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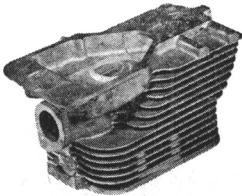
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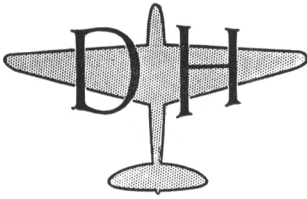
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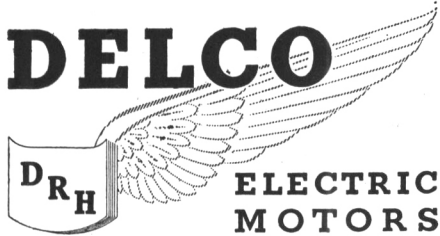
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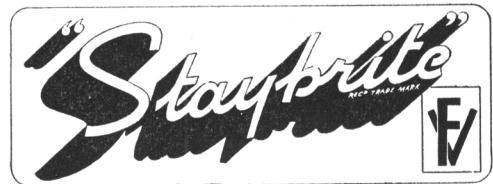
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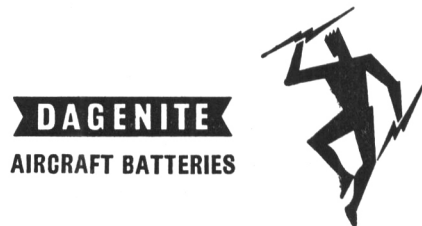
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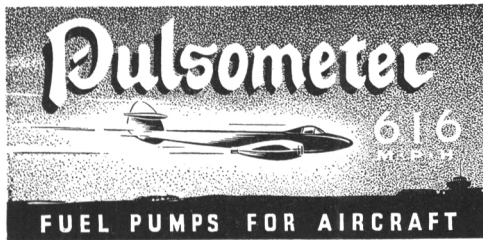
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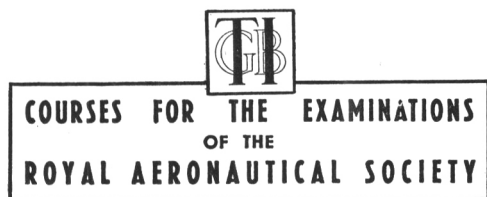
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JOURNAL · PREMIUM AWARDS

The Council have set aside an annual sum of £250 for the award of premiums for papers published in the *Journal* and the Council hope that members (or non-members) will contribute papers on their own special subjects.

THE NEW PRESIDENT

Dr. H. Roxbee Cox, D.I.C., B.Sc., F.I.Ae.S., F.R.Ae.S., took office as President of the Society on 1st October 1947.

CONTENTS OF THE OCTOBER JOURNAL

All Day Discussion on Naval Aircraft.

Papers by W. S. Farren, C.B., M.B.E., M.A., F.R.S., M.I.Mech.E., F.R.Ae.S., "A Survey of the Technical Problems of the Design of Naval Aircraft"; L. Boddington, "Naval Aircraft and Carrier Equipment"; Commander F. M. A. Torrens-Spence, D.S.O., D.S.C., A.F.C., R.N., "Operational Flying." Also, "stills" taken from the films shown during the session by W. G. A. Perring, F.R.Ae.S.

MR. LINDSEY'S LECTURE

The meeting on 20th November will be a joint meeting with the Institution of Mechanical Engineers. Mr. W. H. Lindsey, M.A., A.F.R.Ae.S., will lecture on "The Development of the A.S. type Gas Turbine."

The attention of members is drawn particularly to the fact that this meeting will be held at the Institution of Mechanical Engineers, Storey's Gate, S.W.1, at 6 p.m. (Tea at 5.30 p.m.).

LECTURES—ADVANCE PROOFS

The Society regrets that because of the severe restrictions on paper and the general difficulties of printing, there will be no advance proofs of lectures read before the Society during the Autumn Session 1947.

Whenever possible, brief summaries of forthcoming lectures will be published in Monthly Notices.

GARDEN PARTY

A few copies of the Garden Party Programme are still available, price one shilling (1/3 post free).

"PRESSURISATION" by W. M. Widgery, F.R.Ae.S.—*Outline of the lecture to be read on 9th October 1947.*

The lecturer gives a broad survey of problems of pressurised aircraft cabins and the associated problems of controlling the internal air conditions, with a brief outline of the physiological aspects of the problem. Heating, ventilation, humidification, refrigeration and so on are discussed, together with a description of existing systems.

The paper concludes with a review of the probable trend of developments.

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“SOME RECENT DEVELOPMENTS IN THE LANDING GEAR FIELD” by R. Lucien, A.F.R.Ae.S.—*Synopsis of Lecture to be read on Thursday, 6th November 1947*

The paper considers those new factors which have had considerable effect on the landing problem—the increase in speed, wing loadings, gross weights, and operational altitudes and the effect of thin wings. These are considered in relation to functioning strength and retraction requirements.

The ground stability of the tricycle layout is discussed, including problems of freely castoring wheels, shimmy, hydraulically steerable nosewheels, progressive locking at take-off, and systems where all wheels can castor, such as the MacLaren and Goodyear.

The particular requirements of the modern brake are discussed, the need for high energy absorption and good cooling being stressed. A new type of disc brake is illustrated. French requirements as to brake power are discussed as well as the new method adopted in that country for the emergency control of the brakes. Mention is made of the possibilities of aerodynamic braking.

Some particular features of shock absorber performance are investigated, relating to the differentiation between the absorption of landing energy and the good suspension necessary when taxiing. Three systems employed in France for obtaining variable orifice control to facilitate this are discussed and illustrated.

Problems of low temperature performance relating to fluids, seals and the effect on metals themselves are mentioned.

The need for increased speed of operation of ancillary services is stressed and details are given of methods using electro-hydraulic controls of various types, and also hydraulic relays. Comparisons are made between such new equipment and electric or pneumatic equivalents.

Particular aspects of strength requirements are investigated and the point is made that since official stressing requirements are based on performance of bad undercarriages, many aircraft are inevitably fitted with undercarriages of excessive strength. Features of the use of welded structures, light alloy castings and forgings, high tensile steel castings and forgings and American welding technique are reviewed and discussed.

The difficulty of undercarriage retraction in a modern machine is considered and unusual geometric solutions which hinge or rotate the wheel, contract the shock absorber travel or make use of tandem wheel arrangements are illustrated.

Special runway equipment, such as the Westinghouse electric trolley, is mentioned.

SYMPOSIUM ON INTERNAL STRESSES IN METALS

A Symposium on internal stresses in metals and alloys has been arranged by the Institute of Metals in association with the Faraday Society, the Institute of Physics, the Institution of Mechanical Engineers, the Iron and Steel Institute, the Physical Society and the Royal Aeronautical Society.

The Symposium will be held on **Wednesday and Thursday, 15th and 16th October 1947**, at the Institution of Mechanical Engineers. Thirty-six papers have been received and a limited number of advance copies of the papers will be available at a charge of 5s. (post free). Because of the shortage of paper it is particularly requested that those who are not able to take part in the meeting will await publication of the final report.

The Symposium will be divided into three main sections. The first, under the chairmanship of Dr. C. Sykes, F.R.S., on **The Measurement of Internal Stresses**; the second

NOTICES

on The Origin, Control and Removal of Internal Stresses, under the chairmanship of Professor L. Aitchison, D.Met., B.Sc., F.R.Ae.S.; and the third on Effects Associated with Internal Stresses, under the chairmanship of Dr. Maurice Cook and Dr. H. J. Gough, C.B., M.B.E., F.R.S. To allow the maximum time for discussion, papers will not be read but will be summarised at the beginning of each session by rapporteurs, who will indicate points on which they consider discussion will be most profitable.

The first session begins at 10 a.m. on 15th October 1947, and ends at 12.45; the second at 2.30 and ends at 5.0 p.m., and the third at 10 a.m. on 16th October and ends at 5.0 p.m.

Further particulars can be obtained from The Secretary, Institute of Metals, 4 Grosvenor Gardens, S.W.1.

ASSOCIATE FELLOWSHIP EXAMINATION—DECEMBER 1947

The next Associate Fellowship Examination under the present syllabus will be held on 16th and 17th December at home and abroad. All candidates will be sent full instructions and time-table.

LECTURE PROGRAMME—AUTUMN SESSION 1947

The Lectures will be held at 6 p.m. in the Lecture Hall of the Institution of Civil Engineers, Great George Street, S.W.1 (by permission of the Council of the Institution) unless otherwise stated. Tea will be served at 5.30 p.m.

Visitors are welcome, but should obtain tickets through a member of the Society.

Thursday, 9th October 1947—Pressurisation of Aircraft, by W. M. Widgery, F.R.Ae.S.

Thursday, 23rd October 1947—The Problem of High Temperature Alloys for Gas Turbines, by Sir William T. Griffiths, D.Sc., F.R.I.C., F.Inst.P., F.I.M.

Thursday, 30th October 1947—The Third British Commonwealth and Empire Lecture, by James Bain of Trans-Canada Airlines.

Thursday, 6th November 1947—Some recent Developments in the Landing Gear Field, by Captain R. Lucien, A.F.R.Ae.S.

Thursday, 20th November 1947—The Development of the A.S. Type Gas Turbine, by W. H. Lindsey, M.A., A.F.R.Ae.S. Joint meeting with the Institute of Mechanical Engineers. *This meeting will be held at the Institution of Mechanical Engineers, Storey's Gate, S.W.1, at 6 p.m. (Tea at 5.30 p.m.).*

Thursday, 4th December 1947—Problems Facing Civil Airline Operations, by N. E. Rowe, C.B.E., B.Sc., D.I.C., F.R.Ae.S.

Thursday, 18th December 1947—The Work of the High-Speed Tunnel, by Professor A. Thom, M.A., D.Sc., and W. G. A. Perring, F.R.Ae.S.

BIRMINGHAM BRANCH

The annual dinner of the Birmingham branch is to be held at the White Horse Hotel, Birmingham, on Saturday, 11th October. This is to be followed by a concert for which special artists are being engaged.

The tickets for the dinner and concert are 22/6 for a double ticket and 12/6 for a single ticket.

Application for tickets to Mr. C. P. Homes, 81 Peplins Way, Birmingham, 30.

24th October 1947—Film evening. At Queen's College Chambers, Paradise Street, Birmingham, at 7 p.m.

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GLOUCESTER AND CHELTENHAM BRANCH

15th October 1947—Pressurisation of Aircraft, by Mr. W. H. Widgery, F.R.Ae.S.
In the Chemistry Lecture Theatre, Cheltenham Grammar School, at 7.30 p.m.

PRESTON BRANCH

Thursday, 9th October 1947—Modern Landing Gear Practice, by H. G. Conway, M.A., A.M.I.Mech.E., A.F.R.Ae.S. (Technical Director of British Messier Ltd.).

Wednesday, 29th October 1947—Aircraft Production in War and Peace, by L. G. Burnard, A.M.I.P.E. (Vickers-Armstrongs Ltd., Aircraft Section).

Wednesday, 19th November 1947—The Probable Role and Influence of Aircraft in Future Warfare, by Air Marshal Sir Robert H. M. S. Saundby, K.B.E., C.B., M.C., D.F.C., A.F.C.

Wednesday, 10th December 1947—Fighter Design, by Professor R. L. Lickley, B.Sc., F.R.Ae.S. (Professor of Aircraft Design at the College of Aeronautics, Cranfield).

Unless otherwise stated, all lectures will be held at 7 p.m. in the Preston Chamber of Commerce, Fishergate (next to the Theatre Royal).

READING BRANCH

Wednesday, 5th November 1947—The Place of the Model in Aeronautical Research, by W. G. A. Perring, F.R.Ae.S. In the Monthly Staff Dining Room, Miles Aircraft Ltd., The Aerodrome, Woodley, Berks., at 6 p.m. (tea at 5.30 p.m.).

SOUTHAMPTON BRANCH

5th November 1947—The Case for Tailless Aircraft, by E. D. Keen, F.R.Ae.S.

3rd December 1947—Recent Development in Flying-Boats, by H. Knowler, A.F.R.Ae.S.

7th January 1948—Rotating Wing Aircraft, by C. G. Pullin.

4th February 1948—Structures Testing by P. B. Walker, M.A., Ph.D., F.R.Ae.S.

Lectures will be held at University College, Southampton, at 7 p.m.

GRADUATES' AND STUDENTS' SECTION

Tuesday, 21st October 1947—Interplanetary Flight and Rocket Propulsion, by Mr. A. V. Cleaver, A.R.Ae.S., Special Projects Engineer, De Havilland Engine Co. Ltd.

Tuesday, 4th November, 1947—Maintenance Difficulties in the Field, by Mr. M. J. Kemper, M.B.E., A.R.Ae.S.

Wednesday, 19th November, 1947—Aircraft Photography, by Mr. John Yoxall, Art Editor of *Flight*.

Friday, 12th December 1947—Aircraft Design from the Airline Point of View, by Mr. Christopher Dykes, Deputy Chief Project Engineer, B.O.A.C.

Lectures will be held in the Library of the Society, 4 Hamilton Place, W.1, at 7.30 p.m.

Dance

The Annual Dance, open to members and their friends, will be held on Friday, 17th October 1947 at the Royal Hotel, Woburn Place, W.C.1 (nearest Tube Station, Russell Square—Piccadilly Line). Tickets, price 5/- each, may be obtained from the Honorary Secretary, J. G. Roxburgh, 62 Fitzjohns Avenue, London, N.W.3, or from the Section's representatives at firms and colleges.

NOTICES

CHANGES OF ADDRESS

To assist in keeping the records of members correct and up to date the Secretary will be glad if all members will notify him as soon as possible of changes of address.

When notifying changes please give the following particulars:—

- Name (in block letters).
- Grade of membership.
- New address (in block letters).
- Old address.

Changes of address must be received *before the 15th of the month* in order to be effective for the Journal for the following month.

ELECTION OF MEMBERS

The following new members have been elected:—

Associate Fellow

M. V. Govinda-Raghavan.

Associates

James L. Heron, Denis Keogh Kempston (from Graduate), George Harold Thomas, Frederick Wheate, Henry John Banfield Thompson.

Graduate

James Insley Osborne.

Students

Margaret Elizabeth Angas, Rupert Page Brown, James Joseph Thompson, Keith Donald Thomson, John William Herbert Woof.

ACKNOWLEDGMENTS

The Council acknowledge with grateful thanks back numbers of the Journal from Captain A. N. Barrett, A.F.R.Ae.S., J. D. Campbell, A.F.R.Ae.S., and T. H. Tarr, A.R.Ae.S., and a copy of "Le Vol Vertical" by Lt.-Col. Lamé, presented to the Library by G. Korab, Esq.

ADDITIONS TO THE LIBRARY

- A.a.337—*Cinématique de l'avion*. Francois Hussenot. Dunod, Paris. 1947.
- B.g.154—*Jane's All the World's Aircraft*. Leonard Bridgman (comp). Sampson Low. 1947.
- BB.b.131—*Calcul et construction des avions légers*. R-G. Desgrandchamps. Libraire des Sciences Aeronautiques. 1947.
- BB.b.132—*Plan de fabrication aéronautique*. M-P. Guibert. Dunod, Paris. 1945.
- EE.b.92—*Achievement. Rolls-Royce Ltd.* 1947. (Y.7).
- EE.b.120—*Aircraft Engines of the World*. Paul H. Wilkinson. Pitmans. 1947.
- L.d.116—*Notices to Airmen. Nos. 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 241, 242, 243, 244, 245, 247, 248, 249, 250, 252, 253, 254, 255, 256, 257, 258.*
- Q.a.176—*Select list of standard British scientific and technical books.* ASLIB. 1946.
- S.e.141—*German Research in World War II*. Leslie E. Simon. John Wiley, New York, 1947.
- TT.a.54—*The Flying Boat*. Herbert Strang. Milford. 1919.

NOTICES

Australian Council for Aeronautics

C.S.I.R. Report No. 27. *A review of turbulence theories.* B. L. Cuming.

A.C.A. Report No. 28. *Review of current methods for strength testing of aircraft wings.* W. W. Johnstone.

A.C.A. Report No. 29. *The buckling of plywood plates in shear.* R. C. T. Smith.

A.R.C. Reports and Memoranda

2130—*Equations to given aerofoil sections: "Clark Y" and R.A.F.6.* R. C. Pankhurst.

2115—*Some notes on aerodynamic derivatives.* W. J. Duncan.

2093—*Drag measurements on N.A.C.A. 2218 section at compressibility speeds for comparison with flight tests and theory.* H. H. Pearcey.

2133—*The development of turbulent boundary layers.* H. C. Baines.

2112—*A new method of two-dimensional aerodynamic design.* M. J. Lighthill.

2120—*The smallest size of a spanwise surface corrugation which affects boundary layer transition on an aerofoil.* A. Fage.

2117—*Aerodynamic forces on wings in non-uniform motion.* W. Prichard Jones.

2028—*A continuation of longitudinal stability and control analysis. Part II. Interpretation of flight tests.* S. B. Gates and H. M. Lyon.

2103—*Effect of damping in different parts of an aircraft structure on forced vibrations as studied on simplified systems.* S/L. Fiszdon, R. P. N. Jones and D. L. Woodcock.

2099—*Stress distribution in reinforced flat sheet, cylindrical shells and cambered box-beams under bending.* D. Williams and M. Fine.

J. LAURENCE PRITCHARD,
Secretary.



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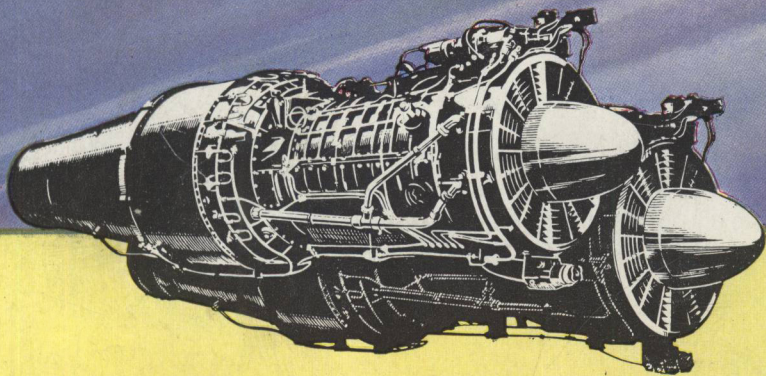
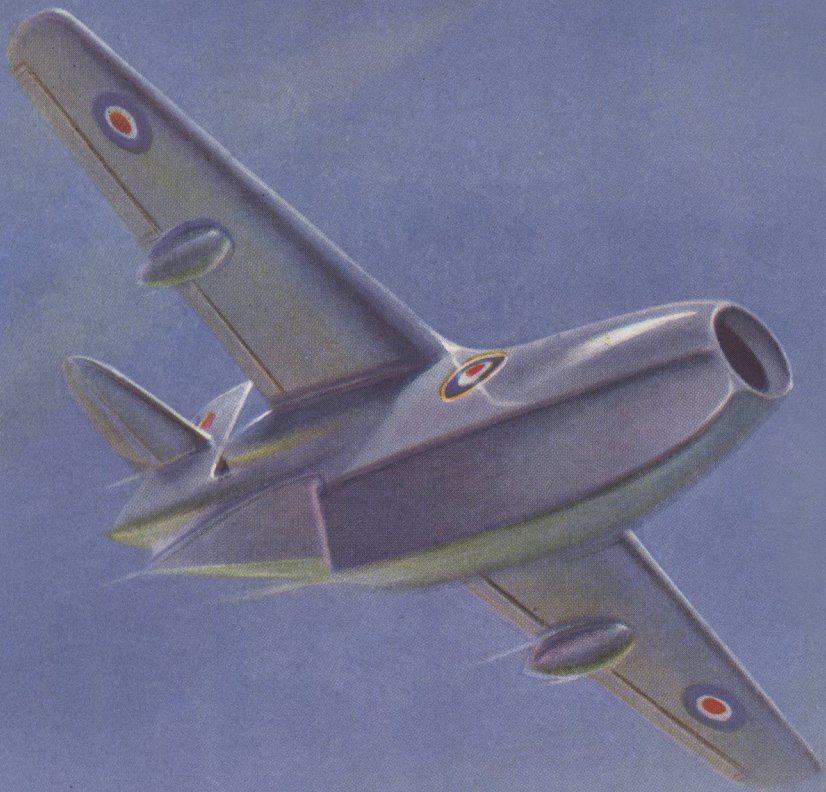
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