillips. **Decision and Dissension: the Birth of the RAF** (March 1971)
Coox. **Restraints on Air Power in Limited War: Japan vs Russia at Chankufeng, 1938.** (Dec. 1970)
Korb. **Robert McNamara's Impact on the Budget Strategies of the JCS** (Dec. 1970)

Department of History
Kansas State University
Manhattan, Kansas 66502
USA

a quarterly
\$8 a year

Cessna A-37

Overseas Subscribers Add One Dollar for Postage

VOLUME 78
NUMBER 758/759
FEBRUARY/MARCH
1974

THE **aeronautical** JOURNAL

*Incorporating The Institution of Aeronautical Engineers and
The Helicopter Association of Great Britain*
Published Monthly

contents

*Editor: G. R. Wrixon, ARAeS,
TEng(CEI).
Assistant Editors:
Jay Wolff, David Scallion.*

*Secretary of the Society:
E. M. J. Schaffter, MA, CEng,
AFRAeS
4 Hamilton Place, London,
W1V 0BQ. Tel: 01-499 3515.
Telegrams: Didaskalos, London, W1*

*Reproduction of any of the papers
published in this journal is not
permitted without the written
consent of the Editor.*

*None of the papers or paragraphs
must be taken as expressing the
opinion of the Council unless
otherwise stated.*

*Advertisements only:
H. E. Southon,
Magazine Advertising Ltd,
184 Fleet Street, London, EC4.
Tel: 01-405 6279 & 01-405 3363.*

*Printed by
Lewes Press Ltd.,
Lewes, Sussex, England.*

*Subscriptions: £20 per annum,
post free.*

*Single copies, including back
numbers: £1.75.*

*Published by
The Royal Aeronautical Society,
4 Hamilton Place,
London W1V 0BQ, England.*

Cover Picture:
One of the most incredible looking aircraft ever designed was certainly this Caproni 60 triple triplane or "hydro-nine-plane" as Dr. Ing. Alberto Jona describes it in his fascinating paper on the Italian aircraft industry in this issue. Originally designed as a 100 passenger transport, the aircraft only made two flights, and on the second it came to grief because of the shifting of an insecure load.

Diary, Notices and Branch Meetings	v
Lecture Summaries	viii
R. Chevalier ANGLO-FRENCH COLLABORATION—CONCORDE AND SUPERSONIC TRANSPORT	61
Dr. Ing. Alberto Jona ADVENTURES AND VENTURES IN THE ITALIAN AIRCRAFT INDUSTRY	65
Professor W. R. Sears SELF-CORRECTING WIND TUNNELS	80
TECHNICAL NOTES	
J. Dunham The effect of stream surface convergence of turbomachine blade boundary layers	90
R. P. Patel A note on fully developed turbulent flow down a circular pipe	93
Library, Reviews, Additions and Reports	98
Council	106
SUPPLEMENTARY PAPERS	
G. E. Williams The computer in management: the current status of the management information system	109
J. Cattanach Anti-tank guided weapons	112

Lynx

**advanced technology
self-contained weapon system**

Westland-Aerospatiale Lynx - the world's most advanced naval helicopter for frigate operation in anti-submarine, surface search and strike, and liaison roles.

**Reliable and robust
Easily maintained
High performance
Maximum capability in
roughest weather and at night
Compact
Operationally versatile
Low vulnerability**

Talk to Westland about Lynx, the first of the next generation of helicopters - in production for the British and French armed forces.

The Westland Group of Companies - 5 times winner of the Queen's Award to Industry

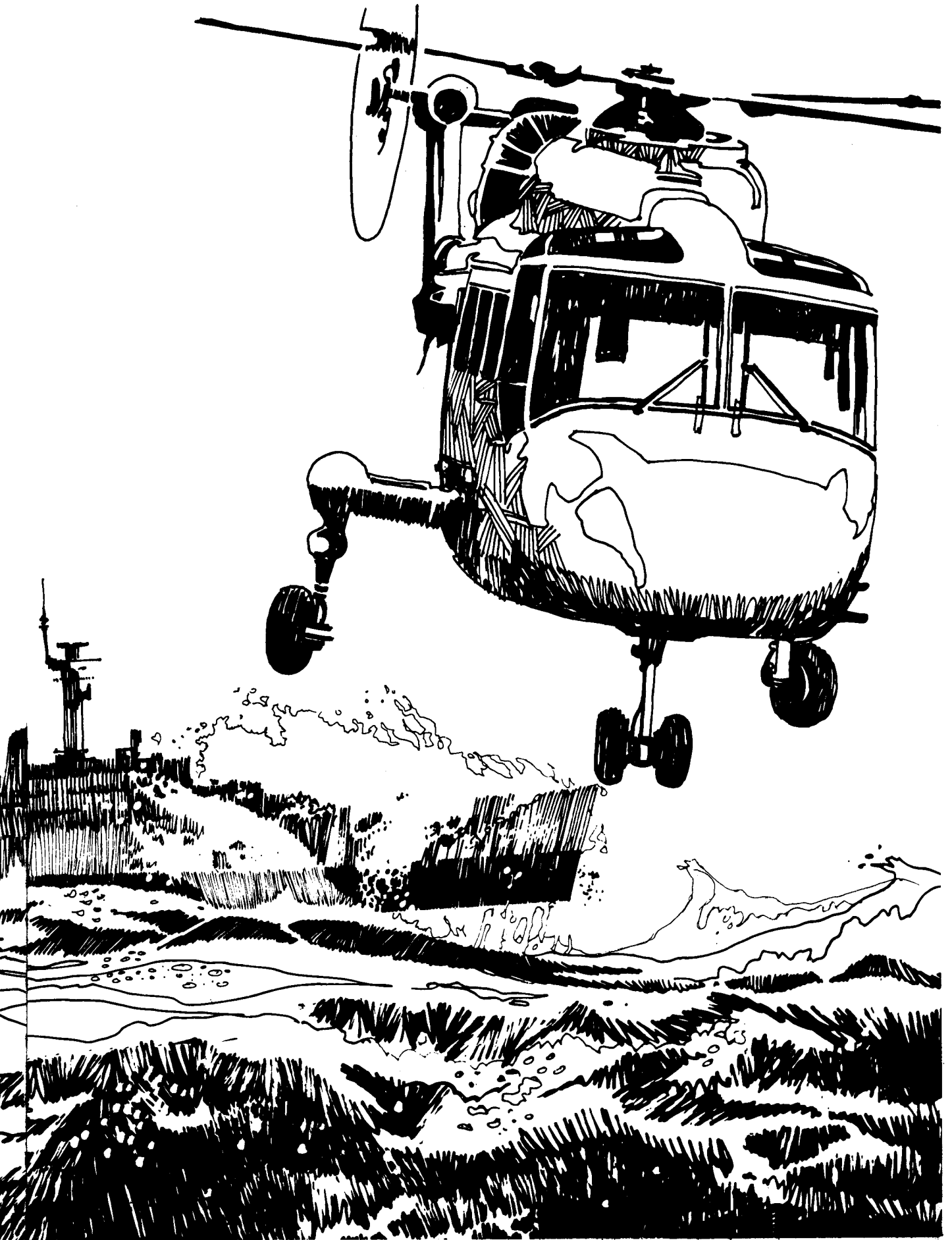


Westland Aerospatiale

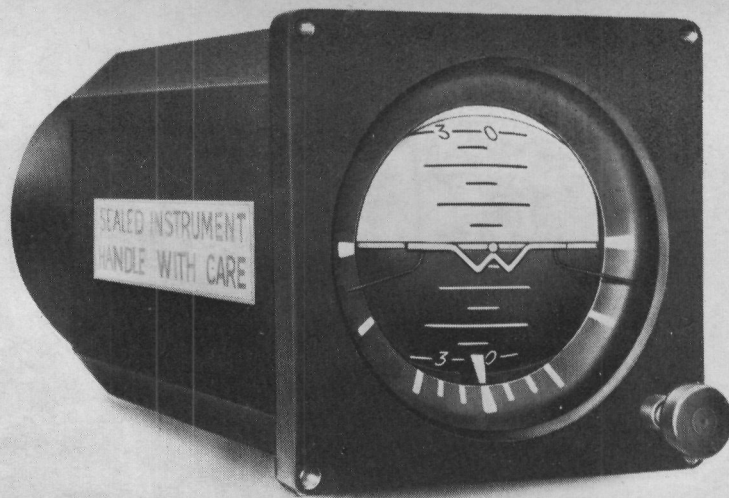
WESTLAND HELICOPTERS
YEovil, ENGLAND

AEROSPATIALE 2 A 20AV, MARCEL CACHIN
93 LA COURNEUVE FRANCE





**DC driven-
but where
is the
inverter?**



FH32 Artificial Horizon is a two-in-one package - lighter, shorter and costs less

Ferranti has built the static inverter inside the case of this 3¼ in. FH32 artificial horizon — to simplify your installation.

Yet this new horizon is lighter, shorter and cheaper than previous Ferranti instruments and the comparable alternatives.

Ferranti can now also supply *directional gyros and turn and slip indicators* with the same DC operation — in association with **AOA apparatebau gauting gmbh**

Send for details to Ferranti Ltd., Aircraft Equipment Department, Lily Hill House, Lily Hill Road, Bracknell, Berkshire, RG12 2SJ. Tel: 0344 24001 Telex: 848117

FERRANTI

FH32 Artificial Horizon with Static Inverter

FAE 49 

Mechanical Engineer

for research with the Advanced Passenger Train Project . . . salary range £2,635 to £3,340.

The Research & Development Division of the British Railways Board has a vacancy in the Structures Section of the Advanced Passenger Train Group, located at Derby, for a Mechanical Engineer, to be responsible for the supervision of a small team of draughtsmen working on advanced vehicle studies and on the support activity for Advanced Project Train development, and also to be responsible for maintaining drawing office standards.

Applicants should have experience in team leadership in a drawing office and be familiar with vehicle design. Experience both in vehicle structures and in equipment installation work would be an advantage. A minimum qualification of HND or equivalent is essential.

There is a contributory pension scheme and the transfer of existing pension rights can be accepted. There are also free and reduced rate rail travel facilities.

Applications stating age, education, qualifications, experience and present salary should be sent to the :—



**Headquarters Staff & Services Manager,
British Railways Board Headquarters,
222 Marylebone Road, London NW1 6JJ
quoting reference RB. 242.**