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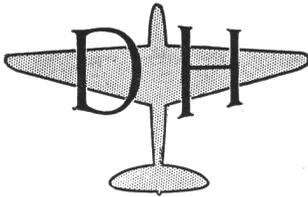
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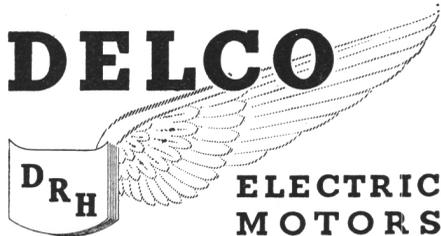
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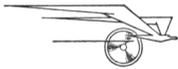


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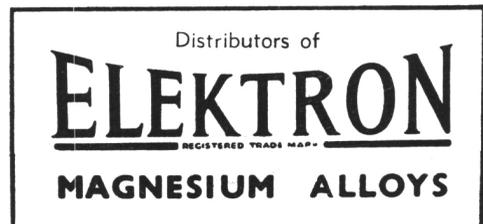
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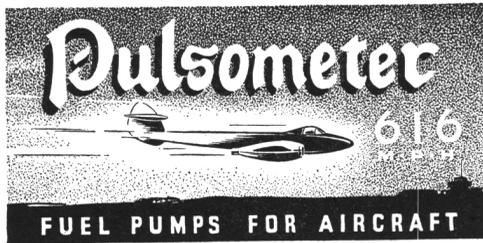
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MARCH

NOTICES

1947

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.

CONTENTS OF THE MARCH JOURNAL

Protection of Aircraft Against Ice, by Mr. J. K. Hardy.

Lofting and Template Reproduction, by Mr. S. P. Woodley, M.B.E.

On the Nature and Conditioning of Least Work Equations in Structures, by Captain J. Morris.

Design for Maintenance, by Lt. (A/E) T. E. G. Bowden, R.N., Graduate.

LECTURES—ADVANCE PROOFS

Because of the severe restrictions on paper and the difficulties of printing caused by the fuel crisis, there will be no advance proofs of Lectures given before the Society during the present Session, that is, up to the end of May.

In future a brief résumé of forthcoming lectures will be published, whenever possible, in Monthly Notices or the Journal.

THE 1951 EXHIBITION

Sir Frederick Handley Page, President, has been appointed to represent the Society at conferences held by the Royal Society of Arts in connection with the proposed 1951 Exhibition.

ELLIOTT MEMORIAL PRIZE

The Elliott Memorial Prize has been awarded to 579736 Corporal Apprentice Air P. Fairhurst of the February 1944 entry, who obtained the highest number of marks in the General Studies Passing Out Examination at Halton.

BADEN POWELL MEMORIAL PRIZE

The Baden Powell Memorial Prize has been awarded to Mr. E. M. Dowlen, who was considered by the examiners to be the best candidate in the Associate Fellowship examination for December 1946.

NOTICES

GENERAL THEORY OF CYLINDRICAL AND CONICAL TUBES—CORRECTIONS

In the paper "General Theory of Cylindrical and Conical Tubes under Torsion and Bending Loads" by J. Hadji-Argyris and P. C. Dunne in the February 1947 Journal, misprints occurred in the following two equations:—

Equation (59a) on page 223 should read

$$h_1 = C_1 \sin \left(\sqrt{\frac{t_s}{t}} \lambda_1 s \right) + C_2 \cos \left(\sqrt{\frac{t_s}{t}} \lambda_1 s \right) + \frac{\hat{p}_1 t}{2A} \oint_S \frac{h_1}{t} ds$$

In equation (120) on page 235 the last term on the L.H.S. should read

$$\omega^2 \sum_i a_i \left\{ \frac{h_i}{t} - \frac{\hat{p}_T}{2A} \oint_S \frac{h_i}{t} ds \right\}$$

MEETINGS AT THE HEADQUARTERS OF THE SOCIETY

During February the following meetings of other organisations were held at 4, Hamilton Place, the headquarters of the Society:—

- Aeronautical Research Council (on several occasions).
- Airspeed Ltd.
- British Standards Institution (on several occasions).
- Guild of Air Pilots and Air Navigators.
- Light Aeroplane Technical Committee.
- Meteorological Research Committee.
- Society of British Aircraft Constructors (on several occasions).

LECTURE PROGRAMME—SPRING SESSION 1947

Except where otherwise stated, 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). Tea will be served at 5.30.

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

Thursday, 27th March, 1947—The War in the Ether, by Air Vice-Marshal E. B. Addison, C.B., C.B.E.

Thursday, 10th April, 1947—A Review of Production Difficulties in Relation to Aircraft Design, by Mr. C. E. Fielding.

Thursday, 17th April, 1947—Testing Civil Aircraft, by Mr. P. A. Hufton, M.Sc.

Thursday, 24th April, 1947—The Risk of Fire and Fire Prevention Methods, by Dr. J. W. Drinkwater, B.Sc., D.Phil., and Mr. W. G. Glendinning.

Thursday, 1st May, 1947—The Development of the A.S. type Gas Turbine, by Mr. W. H. Lindsey, M.A., A.F.R.Ae.S.

NOTICES

DISCUSSION ON NAVAL AIRCRAFT

Wednesday, 7th May, 1947—A full-day Discussion will be held at which the following papers will be read:—

Morning Session

11 a.m. Aircraft Design, by Mr. W. S. Farren, C.B., M.A., F.R.S., F.R.Ae.S.

12 noon. Equipment, by Mr. L. Boddington.

1-2.30 p.m. Luncheon Interval.

Members and visitors should make their own arrangements for lunch.

Afternoon Session

2.30 p.m. Operational Flying, by Commander F. M. A. Torrens-Spence, D.S.O., D.S.C., R.N.

3.30 p.m. Films illustrating Deck Landing, shown by Mr. W. G. A. Perring, F.R.Ae.S.

4.30-5 p.m. Tea Interval (tea provided).

Evening Session

5-6.30 p.m. General Discussion and summing-up by the Chairman.

Thursday, 8th May, 1947—The Development of the Goblin Engine, by Mr. E. S. Moulton, B.Sc., A.M.I.Mech.E., A.F.R.Ae.S.

Thursday, 29th May, 1947—The Thirty-Fifth Wilbur Wright Memorial Lecture will be read by Mr. J. K. Northrop.

GRADUATES' AND STUDENTS' SECTION

Friday, 14th March, 1947—Developments in Propeller Turbine Engines, by Mr. G. J. C. Davies, A.F.R.Ae.S.

Friday, 2nd May, 1947—Flight Testing of Aircraft, by Mr. W. Humble.

Tuesday, 20th May, 1947—Operation of Civil Aircraft in the Tropics, by Captain G. U. Allen, A.F.R.Ae.S.

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

BRANCH LECTURES AND NOTICES

BELFAST BRANCH

11th March, 1947—Gas Turbines and Jets, by Mr. J. Hodge, A.F.R.Ae.S.

All lectures are held in the Central Hall, Belfast College of Technology.

BIRMINGHAM BRANCH

27th March, 1947—An historical survey of the aeroplane, by Lord Brabazon of Tara.
At Queen's College, Paradise Street, Birmingham, at 7 p.m.

BRISTOL BRANCH

4th March, 1947—Some Aspects of Stability and Control, by Prof. A. R. Collar, M.A., B.Sc., F.R.Ae.S., Professor of Aeronautical Engineering, University of Bristol.

25th March, 1947—Competition for the best paper read by a Junior Member.

15th April, 1947—Annual general meeting and film show.

All meetings will be held in the Conference Room, Filton House, Bristol Aeroplane Co., Ltd., Filton, at 5.30 p.m.

NOTICES

DERBY BRANCH

24th March, 1947—Mr. P. G. Masefield, F.R.Ae.S., Director-General Long-Range Planning and Projects, Ministry of Civil Aviation.

Lectures are held at the Rolls-Royce Welfare Hall at 6.15 p.m.

GLOUCESTER AND CHELTENHAM BRANCH

20th March, 1947—Modern Methods of Testing, by Mr. A. E. Bingham, M.I.Mech.E., F.R.Ae.S. In the Social Room, Dowty Equipment Ltd., Arle Court, Cheltenham, at 7.30 p.m.

PORTSMOUTH BRANCH

21st March, 1947—Liquid Springs, by Mr. R. H. Bound, F.R.Ae.S., A.M.I.A.E.

In the Central Library Lecture Room at 7 p.m.

READING AND DISTRICT BRANCH

7th March, 1947—ANNUAL DINNER DANCE—at the Oxford Hall, Reading.

19th March, 1947—Air Transport, by Mr. C. G. Grey.

2nd April, 1947—Sailplane and Glider Design, by Mr. K. G. Wilkinson, of British European Airways.

7th May, 1947—Propeller Turbine Installations, by Mr. A. C. Clinton, F.R.Ae.S., of the Bristol Aeroplane Co. Ltd.

28th May, 1947—FREE FOR ALL. At this meeting any member of the Branch may speak for about 10 minutes on any aeronautical subject. Please let the secretary know beforehand of your intention to speak.

All Lectures will be held at 6 p.m. in the Monthly Staff Dining Room, Miles Aircraft Ltd.; tea will be served from 5.30 p.m.

SOUTHAMPTON BRANCH

19th March, 1947—High Speed Flight, by R. Smelt, M.A., A.F.R.Ae.S.

9th April, 1947—An Address by E. F. Relf, C.B.E., F.R.S., F.R.Ae.S.

All lectures will be held at 7 p.m. in the Physics Lecture Theatre, University College, Southampton.

READING BRANCH PRIZE

The Reading and District Branch has decided to award annually book tokens up to the value of five guineas for the best paper read before this branch by one of its members.

The work must be original and will be judged on its content and upon its delivery; papers must be submitted before 1st September, 1947, and authors will be required to deliver summaries—twenty minutes each—to a meeting early in the Autumn Session.

The winning paper will be announced at the Annual General Meeting and will be read in full later in the session. If considered suitable, the paper will also be recommended to Council for the R.Ae.S. Branch Prize.

Members of Committee are not eligible for their Branch Prize.

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.

ANNUAL SUBSCRIPTIONS OF MEMBERS

Members are reminded that their subscriptions became due on January 1st, 1947, and that under Rule 55 any member whose subscription shall not have been paid before the first day of April shall be in arrears of subscription and shall not be entitled to attend or vote at any meeting or to receive any publications to which he would be otherwise entitled.

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Fellows ..	4	4	0	3	3	0	Graduates (age 26-28)	2	12	6	2	12	6
Associate Fellows ..	3	3	0	2	2	0	Students ..	1	1	0	1	1	0
Associates ..	2	2	0*	2	2	0*	Companions ..	2	2	0	2	2	0

* £1 1s. 0d. without Journal.

It will avoid delay and confusion if members, when sending remittances for their subscriptions, state their name clearly and give their grade of membership and address.

ASSOCIATE FELLOWSHIP EXAMINATION RESULT

The following were successful in the Associate Fellowship Examination held in December 1946:—

Allwright, J. M., Theory of Machines; Balasubramanian, M. S., Applied Mathematics; Balasubramanian, T. S., Theory of Internal Combustion Engines; Busen-Schmitz, H., Pure Mathematics; Briginshaw, G. F., Air Transport; Bukovsky, J. J., Navigation and its Application to Aeronautics; Carroll, T. D. R., Applied Mathematics, Strength of Aeronautical Materials and Structures, Navigation and its Application to Aeronautics; Clarke, J. F., Applied Mathematics, Theory of Machines; Cook, H., Applied Mathematics, Theory of Machines; Currey, N. S., Pure Mathematics; Dolezal, J., Strength of Aeronautical Materials and Structures, Design (Aircraft) (1st place); Donkin, A., Applied Mathematics, Strength of Aeronautical Materials and Structures, Aerodynamics; Dowlen, E. M., Applied Mathematics (1st place), Strength of Aeronautical Materials and Structures (1st place), Aerodynamics (1st place); Dunn, K. G., Aircraft Materials; East, A. W., Pure Mathematics; Edwards, P. A. E., Pure Mathematics; Eggington, W. J., Applied Mathematics; England, B. H., Aircraft Materials (1st place); Evans, R. J., Applied Mathematics; Fairbrother, A., Strength of Aeronautical Materials and Structures, Design (Aircraft); Fearon, J. R. C., Strength of Aeronautical Materials and Structures; Gilchrist, J., Pure Mathematics; Gill, D., Pure Mathematics; Glasspole, M. A., Theory of Machines; Glew, F., Pure Mathematics; Greer, A., Strength of Aeronautical Materials and Structures; Harper, N. T. W., Theory of Machines;

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Harris, E. L., Applied Mathematics, Strength of Aeronautical Materials and Structures, Design (Aircraft); Hellier, E. J., Aerodynamics; Henry, A., Applied Mathematics; Hawley, A. V., Applied Mathematics, Strength of Aeronautical Materials and Structures, Theory of Machines; Jones, J. G., Design (Aero Engines), Theory of Machines; Legg, G. G., Pure Mathematics, Strength of Aeronautical Materials and Structures; Lewandowski, A., Applied Mathematics, Theory of Machines; Little, G. W., Design (Aircraft), Applied Mathematics; Macewicz, K., Applied Mathematics; Marshall, J. M., Applied Mathematics, Theory of Machines; Measures, A., Pure Mathematics; McCallum, R. L., Applied Mathematics, Theory of Machines; McFarlane, P. R., Applied Mathematics, Design (Aero Engines), Theory of Machines; Nayak, U. N., Pure Mathematics, Aircraft Instruments—Theory and Design; Page, D. G., Applied Mathematics, Design (Aero Engines), Theory of Machines; Piggott, J. W., Applied Mathematics, Theory of Internal Combustion Engines; Ricketts, G. C., Strength of Aeronautical Materials and Structures; Romeril, J. G., Applied Mathematics; Scott, C. L. M., Applied Mathematics, Navigation (1st place), Aerodynamics; Smith, M. C. G., Aerodynamics; Sowry, B. L., Theory of Internal Combustion Engines; Staples, G. E., Applied Mathematics, Design (Aero Engines), Theory of Machines (1st place); Sweeting, N. E., Pure Mathematics (1st place), Theory of Machines, Aerodynamics; Swingler, J. A., Applied Mathematics; Subbarao, H. V., Design (Aero Engines); Szymanski, R., Theory of Machines; Tavener, R. I. B., Theory of Machines; Taylor, A. M., Design (Aero Engines), Theory of Machines; Titmuss, H., Applied Mathematics, Aircraft Materials; Tuffs, P. J. W., Pure Mathematics, Strength of Aeronautical Materials and Structures; Walmsley, J. H., Applied Mathematics; Watkins, J., Design (Aero Engines) (1st place); Williams, W. S., Applied Mathematics.

ELECTION OF MEMBERS

The following new members have been elected:—

Associate Fellows

Stuart Alexander Andrews (from Student), Stephen Blumenthal (from Associate), Maurice Edward Burt (from Graduate), Arthur Charles Caporn (from Graduate), Sidney Arthur Clark (from Associate), Clayton Sandel Davies, William John Leslie Davies (from Associate), Michael Dorrington Day (from Associate), George Drzewiecki, David John Farrar, Alexander Walter Fielder (from Graduate), Leslie Percy Gibson, Harold Taylor Hill (from Associate), Geoffrey Soothill Holroyd, Andrew Colin Paul Johnstone (from Associate), Hans Martin Johan Kittelsen, Stanley Douglas McDonald (from Associate), William Rankin McGaw, Donald Louis Mordell (from Graduate), Leonard Alfred Morgan, Wilfred Norwood Neat (from Student), Thomas Robert Nelson (from Graduate), Woolf Petrook (from Graduate), Elizabeth Constance Pike (from Graduate), Marie Helen Polanyi (from Companion), Eric Priestley, Frederick Pye (from Associate), Jack Rasmussen, James Milne Robb, John Alexander Ross (from Graduate), Stanley Alfred Seager (from Associate), Robert Bernard Shannon (from Student), Charles Edwin Smith (from Student), John Maynard Smith, Robert Eric Swift, John Yeadon Tomlinson (from Graduate), Cornelius Paul Joseph Truyens, William Albert John Wall (from Graduate), Tze-Jen Wang, Donald George Alexander Waterman, Peter Sumner Wilson (from Graduate), Donald Arthur Woodley (from Student).

Associates

John Almeida, Frederick Henry Bothanley, Joan Bradbrooke, Harold Stuart Brighty, Bernard Edwin Bullivant (from Companion), Leonard Robert Carolan, Donald Milton Cashmore (from Student), Egbert John Clift, Geoffrey Gofton Conyers, Elmer Coton, Eric Frank Cotton (from Student), Peter Anthony Curry (from Graduate), James Cutts, Francis

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Arthur Davies, Edward William Dawson, Jack Generes Dunkley, Christopher Frederick Earp, Sidney Albert Fentum, Cyril Lewis Soloman Fraser, William Douglas Gaffney, John Robert Lynch Garbett, Harold Sterling Gladwin, Walter Frame Gibb, Arthur Cyril Gower, Donald Saunders Griffin, Edward Clifford Gulliford, Leslie David Groom, John Francis Hardy, Ernest Lawrence Harris, Robert John Thurstan Holland (from Student), Clive Beckingham Houlder, Andre Hubert Jessell, Kenneth James Keen, Francis Pennington Lanham, John Lawson, Lachlann Iain Loch, George Malcolm MacIntosh, David James Masters, Elisabeth Merchant, Frederick Norman Montague (ex-Student), Thomas Edmund Morgan, Leslie Barrington Naylor, Stanley Gordon Orr, Keith Rex Orsborn, David Norman Owen (from Companion), Owen Robert Page, Harold Ray, John Handsley Reed, Desmond Leonard Rendell, George Albert Reston, Henry John Lillgert Sims, Cecil Dennis Soltz, Harry Spencer, Alan Sutcliffe, Belligund Ananth Swamirao, David Barry Sykes, Peter George Ware, Ronald Dennis Watts, Walter Wilkins, David Reginald Williams (from Companion), Ronald Duncan Wymer, James Benjamin Yates (from Graduate).

Graduates

Alec Field Atkin (from Student), Joseph Black, Jean Pierre Day, Ronald Dickson, Stanley Kenneth Harley (from Student), Walter Edmund Hogsflesh, Shanker Lal, William Bernard Mathison (from Student), Harry Usher Midwood (from Student), Kenneth William Norris (from Student), Edward James Oag (from Student), Morris John O'Brien, Roy Panter, Joseph McAdam Rainey (from Student), Muthyala Venkata Rama-Rao, Clement Barry Redgate (from Student), Kenneth David John Ross (from Student), Jeffery Ernest Rossiter, Peter Edward Saunders (from Student), John Speechley (from Student), Norman Teather (from Student), Geoffrey Swan Cabot Vautier (from Student), Robert Craven Walker, Roland Graham L'Estrange Wallace (from Student), Arthur Dennis Wood, Leslie Colin Woods.

Students

Duncan Lomas Berry, Peter Philip Benham, Cyril James Bishop, Stanley Butler, John Edward Cheesbrough, Kevin Edmund Cheverton, Peter Child, Conway Andrew James Chiles, Archie Corke, John Llewellyn Cox, Kenneth Dudley Crisp, Derek Charles Crowther, Alan Russell Dare, Graham Hopkin Davies, Frederick Eric Deudney, David Charles Findlay, Harold Charles Douglas Garner, Grahame Kenneth Gates, Alan Roy Hammond, George Stallwood Henson, Colin Charles Holden, John Edward Howland, William Charles James, Richard Alvin Mathias Lewis, John Kenneth Marshall, Frank Ronald Mason, Spencer Davidson Meston, John Lawrence Mort, James George Alexander Paterson, John Rex, Clive Ridpath, Graham Robertson Russell, Lancelot Brian Rutter, Ronald Charles Rye, Stanislaw Schaezel, John Trevor Stamper, Jerzy Terajewicz, Peter Hammill Wilde, Muhammad Akbar Yusuf.

Companions

Edgar Martyn Allies (from Student), William Macpherson Barber (from Graduate), Alan Harold Buchanan, Francis John Field, Eric Herbert Whiteley.

COLLEGE OF AERONAUTICS

The second two-year Course at the College of Aeronautics will begin in October 1947. This Course is intended for students who have reached graduate standard, but who need not necessarily possess a degree, and who wish to undertake advanced studies in general aeronautics, with specialisation in Aerodynamics, Aircraft Design or Aircraft Propulsion.

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Those interested should write as soon as possible to the Registrar, College of Aeronautics, Cranfield, Bletchley, Bucks, who will furnish fuller particulars of the Course and the procedure to be followed in making application for enrolment.

APPOINTMENTS WITH THE MINISTRY OF SUPPLY

Applications are invited from men and women for temporary appointments in the Ministry of Supply in the grades shown below.

The vacancies are at various Experimental Establishments of the Ministry of Supply, which are concerned with the whole field of scientific research and development for the Fighting Services, and for civil aviation. Most of the vacancies are in the following locations:

Farnborough, Hants.
Malvern, Worcs.
Christchurch, Hants.
Sevenoaks, Kent.
Woolwich.
Salisbury.

For the Scientific Officer grades an Honours Degree or equivalent qualification in some branch of physical science, engineering or mathematics is required. For the Experimental Officer grades the minimum qualification is Higher School Certificate or National Certificate. In addition, technical experience is required for the grades of Senior Experimental Officer and Experimental Officer.

The fields of work for which candidates are required include the following:—

1. Aerodynamic research, particularly on the problems of high speed flight both sub and supersonic.
2. Problems of aero elasticity flutter and vibration of aircraft structures.
3. Radio aids to aircraft navigation and landing.
4. Development and application of Radar technique, particularly for centimetre waves.
5. Automatic control systems for aircraft and projectiles.
6. Development of electronic techniques and application to research needs, and aircraft and weapon testing.
7. Jet and rocket propulsion at supersonic speeds.
8. Research on high temperature materials and intercrystalline corrosion.
9. Fundamental engineering design of all types of air and military equipment.

Salary will be paid according to age, qualifications and experience, on the following inclusive ranges:—

Principal Scientific Officer—(Men) £892 to £1220 (London); £840 to £1125 (Provinces).
(Women) £784 to £1056 (London); £739 to £964 (Provinces).

Senior Scientific Officer—(Men) £640 to £840 (London); £610 to £810 (Provinces). (Women)
£522 to £726 (London); £492 to £692 (Provinces).

Scientific Officer—(Men) £353 to £590 (London); £333 to £560 (Provinces). (Women) £338
to £502 (London); £318 to £472 (Provinces).

Senior Experimental Officer—(Men) £690 to £892 (London); £660 to £840 (Provinces).
(Women) £552 to £714 (London); £522 to £682 (Provinces).

Experimental Officer—(Men) £490 to £640 (London); £452 to £592 (Provinces). (Women)
£392 to £522 (London); £354 to £492 (Provinces).

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Assistant Experimental Officer—(Men) £205 to £428 (London); £195 to £398 (Provinces).
(Women) £205 to £343 (London); £195 to £323 (Provinces).

Application forms may be obtained on request (by postcard, quoting Vacancies.Con.49) from the Ministry of Supply, Est.5.(B)2, Room 828, Adelphi, Strand, W.C.2, to whom completed application forms should be returned within 21 days of the appearance of this notice.

PRINCIPAL SCIENTIFIC OFFICERS AT FARNBOROUGH

Applications are invited for two posts of Principal Scientific Officer in the Royal Aircraft Establishment of the Ministry of Supply.

The successful candidates will be required to undertake the following duties:—

Post (i)—Principal Scientific Officer (Electrical Engineer).

To lead a group engaged on the development of small timing devices based on resistance capacity circuits.

Post (ii)—Principal Scientific Officer (Physicist).

To lead a group working on radio and other types of proximity fuses and to give guidance, on basic research aspects, to a firm engaged upon the development work.

Candidates must be of British nationality, born on or before 1st August 1915, and under 50 years of age on 1st December 1946. They should possess for post (i) an honours degree in Electrical Engineering and should have practical workshop training. Experience in the leadership of staff engaged upon research and development work is essential, while a knowledge of bomb fuse design and experience of aircraft armament work are highly desirable; for post (ii) an honours degree in physics and previous research experience and ability to lead and conduct original research in the field covered by the duties of the post. Familiarity with the use of miniature radio components and the special problems involved in the design of small electronic devices to operate under extremely severe conditions would be an advantage.

The posts are permanent, with Superannuation benefits under the Federated Superannuation System for Universities, and carry salary on the provincial scales £750 x £30-£1020 (men) and £660 x £30-£880 (women) plus a consolidation addition ranging from £90 at the minimum of the scale to £105 at the maximum (men) and £79 at the minimum to £84 at the maximum (women).

Further particulars and forms of application may be obtained from the Civil Service Commission, 6, Burlington Gardens, London, W.1, quoting No. 1797. Completed applications must be returned not later than 15th March, 1947.

NATIONAL GAS TURBINE ESTABLISHMENT APPOINTMENT

Applications are invited for the post of Senior Engineer at the National Gas Turbine Establishment.

Candidates should be British subjects, born on or before 1st August 1915, and under 50 years of age on 1st December 1946. They should possess a 1st or 2nd Class Honours degree and have a sound knowledge of oxygen and refrigeration plant and general mechanical engineering. The successful candidate will be required to supervise the development of turbine oxygen plant.

The appointment is permanent, with superannuation benefits under the Federated Superannuation System for Universities and is graded as Principal Scientific Officer on the

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provincial scale, £750 x £30-£1020 (men) and £660 x £30-£880 (women), plus a consolidation addition ranging from £90 at the minimum of the scale to £105 at the maximum (men) and from £79 at the minimum to £84 at the maximum (women).

Forms of application and full particulars of the appointment may be obtained on application to the Civil Service Commission, 6, Burlington Gardens, London, W.1, quoting No. 1798. Completed applications must be returned not later than 15th March, 1947.

VACANCIES FOR EXPERIMENTAL OFFICERS AT THE NATIONAL GAS TURBINE ESTABLISHMENT

Applications are invited for the following eight posts of Senior Experimental Officer at the National Gas Turbine Establishment of the Ministry of Supply.

1. Aerodynamic investigations applied to gas turbines and compressors.
2. Combustion investigations at varying pressures and temperatures, including high altitude conditions.
3. Investigations of heat transfer.
4. Mechanical design of high speed machinery.
5. The application of electronic methods to problems of vibration.
6. The application of strain gauge methods to the examination of the stresses in rotating components.
7. Testing of engines and accessories, including flight test work.
8. Thermodynamic calculations and performance assessment.

Candidates must be of British nationality. They must have been born on or before 1st August 1915, and be under 50 years of age on 1st January 1947.

Candidates should have general engineering, physical or mathematical knowledge or experience. Possession of a University degree or membership of an appropriate institution, together with experience in the subject pertaining to the post for which they apply, would be an advantage.

Posts are permanent, with superannuation benefits under the Superannuation Acts, and carry salary on the provincial scale, £570 x £25-£750 (men) and £450 x £25-£610 (women) plus a consolidation addition of £90 throughout the scale (men) and £72 throughout the scale (women).

Further particulars and forms of application are obtainable from the Civil Service Commission, 6, Burlington Gardens, London, W.1, quoting No. 1794 to whom completed applications must be returned not later than 15th March 1947.

ACKNOWLEDGMENTS

The Council acknowledges with grateful thanks the gift of four first Indian Air Mail covers from John Maynard, Esq., Associate Fellow, and Biuletyn Budownictwa Lotniczego, Nos. 1-8, 1945-46, presented by Wing Commander P. Czyzewski.

ADDITIONS TO THE LIBRARY

Pamphlets in italics with location reference following in brackets. Books marked * or ** may not be taken out on loan.

A.a.330.—*Aeroplane Performance Theory*. E. Davison. Pitman. 1946.

D.b.264.—*Modern Air Transport*. F. S. Stuart and H. C. Baird. John Long. 1946.

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- *L.d.116.—*Notices to Airmen*. Nos. 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39.
- L.g.28.—*Air Almanac 1947*. January-April. Air Ministry. H.M.S.O. 1946.
- L.j.96.—*Camouflage of Vital Factories and Key Points*. Ministry of Home Security. 1939-45.
- Q.b.8a, P.Q.1a.—*Classification and indexing of technical aeronautical information*. W. C. Cooper. British Society for International Bibliography. 1944.
- S.e.131.—*Battle of the Atlantic*. H. T. Dorling. H.M.S.O. 1946.
- S.e.132.—*The Pilot Walked Home*. Dennis Hornsey. Collins. 1946.
- S.e.133.—*Brief Glory*. E. C. Cheesman. Harborough. 1946.
- *W.g.14.—*Ingenieur-Archiv*. Dr. Ing. Dr. R. Grammel. Band 10-15; Band 10, Heft 5 and 6; Band 11, Complete; Band 13, Complete; Band 14, Complete; Band 15, Heft 1.
- *X.c.155.—*Casey Jones Cyclopaedia of Aviation Terms*. H. L. Williams. McGraw Hill. 1947.

Thornton Aero-Engine Research Laboratory

- Report No. 145.—Gas turbine combustion studies: gas analysis*. R. Heron and R. R. Baldwin.
- Report No. 140.—Gas turbine combustion studies: carbon formation*. R. R. Baldwin and J. C. Street.
- Technical Memorandum T-78.—The development of knock rating methods*. 1939-1946. P. G. Pignuy.

A.R.C. Reports and Memoranda

- 1987.—*Flat sandwich panels under compression end loads*. D. Williams, D. M. A. Leggett and H. G. Hopkins.
- 1999.—*A new theory on load distribution among the rivets or spot welds of a group*. K. Swainger.
- 2011.—*Coupled flexural vibrations of the blades of a propeller and a torsional vibration of an engine crankshaft system*. J. Morris and J. W. Head.
- 2079.—*Transition indication in the National Physical Laboratory 20 in. by 8 in. high speed tunnel*. D. W. Holder.

*N.A.C.A. Technical Memoranda

- 1084.—*Kinetics of chemical reactions in flames*. Y. Zeldovich and N. Semenov.
- 1086.—*Distribution of structural weight of wing along the span*. V. V. Savelyev.
- 1087.—*Strength investigations in aircraft construction under repeated application of the load*. E. Gasener.
- 1089.—*Investigation of flow in a centrifugal pump*. Karl Fischer.
- 1091.—*The effect of the Sperry directional gyro in turning*. Rosello Roselli del Turco.
- 1092.—*On laminar and turbulent friction*. Th. von Kármán.
- 1093.—*The further development of heat-resistant materials for aircraft engines*. Franz Bollenrath.
- 1094.—*Investigation of the behaviour of thin-walled panels and cut-outs*. A. A. Podorozhny.

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- 1095.—*Wind-tunnel investigation of the horizontal motion of a wing near the ground.* Y. M. Serebrisky and S. A. Biachuev.
- 1096.—*Investigation of turbulent mixing processes.* K. Viktorin.
- 1104.—*The influence of the jet of a propulsion unit on nearby wings.* H. Falk.
- 1109.—*Flow investigation with the aid of the ultramicroscope.* G. Vogelpohl and D. Mannesmann.

The following reports have also been received:—

National Luchtvaartlaboratorium, Amsterdam. Report Nos. S.317, S.318, and V.1392.

J. LAURENCE PRITCHARD,
Secretary.



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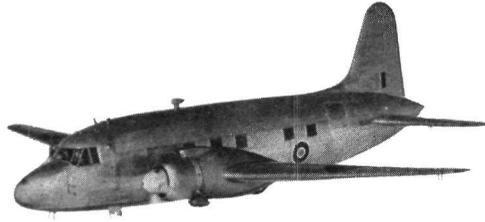
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