

SITUATIONS VACANT

This page of the JOURNAL is available for advertisements of situations vacant in the Industry, the Ministries, Universities and Colleges. The charge for advertisements up to 2 in. in depth is £5 0s. 0d.

ENGINEERS having experience of aircraft fuel systems and associated equipment are invited to make application regarding a vacancy for a **Project Engineer** in a Development Department, in the South of England. The post, which is permanent, involves responsibility for the layout and design work in the application of equipment to prototype and production aircraft and liaison with other project engineers. Whilst experience of aircraft installations and equipment is essential, some knowledge of instrumentation and electrical equipment is required. The salary offered will be commensurate with qualifications and experience. Write giving full details of experience, etc., to Box No. 212.

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STRESS ENGINEERS required by aircraft firm in the Midlands for the stress analysis of new rocket aircraft projects. The positions offer exceptional opportunities of entering a new and expanding branch of aviation having good prospects. Applicants should have experience of stressing either of aircraft or engines and a degree in engineering or Associate Fellowship of the Royal Aeronautical Society would be preferred qualifications. Good salaries will be offered for these posts in accordance with qualifications and experience.—Apply stating age, experience, etc., to Box 195.

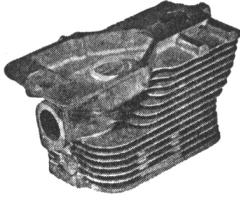
AERONAUTICAL and MECHANICAL ENGINEERS are invited by the Ministry of Supply to apply for a post in the grade of **PRINCIPAL SCIENTIFIC OFFICER** in the Structures Department of the Royal Aircraft Establishment, Farnborough, Hants. Duties will involve work on the design approval of aircraft structures or on the solution of airworthiness problems. Candidates must be at least 31 years of age and should have a 1st or 2nd Class honours degree in Aeronautical or Mechanical Engineering or equivalent qualification, with long experience of aircraft design and structural stressing in the aircraft industry. Salary will be assessed according to age, qualifications and experience within the range £960 to £1,295. Rates for women somewhat lower. The post is unestablished but carries benefits under F.S.S.U. Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), Almack House, King Street, London, S.W.1, quoting Ref. C.684/51A. **Closing date, 5th January 1952.**

APPLICATIONS are invited by the **MINISTRY OF SUPPLY** for the following posts in the Mechanical Engineering Department of the Royal Aircraft Establishment, Farnborough. **SENIOR SCIENTIFIC OFFICER** or **SCIENTIFIC OFFICER**. 1. (Ref. No. C.685/51A). Research into the more fundamental aspects of the development of aircraft hydraulics, pneumatics and oxygen systems involving problems of gas and liquid flow, control systems and storage. 2. (Ref. C.686/51A). Work on research aspects of aircraft vulnerability and weapon lethality, including field trials on representative aircraft parts, studies of new aircraft and weapons and statistical analysis of test results. Mathematical bias with knowledge of statistics essential. Candidates should have a 1st or 2nd class honours degree in Mechanical Engineering or equivalent qualification. For the senior grade they should have had at least three years post-graduate research experience. Salary will be assessed according to age, qualifications and experience within the ranges: Senior Scientific Officer, £720-£910; Scientific Officer, £380-£620. Rates for women somewhat lower. Posts are unestablished but carry benefits under F.S.S.U. 3. (Ref. No. C.687/51A). **SENIOR EXPERIMENTAL OFFICER** and **EXPERIMENTAL OFFICER**. To work on air crew oxygen breathing equipment which requires a knowledge of light precision engineering and a capacity for experimental and development work on components such as capsule and diaphragm operated mechanism, reducing valves, etc. A production background would be a valuable asset. Experimental Officer to assist in the above work. 4. (Ref. No. C.688/51A). **EXPERIMENTAL OFFICER** to assist, with general laboratory and flight work on light mechanisms, cabin conditioning, hydraulic and pneumatic systems. A general mechanical engineering background is required and experimental experience will be of advantage. Candidates should have obtained a Higher National Certificate or equivalent qualification in Mechanical Engineering, preferably following an approved apprenticeship. Salary will be assessed according to age, qualifications and experience, within the ranges: Senior Experimental Officer (minimum age 35), £742 to £960; Experimental Officer (minimum age 28), £545 to £695. Rates for women somewhat lower. Posts are unestablished. Application Forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), Almack House, 26-28 King Street, London, S.W.1, quoting appropriate reference number above. **Closing date, 5th January 1952.**

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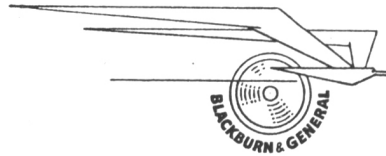


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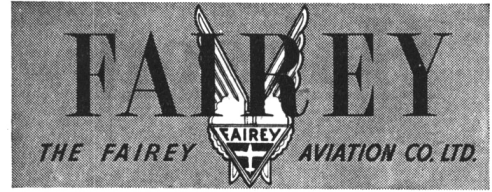
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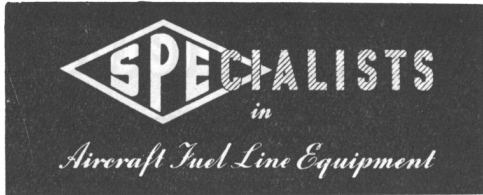
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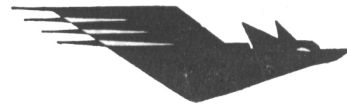


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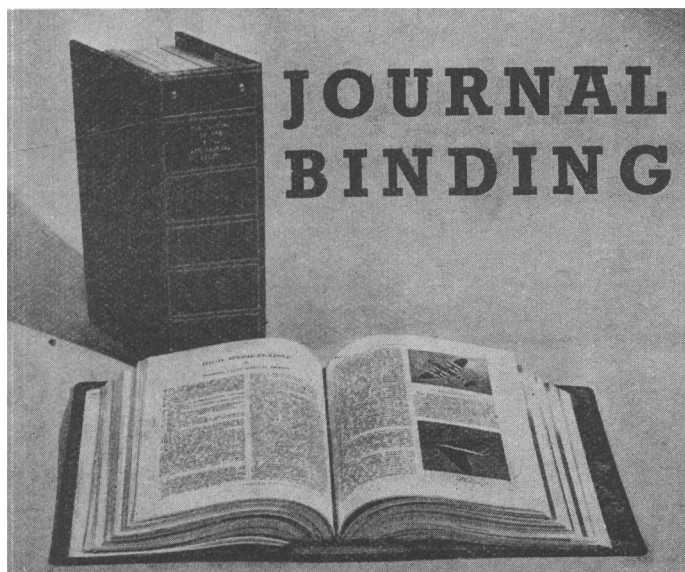
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SECRETARY'S NEWS LETTER

DECEMBER 1951

DURING the past month I have attended two Dinner-Dances, one at Derby and the other at the Isle of Wight. Both of these functions were the first of their kind; I was informed that the ladies had been feeling rather neglected, and had practically insisted that the usual Branch Dinner become a dinner-dance. Whatever the reason for their inception, they were most enjoyable.

I arrived in Derby on 2nd November and during the afternoon was shown over the Rolls-Royce factory by Mr. A. I. Fenwick, of the Publicity Department. I learned that the "Clyde" was not named after THE CLYDE, but after some small river, flowing from the Pennines.

Mr. D. C. Smith joined me in time for the Dinner, which was held in the Rolls-Royce Canteen. Mr. A. G. Elliott was chairman and proposed the toast of the Society. The indisposition of the President was greatly regretted and, in his absence, I had the pleasure of replying to the toast. Other speeches were given by Mr. F. Nixon and Wing Commander Roxburgh. After the speeches the dining room became the dance hall; at the smallest hour the dance became an enjoyable memory.

On 7th November I went to the Weybridge Branch to hear the lecture by Air Commodore H. Satterly on "Bombers from the Operators' Point of View." The discussion which followed proved lively and interesting. The lecture was followed by a dinner given by the Branch President, Mr. G. R. Edwards. Among those present were Sir Hew Kilner, Mr. H. H. Gardner (the Branch Chairman), Mr. J. Sinclair (the Honorary Secretary) and members of the staff of Vickers.

During the following morning, under the guidance of Mr. "Jock" Sinclair, I saw something of the educational side of Vickers.

For their Reception on 9th November at 4 Hamilton Place, the Graduates and Students produced a programme which was very well done. There was dancing in the Library and films in the Council Room. It was a good function, perhaps a little lacking in gaiety at first, but by the end it had warmed up considerably. Mr. J. G. Roxburgh and his Committee are to be congratulated on its success.

At the invitation of Mr. F. T. Meacock, the Chairman of the de Havilland Technical School Old Boys' Association, I was present at their first Annual Dinner, held in Simpson's in the Strand. Among the guests was C. G. Grey, who was in reminiscent mood, and his "I remember" stories caused no little hilarity.

I had never been in Somerset until I visited the Yeovil Branch on 15th November. Air Marshal Sir Robert Saundby gave an interesting lecture on "The Role of Aircraft in Future Warfare." Equally interesting was the discussion at dinner on railway engines, upon which Sir Robert is an expert. Indeed, the Chairman, Mr. E. C. Wheeldon, suggested that Railways might be the subject of a future lecture by Sir Robert.

Mr. D. C. Smith and I stayed over-night at the Westland Guest House and next morning visited the Westland factory. We were particularly interested in the Westland Sikorsky Helicopter, the S55, and in its potentialities. Mr. L. A. Lansdown, the Branch Secretary, took us to Normalair Ltd., where Commander Bassett showed us over the factory.

In the absence of the President, Major Bulman took the chair at the Main Society Lecture at Cheltenham on 22nd November. The lecture, "Problems of Transonic Flight," by Mr. A. N. Clifton, of Vickers-Armstrongs (Supermarine), was very well

attended. There were more than 420 present; at least seven Branches were represented, including the Gloucester and Cheltenham Branch, and there was a large number from the Royal Aircraft Establishment, Farnborough. After the lecture, Mr. Dówty, the Branch President, gave a dinner at the Queens Hotel; among the guests were representatives of the various Branches.

During the following morning I accompanied Mr. Clifton to Hursley Park and was shown over the various departments of Vickers-Armstrongs (Supermarine). I find test rigs and research laboratories very interesting, and those at Vickers-Armstrongs (Supermarine) were no exception.

From Southampton I went across to the Isle of Wight at the invitation of the Branch there. Before the dinner-dance I managed to sandwich in a few hours looking over the "Princess" flying boat at Saunders-Roe. I shall not make any comment on this giantess for the Press commented upon it on its recent removal from the hangar. The "Princess" is impressive—a wing float looks like the fuselage of a small aircraft.

Among the guests were Captain and Mrs. Laurence Pritchard, and Miss Barwood and Miss Joyce, of the Society Staff. In the absence of the Branch President, Mr. Knowler, on account of illness, Mr. Browning acted as Chairman at the Dinner. Mr. Crewe proposed the toast of the guests. It was pleasing to note that he had read his JOURNAL, whence he had gleaned many facts, used in his speech.

The function was very successful, and I should like to convey to the Branch members the thanks of the two ladies of the Staff and myself for the kind invitation.

I have now visited seven Branches; each and every one appears to be flourishing and enthusiastic. The lectures at which I have been present have been well attended, and the discussions good.

Some Graduates are perturbed about the age limit in By-Law 7 (a), which is: "He shall be twenty-one years of age or over, but shall be not more than thirty years of age (except in such cases as the Council may determine)."

I wish to emphasise the last phrase; this means that the Council will consider an extension of the age limit in individual cases. As long as there is compulsory National Service it is probable that not a few Graduates will have reached the age of 30 years before they have had the eight years experience necessary for Associate Fellowship.

Mr. W. Isbister, the Secretary of the Australian Division is in this country at present, it was pleasant to welcome him at the Society and to have an opportunity to discuss the Australian Division with him.

Beginning with the January JOURNAL the Secretary's News Letter and the Monthly Notices of the Society are to be bound with the JOURNAL—as was done some years ago. Those Associate Members who do not receive the JOURNAL will continue to receive their News Letter and Notices.

The President, Major F. Halford, continues to make progress. He has had eight weeks treatment and is hopeful that he will be with us again early in 1952.



Secretary

NOTICES

CHRISTMAS 1951

The President, Major F. B. Halford, the Council, and the Staff of the Society wish all members, at home and overseas, a Merry Christmas and a Happy New Year.

CHRISTMAS HOLIDAYS

The Library and Offices of the Society will be closed from 5 p.m. on Friday 21st December until Thursday 27th December at 9 a.m.

CONTENTS OF THE DECEMBER JOURNAL

- Supersonic Propellers, W. F. Hilton, Ph.D., A.F.R.Ae.S.
- Instrumentation for Testing Aircraft and Aero-Engines, C. N. Jaques, B.Sc., A.F.R.Ae.S.
- Summary of the Activities of the Society for 1951.
- Reviews. Correspondence.
- Index to Volume LV 1951.

THE AERONAUTICAL QUARTERLY—Part III, Volume III

Part III, November 1951 of the Aeronautical Quarterly will be available towards the end of December. The Contents of Part III, Volume III are:—

Photoelasticity and Aircraft Design	H. T. Jessop and C. Snell
A Note on the Design of Ducted Fans	B. Thwaites
A New Treatment of the Tuned Absorber with Damping	D. C. Johnson
A New Approach to Thin Aerofoil Theory	M. J. Lighthill
The Profile Drag of Yawed Wings of Infinite Span	A. D. Young and T. B. Booth
Beams on Cross-Girders with Clamped Ends	J. M. Klitchieff
A Direct Aerodynamic Proof of the Biot-Savart Law	J. Lockwood Taylor

Copies of Volume III, Parts I and II, are still available from the offices of the Society at 7s. 9d. a copy to members of the Society, post paid, or 10s. 3d. to non-members, post paid.

MEMBERS' NEW APPOINTMENTS

C. CHAPLEO (*Fellow*), formerly of the Royal Aircraft Establishment, has joined the Airspeed Division of the de Havilland Aircraft Co. Ltd., and will be in charge of the stress and structural test departments at Christchurch.

P. G. DUFF (*Associate Fellow*), has been appointed Engineer-in-Charge of Industrial Production Equipment and Land Transport Equipment Section, Ministry of Munitions.

DR. M. HOLT (*Fellow*) is leaving the Department of Mathematics, University of Sheffield, to take up a new appointment on 1st January 1952 as Principal Scientific Officer, Armament Research Establishment, Fort Halstead, Sevenoaks.

C. B. V. NEILSON (*Associate Fellow*) has been appointed Technical Director, Electro-Hydraulics Ltd.

N. A. WHITE (*Associate Fellow*) has been appointed Assistant Manager of the Technical Department of Shell Co. of Philippine Islands Ltd.

RECENT AWARDS TO MEMBERS

The Gold Medal for 1950-51 of the Institute of Navigation has been awarded to H. C. Pritchard, *Fellow*, for valuable contributions in the field of airborne navigation.

The Kelvin Medal 1950 was presented to Dr. Theodore von Kármán, *Hon. Fellow*, of the California Institute of Technology, by the Institution of Civil Engineers, on Tuesday 6th November 1951.

Professor J. C. Hunsaker, *Hon. Fellow*, has been awarded the Wright Brothers Memorial Trophy for 1951 for "significant public service of enduring value to aviation."

FORTIETH WILBUR WRIGHT MEMORIAL LECTURE 1952

The Fortieth Wilbur Wright Memorial Lecture will be given by Sir Harry M. Garner, C.B., M.A., F.R.Ae.S., Chief Scientist to the Ministry of Supply, in May 1952. The title of this lecture will be announced later.

ASSOCIATE FELLOWSHIP EXAMINATION—DECEMBER 1951

The next Associate Fellowship examination will be held on 18th, 19th and 20th December 1951 in the offices of the Society. The Library will be closed to members on those days. All candidates have been sent a timetable and full particulars of the examination.

FIFTH LOUIS BLERIOT LECTURE, PARIS 1952

The Fifth Louis Bleriot Lecture will be given by H. Knowler, A.M.I.C.E., F.R.Ae.S., Director and Chief Designer, Saunders-Roe Ltd. The Lecture will be given in Paris on 12th March 1952 on "The Future of the Flying Boat."

PHOTOGRAPHS OF MEMBERS

A number of photographs of members and guests were taken during the Anglo-American Aeronautical Conference in Brighton in September and at the Reception at 4 Hamilton Place, following the Wilbur Wright Memorial Lecture on 10th September. A complete set is available in the offices of the Society and members may inspect them at any time so that they may order any copies they require.

COMMITTEE MEETINGS HELD IN NOVEMBER

A Meeting of Council was held on 29th November. Among the items discussed were the Report of the Future Policy Committee; Report of the Finance Committee; Report of the Grading Committee; Report of the Branches Committee; Liaison with other Societies.

During November eight meetings were held by Committees of the Society. Outside bodies engaged in aircraft engineering and research held 23 meetings in the offices of the Society.

MEMBERSHIP OF THE HELICOPTER ASSOCIATION OF GREAT BRITAIN

The Council of the Helicopter Association of Great Britain has decided that full membership of the Association shall be open to Associate Fellows of the Royal Aeronautical Society, provided that such candidates at the time of application are actively engaged in the execution, or administration, of rotary wing activities, including research, design, development, production and operation. Previously a definite qualifying period of experience in the rotary wing field was required for full membership for otherwise suitably qualified candidates.

EIGHTH INTERNATIONAL CONGRESS ON THEORETICAL AND APPLIED MECHANICS

The Eighth International Congress on Theoretical and Applied Mechanics will be held in Istanbul, Turkey, from 20th to 28th August 1952. Membership of the Congress will be open to all qualified persons whether they are able to be present in Istanbul or not. For regular members of the Congress the fee is \$10.00, which entitles them to participate in all the Scientific and Social features of the Congress and to contribute papers.

The Sections for the presentation of short contributed papers will be:—

Section I: Elasticity—Plasticity—Rheology.

Section II: Fluid Mechanics (Aerodynamics—Hydrodynamics).

Section III: Mechanics of Solids (Ballistics — Vibrations — Friction — Lubrication).

Section IV: Statistical Mechanics—Thermodynamics—Heat Transfer.

Section V: Mathematics of Physics and Mechanics—Methods of Computation.

Full particulars of the Congress may be obtained from the Chairman of the Organising Committee, Dr. Kerim Irim, The Eighth International Congress for Theoretical and Applied Mechanics, P.O. Box 245, Istanbul, Turkey.

MAIN LECTURES

(At 6 p.m. in the Lecture Hall of the Institution of Civil Engineers, Great George Street, London, S.W.1, unless otherwise stated. Tea will be served at 5.30 p.m.)

Thursday, 20th December 1951—Control Surface Flutter, E. G. Broadbent, A.F.R.Ae.S., and W. T. Kirkby, A.F.R.Ae.S.—*at the Institution of Mechanical Engineers, Storeys Gate, S.W.1.*

Thursday, 7th February 1952—The Availability and Use of Aeronautical Information—A joint discussion with the Aeronautical Information Group of A.S.L.I.B.

SECTION LECTURE

*(At 7 p.m. in the Library of the Royal Aeronautical Society, 4 Hamilton Place,
London, W.1)*

Thursday, 31st January 1952—The Problem of Short Haul Air Travel, P. Brookes, A.F.R.Ae.S.

GRADUATES' AND STUDENTS' SECTION

LECTURE

*(At 7.30 p.m. in the Library of the Royal Aeronautical Society, 4 Hamilton Place,
London, W.1)*

Tuesday, 22nd January 1952—Aircraft and Agriculture, P. H. Southwell.

BRANCH NOTICES

BRISTOL BRANCH

Tuesday, 18th December 1951—Aeronautical Brains Trust. Question Master: N. E. Rowe, C.B.E., D.I.C., B.Sc., A.C.G.I., F.R.Ae.S.

Wednesday, 2nd January 1952—The Influence of Metallographic Structure on Fatigue, Major P. L. Teed, F.R.Ae.S., M.Inst.Met., M.I.M.M., F.Phys.S. (Section Lecture).

Tuesday, 8th January 1952—Airframe Fatigue, H. H. Gardner, B.Sc., F.R.Ae.S. (Section Lecture).

Monday, 14th January 1952—Fatigue—Its Effect on Engine Design, K. Chamberlain, B.Sc., A.M.I.Mech.E., A.F.R.Ae.S. (Section Lecture).

Wednesday, 23rd January 1952—Flight Refuelling, C. H. Latimer-Needham, M.Sc., F.R.Ae.S., F.Z.S., M.S.A.E.

Monday, 11th February 1952—The Design of a Jet Engine, A. A. Lombard, A.F.R.Ae.S.

Tuesday, 26th February 1952—The Campaign Against Terrorism in Malaya, Air Vice-Marshal Sir Francis J. W. Mellersh, K.B.E., A.F.C., M.A.

Tuesday, 22nd April 1952—Annual General Meeting and FILM SHOW.

In the Conference Room, Filton House, Bristol Aeroplane Co., at 6 p.m.

BROUGH BRANCH

Wednesday, 12th December 1951—Thirty Years of Naval Aircraft Development, G. E. Petty, F.R.Ae.S., M.I.Mech.E.

Wednesday, 23rd January 1952—Planning and Production Methods used in the Construction of the "Comet" Aircraft, H. Povey, A.F.R.Ae.S.

Thursday, 21st February 1952—MAIN SOCIETY LECTURE.

Wednesday, 19th March 1952—A Talk on Airships, Rt. Hon. Lord Ventry.

Wednesday, 23rd April 1952—The Testing of Experimental Aircraft, Lieut. R. H. Reynolds, D.S.C., A.F.C., R.N.

In the Lecture Hall, Electricity Showrooms, Ferensway, Hull, at 7.30 p.m. Admission is by ticket only.

CHESTER BRANCH

Tuesday, 8th January 1952—Combustion Problems of Aircraft Propulsion, S. Allen, A.F.R.Ae.S., M.I.Mech.E. (*Joint meeting with the Institute of Petroleum, Stanlow Branch*).

Wednesday, 6th February 1952—Members' Lectures.

Tuesday, 4th March 1952—Synthetic Adhesives, by a representative of Aero Research Limited.

Wednesday, 2nd April 1952—Flight Refuelling, C. H. Latimer-Needham, M.Sc., F.R.Ae.S., F.Z.S., M.S.A.E.

Wednesday, 14th May 1952—Annual General Meeting.
At the Grosvenor Hotel, at 7.30 p.m.

COVENTRY BRANCH

Wednesday, 19th December 1951—FILM Evening.

Wednesday, 16th January 1952—Rocket Propelled Missiles, W. H. Stephens.

Wednesday, 20th February 1952—Parachutes, J. E. Hatfield.

Wednesday, 23rd April 1952—Annual General Meeting and FILMS.

In the Wine Lodge (Corner of Corporation Street and The Burges) at 7.30 p.m.

DERBY BRANCH

Monday, 7th January 1952—Canberra Flight Testing, Wing Cdr. R. P. Beamont, D.S.O., D.F.C.

Monday, 4th February 1952—Airships, Lord Ventry.

Monday, 3rd March 1952—Present and Future Trends in Air Line Operation, H. W. Seagram, Director of Operations, Trans-Canada Airways.

Monday, 7th April 1952—Flying Boats, H. Knowler, F.R.Ae.S.

Monday, 5th May 1952—Wind Tunnels, F. B. Greatrex, B.A., A.M.I.E.E., A.F.R.Ae.S.

In the Rolls-Royce Welfare Hall, Nightingale Road, at 6.15 p.m.

GLOUCESTER AND CHELTENHAM

Wednesday, 12th December 1951 (*Gloucester*)—The Effect of Jet Engines on Aircraft Design, H. W. V. Steventon, M.I.Mech.E., A.F.R.Ae.S.

Thursday, 10th January 1952—*Cheltenham*—Structural Experiments, Professor A. G. Pugsley, O.B.E., D.Sc., F.R.Ae.S.

Wednesday, 30th January 1952—*Gloucester*—Turbo-Props, E. Danvers.

Thursday, 28th February 1952—*Cheltenham*—The Development of the Aircraft Gas Turbine in Great Britain and its Influence on Petroleum Requirements, K. C. Hunt, B.Sc., A.C.G.I., A.F.R.Ae.S., F.I.P., A.M.I.Mech.E.

Wednesday, 26th March 1952—*Gloucester*—Some Aspects of High Performance Jet Aircraft, Sqdn. Ldr. W. A. Waterton, A.F.C. and Bar.

Thursday, 24th April 1952—*Cheltenham*—Annual General Meeting.

Gloucester Meetings are held in the Wheatstone Hall, City Library, Brunswick Road, at 7.30 p.m.

Cheltenham Meetings are held in the Assembly Hall, St. Mary's College, at 7.30 p.m.

ISLE OF WIGHT BRANCH

Thursday, 13th December 1951—Annual General Meeting and FILMS.
(Hydrodynamic Development, by the Consolidated Vultee Aircraft Corp.)

Thursday, 17th January 1952—Metal Adhesive Processes, F. H. Parker.

Thursday, 31st January 1952—Electronics, P. Jackson.

Thursday, 14th February 1952—Welded Magnesium Aircraft Components, R. J. Cross.

Thursday, 28th February 1952—Radio and Radar Navigational Aids, H. C. Hinckley.

Thursday, 13th March 1952—The Princess, H. Knowler, A.M.I.C.E., F.R.Ae.S.

Thursday, 27th March 1952—Junior Prize Lectures,

MANCHESTER BRANCH

- Thursday, 13th December 1951**—The Dart Engine, A. D. Jackson, A.F.R.Ae.S.
Thursday, 17th January 1952—Power Controls, D. J. Millard.
Wednesday, 13th February 1952—Problems of Servicing Modern Aircraft,
 Group Captain G. M. Buxton, O.B.E.
Thursday, 13th March 1952—The Problems in the Design of Wheels, J. Wright.
 In the Reynolds Hall, College of Technology, Manchester, at 7.30 p.m.

PORTSMOUTH BRANCH

- Thursday, 20th December 1951**—FILMS: Flight Six; West Wind; The Gates of
 Power; New Town; and Contribution to Victory.
Thursday, 3rd January 1952—The Development and Production of the Comet
 Air Liner, H. Povey, A.F.R.Ae.S.
Thursday, 17th January 1952—FILMS: Berlin Airlift; Shipbusters; Clydebuilt;
 World Garden; and Colonel Crompton—Pioneer and Prophet.
Thursday, 31st January 1952—Airline Operating Problems, Peter G. Masefield,
 M.A., F.R.Ae.S.
Thursday, 14th February 1952—FILMS: Power Lines; In all Weathers—Radar
 for Merchant Shipping; From Silkworm to Parachute; Glass Blowers of
 England; and A Glimpse of Metrovick.
Thursday, 28th February 1952—Rocket Propulsion—the Prospects for Inter-
 Planetary Flight, J. Humphries, A.F.R.Ae.S.
Thursday, 13th March 1952—FILMS: Houses in History; Gems of the Rockies;
 This is Britain; and Turbo Jet Propulsion.
Thursday, 27th March 1952—Annual General Meeting.
 At Airspeed Ltd., The Airport, Portsmouth, at 6 p.m.

SOUTHAMPTON BRANCH

- Wednesday, 16th January 1952**—The Korean Campaign, W. Courtenay, O.B.E.,
 M.M., A.R.Ae.S.
Wednesday, 20th February 1952—An Introduction to Supersonics, C. H. E.
 Warren, M.A.
Wednesday, 19th March 1952—Development of the Viscount, G. R. Edwards,
 M.B.E., B.Sc., F.R.Ae.S., A.M.I.Struct.E.
Wednesday, 9th April 1952—Wind-Excited Oscillations of Suspension Bridges,
 C. Scruton, B.Sc. (*A Joint Meeting with Southern Branches of the Institution
 of Mechanical Engineers and the Institution of Civil Engineers*).
 In the Physics Lecture Theatre, University College, Southampton, at 7 p.m.

WEYBRIDGE BRANCH

- Wednesday, 12th December 1951**—Brains Trust: Air Vice-Marshal G. W. Tuttle,
 C.B., O.B.E., D.F.C., A. A. Hall, M.A., F.R.Ae.S., Charles Gardner,
 O.B.E., A.R.Ae.S., G. R. Edwards, M.B.E., B.Sc., F.R.Ae.S., A.M.I.Struct.E.
Friday, 28th December 1951—ANNUAL DANCE—*St. George's Hill Tennis Club*.
Wednesday, 9th January 1952—Modern Aircraft, G. R. Edwards, M.B.E., B.Sc.,
 F.R.Ae.S., A.M.I.Struct.E.
Wednesday, 30th January 1952—Junior Prize Lecture. Branch Members.
Wednesday, 20th February 1952—Flight Testing from the Pilots Angle, Wing
 Commander T. Balmforth, D.S.O., D.F.C.
Wednesday, 12th March 1952—Planning and Aircraft Development, F. Olaf
 Thornton, A.F.R.Ae.S.
Wednesday, 2nd April 1952—Why a Delta? S. D. Davies, B.Sc., F.R.Ae.S.
Wednesday, 16th April 1952—FILM SHOW.
Wednesday, 14th May 1952—Annual General Meeting.
 At Vickers-Armstrongs Ltd., Weybridge, at 6 p.m.

YEOVIL BRANCH

- Wednesday, 12th December 1951**—Local Railway Systems, A. Osborne, and a
FILM—Helicopter Aerobatics.
Thursday, 17th January 1952—**FILM**: High Speed Hydrodynamic Research.
Thursday, 21st February 1952—The Giant Helicopter, O. O. Fitzwilliams.
Thursday, 20th March 1952—Technical Brains Trust.
Friday, 4th April 1952—Annual General Meeting.

ELECTIONS

The following is a list of new members and transfers of membership of the Society:—

Associate Fellows

- | | |
|---|--|
| Jack Anstess | Arthur Francis Houghton
(from Graduate) |
| Frederick Ecton Barnes | Richard Watson McKay
(from Associate) |
| Gordon Desmond Bateman
(from Graduate) | John Nash (from Associate) |
| Robert George Bowditch | Herbert Wilfred Rigby |
| Jack Bunting | Peter Rivers (from Graduate) |
| Jean Marie Rene Brogard | h Lovell Edwin Toms
(from Graduate) |
| David Mark Cockburn | Frederick William Wool
(from Associate) |
| Gavin Fleming Davidson | |
| Frederick John Davison
(from Graduate) | |
| Stanley Gray (from Graduate) | |

Associates

- | | |
|-----------------------|---|
| Eddardo A. Borgna | Frederick Avann Mason
(from Student) |
| Fred Brookes | Leonard Martin Pankhurst |
| Frank Douglas Bush | Harry William Smith |
| Edward James Cashman | Hugh Renus Sutherland |
| William Edward Hagan | Douglas Cyril Tritton |
| William Francis Hill | Charles Victor George Usher |
| Ivan Beresford Holmes | Alfred Williams |

Graduates

- | | |
|--|---|
| Aldric B. Au-Yong | Richard Godfrey Palgrave Hood
(from Student) |
| Andrew Fyfe Duncan (from Student) | Philip Reed Miller (from Student) |
| George Kenneth Frank Green
(from Student) | Robin Salmon |
| Alan Sidney Henney (ex-Student) | Derrick Francis Simpson |
| Frederick Arthur Hewitt
(from Student) | George Edward Whitmarsh |

Students

- | | |
|---|------------------------|
| Norman Birch | Donald John Leech |
| John Thornton Clarke | Eric James Phillips |
| Michael John Patmore Cowper | Gilbert Joseph Rothery |
| Thomas Patrick Doherty
(from Graduate) | Ivor Harold Smart |
| | Edward Clement Weston |

Companions

- | | |
|--|--|
| George Walter Dandridge | Peter Douglas Dorcenne Bojs
Rowland |
| John Norman Dean | |
| Albert Geoffrey Griffiths
(ex-Graduate) | |

ACKNOWLEDGMENTS

The President and Council wish to acknowledge with grateful thanks a collection of historical slides presented by W. H. Brodey, Esq., Director of the North Bar Tool Co.; and a Farman catalogue presented by Air Commodore E. A. Masterman, C.B., C.M.G., C.B.E., A.F.C.

They also acknowledge with thanks the return of back numbers of the JOURNAL from P. H. Watson, Esq., *Associate Fellow*.

JOURNAL BINDING

The attention of members is drawn to a special leaflet on JOURNAL binding for the 1951 Volume and for 1952, which is enclosed with the December JOURNAL, or with these Notices.

ANNUAL SUBSCRIPTIONS

Members are reminded that their annual subscriptions become due on 1st January 1952. The rates are:—

	HOME			ABROAD		
	£	s.	d.	£	s.	d.
Fellows	5	5	0	4	4	0
Associate Fellows	4	4	0	3	3	0
*Associates	3	3	0	3	3	0
Graduates (aged under 26)	2	2	0	2	2	0
Graduates (aged 26 and over)	2	12	6	2	12	6
Students (aged under 21)	1	1	0	1	1	0
Students (aged 21 and over)	1	11	6	1	11	6
Companions	3	3	0	3	3	0
Founder Members	2	2	0	2	2	0

* Any Associate elected before 1st October 1947 may, if he wishes, elect not to receive the JOURNAL, and in this case his subscription will be reduced by £1 1s. 0d. to £2 2s. 0d.

It will avoid delay and confusion if members, when sending remittances for subscriptions, will state their names clearly and give their addresses and grades of membership.

Remittances should be made payable to the Royal Aeronautical Society.

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.

ADDITIONS TO THE LIBRARY

The following have been added to the Library (titles of pamphlets are printed in italics; books marked * or ** may not be taken out on loan):—

Bailey, S. F. and L. M. Smith	Handbook of Agricultural Pest Control. Industry Publications. 1951.
Bergin, K. G.	Immunization and Air Travel. Reprint from "The Practitioner." 1951.
Civil Aeronautics Administration, U.S.A.	Flight Instruction Manual. U.S.G.P.O. 1951.
Civil Aeronautics Administration, U.S.A.	Standard Specifications for Construction of Airports. U.S.G.P.O. 1948.

- Clark, D. A. R. Advanced Strength of Materials. Blackie. 1951.
- Crede, C. E. Vibration and Shock Isolation. Wiley. 1951.
- Fisher, J. W. *Photography at Sea of Ship Propeller Cavitation*. N.E. Coast Inst. Eng. and Ship. 1951.
- Innes, H. Air Bridge. Collins. 1951.
- Marbarger, J. P. Space Medicine. University of Illinois. 1951.
- Murray, W. M. (Ed.) Proceedings of the Society for Experimental Stress Analysis. Volume IX, Part 1. 1951.
- Neurath, M. Rockets and Jets (A Children's Book). Parrish. 1951.
- Spiral Tube & Components Co. Ltd. Finned Tube. 1951.
- Smith, H. M., A. J. Kraemer and H. M. Thorne Aviation Gasoline and its Component Hydrocarbons. U.S.G.P.O. 1951.
- Teare, D. *Post Mortem Examinations on Air-Crash Victims*. Reprint B.M.J. 1951.
- Tendler, M. and F. M. Holz (Eds.) Official Airline Route and Mileage Manual. Traffic and Service Corp. 1951.
- U.S.A.F.-Navy-Commerce Design of Wood Aircraft Structures. U.S.G.P.O. 1951.
- U.S.A.F.-Navy-Commerce Sandwich Construction for Aircraft. Part II. U.S.G.P.O. 1951.
- U.S. Naval Air Technical Training Command Aircraft Hydraulics. U.S.G.P.O. 1951.

Aeronautical Research Council. Reports and Memoranda

- 2249—*The effect of the condensation of atmospheric water vapour on total head and other measurements in the N.P.L. high speed tunnels*. H. H. Pearcy.
Note on the interpretation of readings of Pitot and static tubes in a high speed tunnel in which condensation of moisture is taking place. C. N. H. Lock.
- 2402—*Parachute Design*. T. F. Johns.
- 2444—*Expressions for the rates of change of critical flutter speeds and frequencies with inertial, aerodynamic and elastic coefficients*. G. H. L. Buxton and I. T. Minhinnick.
- 2504—*High speed wind tunnel tests on models of two jet-propelled fighters (Meteor and Vampire)*. R.A.E. Staff.
- 2564—*Measurement of aircraft attitude relative to flight path during dives*. J. E. H. Braydon.

National Aeronautical Establishment, Canada. Laboratory Reports

- LR-2—*A study of wing torsional divergence*. T. J. Mentel.
- LR-3—*Orifice-type ice detector: preliminary icing tunnel tests of functioning as ice detector, rate-of-icing meter, and icing-severity meter*. D. Fraser.
- LR-5—*The effect of surface active agents on petroleum fuels*. F. G. Kitson.

National Research Council of Canada. Aeronautical Report

- AR-9—*Experimental diagrams of deformation and strain distribution in curved plates under compression*. K. B. Jackson and A. H. Hall.

Publications Scientifiques et Techniques du Ministère de L'Air, France

- Note Technique No. 43—*Les aspects fondamentaux de la thermocinétique*. P. Vernotte.

National Luchtvaartlaboratorium, Amsterdam, Holland. (In English)

- Report F.86—*Ternary wing bending-aileron-tab flutter*. A. I. van de Vooren and D. J. Hofsommer.
- Report S.374—*Study on the frequency of gust loads*. J. P. Benthem.

The Aeronautical Research Institute of Sweden. Reports. (In English)

- 39—*Apparatus for recording the compressive stress-strain curve for thin material coupons at large strains.* B. Bergqvist.
 40—*Note on wall interference in two-dimensional flow at subsonic and transonic speeds.* G. Drougge.
 41—*The induced sidewind behind swept wings at subsonic velocities.* W. Jacobs.

National Advisory Committee for Aeronautics, U.S.A.**Reports**

- 1001—*Fundamental effects of aging on creep properties of solution-treated low-carbon N-155 alloy.* D. N. Frey, J. W. Freeman and A. E. White.
 1002—*On the theory of oscillating airfoils of finite span in subsonic compressible flow!* E. Reissner.
 1003—*Correlation of physical properties with molecular structure for some dicyclic hydrocarbons having high thermal-energy release per unit volume.* P. H. Wise, K. T. Serijan and I. A. Goodman.
 1004—*A lift-cancellation technique in linearised supersonic-wing theory.* H. Mirels.
 1005—*Analytical determination of coupled bending-torsion vibrations of cantilever beams by means of station functions.* A. Mendelson and S. Gendler.
 1006—*Analysis of thrust augmentation of turbojet engines by water injection at compressor inlet including charts for calculating compression processes with water injection.* E. C. Wilcox and A. M. Trout.

Technical Memoranda

- 1290—*The structure of Airy's stress function in multiply connected regions.* G. Grioli.
 1293—*Approximate method of integration of laminar boundary layer in incompressible fluid.* L. G. Loitsianskii.
 1301—*The flow of gases in narrow channels.* R. E. H. Rasmussen.
 1302—*Stability of the cylindrical shell of variable curvature.* K. Marguerre.
 1303—*Resistance of cascade of airfoils in gas stream at subsonic velocity.* L. G. Loitsianskii.
 1304—*Generalisation of Joukowski formula to an airfoil of a cascade in compressible gas stream with subsonic velocities.* L. G. Loitsianskii.
 1306—*Three papers from conference on "wing and tail-surface oscillations"—6th-8th March 1941, Munich.* H. Söhngen, L. Schwarz and F. Dietze.
 1307—*Lateral control by spoilers at the DVL.* M. Krama, Th. Zobel and C. G. Esche.
 1313—*On the recording of turbulent longitudinal and transverse fluctuations.* H. Reichardt.

Technical Notes

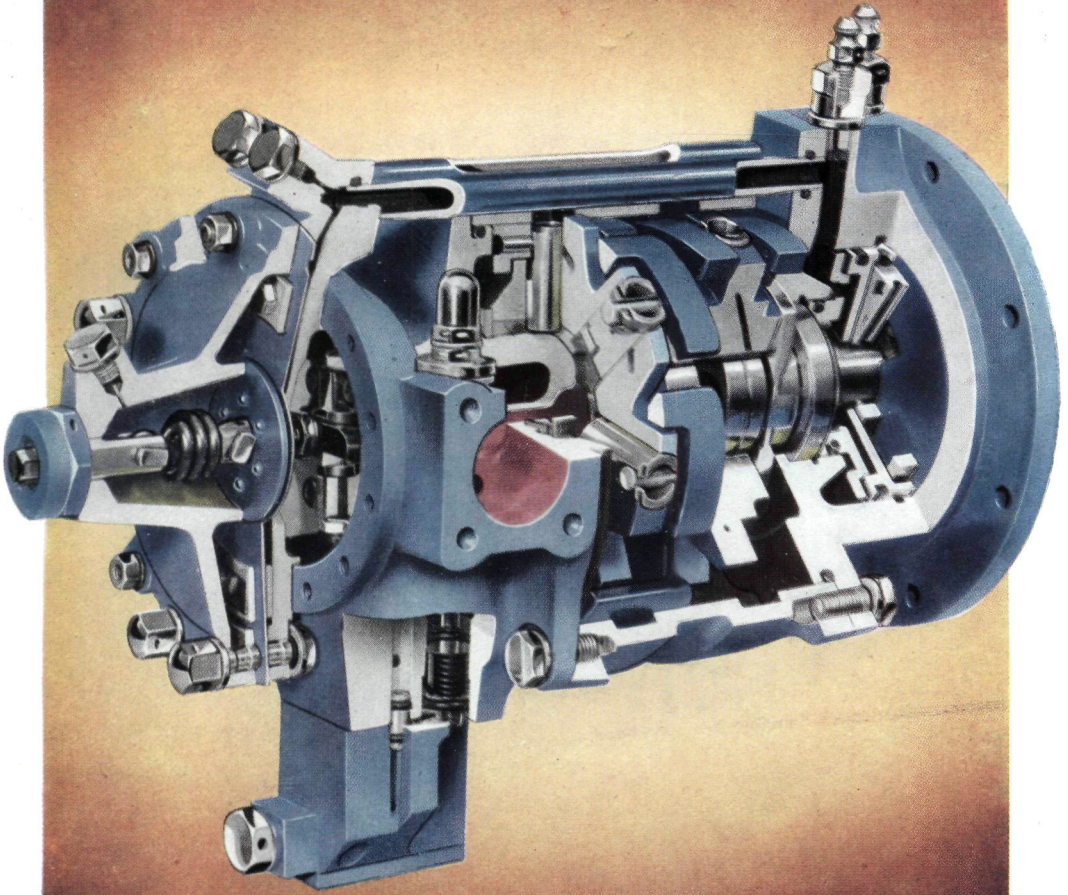
- 2404—*An analytical investigation of effect of high-lift flaps on take-off of light airplanes.* F. E. Weick, L. E. Flanagan, Jr. and H. H. Cherry.
 2424—*Flight investigation of the effect of transient wing response on wing strains of a twin-engine transport airplane in rough air.* H. C. Mickleboro and C. C. Shufflebarger.
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