

Library Additions



July/August 2003

BOOKS

General

STAR21 — Strategic Aerospace Review for the 21st century: Creating a coherent market and policy framework for a vital European industry. European Advisory Group on Aerospace. European Commission, Enterprise Directorate-General, Aerospace, Defence, Rail and Maritime Industries Unit, B-1049 Brussels, Belgium. 2002. 41pp.

Aerospace Testing International — January 2003. Edited by A. Pickering. UK & International Press, Abinger House, Church Street, Dorking, Surrey RH4 1DF, UK. 2003. 88pp. Illustrated. £35 (annual subscription). ISSN 1478-2774.

The future of full-scale structural testing, quality assurance, lightning test equipment, BAE Systems acoustic fatigue facility, synthetic vision systems, RSVM — compliant air data testing and the European Transonic Windtunnel (ETW) are among the subjects reviewed.

Aerospace Testing International — July 2002. Edited by A. Pickering. UK & International Press, Abinger House, Church Street, Dorking, Surrey RH4 1DF, UK. 2002. 184pp. Illustrated. £35 (annual subscription). ISSN 1478-2774.

Developments in LaserUT (Laser Ultrasonic Testing), servo-actuators, transducers, telemetry systems, dynamic (crash) test sleds/dummies, test data management, friction stir welding (FSW), airbags, the flammability of aircraft materials, Rolls-Royce's engine noise testbeds, Pratt & Whitney Canada's PW800 programme and the wind tunnels of Boeing, ONERA, Aircraft Research Association (ARA), the Arnold Engineering Development Center (AEDC) and India's National Aerospace Laboratories (NAL) are among the subjects reviewed.

Everything Aerospace: Onwards and Upwards — Careers in Aerospace. Edited by V. Amliwala. Independent Educational Publishing, Independent News and Media, Freepost LON18911, London E14 9BR, UK. 2003. 66pp. Illustrated.

Published in association with the Royal Aeronautical Society's Careers Centre, this is an informative guide to career opportunities in the aerospace industry.

LETTERS OF THE WRIGHT BROTHERS



EDITED BY
BRIAN RIDDLE AND COLIN SINNOTT



Defence Procurement Analysis — Spring 2003. Edited by G. Blakey *et al.* Highbury Nexus Defence, Highbury House Communications, The Publishing House, 1-3 Highbury Station Road, Islington, London N1 5SE, UK. 2002. 114pp. Illustrated. £84 (annual subscription). ISSN 1462-0243.

The Autonomous Navigation and Sensing Experimental Research (ANSER) project, FsAST Integrated Synthetic Training Service (FIASTS), smart engines, network-centric warfare and the future of air power are among the subjects reviewed.

World Aviation Directory and Buyer's Guide Spring-Summer 2003. World Aviation Directory, The McGraw-Hill Companies, 1200 G St NW, Suite 900, Washington DC 2005, USA. 2003. 876pp; 478pp. \$245. ISSN 0043-826X.

The Rebirth of UK Engineering: the Hawley Review and the creation of the Engineering and Technology Board. M. Letellier. Training Publications, 3 Finway Court, Whippendell Road, Watford WD18 7EN, UK. 2003. 154pp. Illustrated. £9.99. ISBN 1-84019-017-5.

A review of the work of the Engineering Council (and its predecessors) and its impact on the UK's engineering institutions.

Aerodynamics

Introduction to Aircraft Flight Mechanics. T.R. Yechout *et al.* American Institute of Aeronautics and Astronautics, 1801 Alexander Bell Drive, Reston, VA 20191, USA. 2003. 629pp. Illustrated. ISBN 1-56347-577-4.

Aerodynamics for Engineering Students — Fifth edition. E.L. Houghton and P.W. Carpenter. Butterworth-Heinemann, Linacre House, Jordan Hill, Oxford OX2 8DP, UK. 2003. 590pp. Illustrated. £29.95. ISBN 0-7506-5111-3.

Air Law

Guidance on the Implementation of Article 83 bis of the Convention on International Civil Aviation. ICAO Circ 295. International Civil Aviation Organization, 999 University Street, Montreal, Quebec, Canada, H3C 5H7. 2003. 45pp.

Assembly 33rd Session — Plenary Meetings: Minutes, Montreal, 25 September–5 October 2001. ICAO Doc 9789. International Civil Aviation Organization, 999 University Street, Montreal, Quebec, Canada, H3C 5H7. 2003. 45pp.

Air Transport

Airline Survival Kit. N.K. Taneja. Ashgate Publishing, Gower House, Croft Road, Aldershot, Hants GU11 3HR, UK. 2003. 193pp. £45. ISBN 0-7546-3452-3.

BEAline to the Islands: the story of air services to offshore communities of the British Isles by British European Airways, its predecessors and successors. P. Lo Bao and I. Hutchison. Kea Publishing, 14 Flures Crescent, Erskine, Renfrewshire PA8 7DJ, UK. 2002. 179pp. Illustrated. £14.95.

A detailed history of the post-WW2 development of air transport operations to the Isles of Scilly, Isle of Man, the Channel Islands, the Hebrides and the Northern Isles (Shetland and Orkney), including the recollections of many who were involved.

Airport Technology International 2003. Edited by M. Willey *et al.* Cornhill Publications, 131 Edgware Road, London W2 2HT, UK. 2003. 129pp. Illustrated. £19.95. ISBN 1-85938-453-6. *The development of a 'single European sky', airport security and wireless Internet connectivity in airports are among the subjects concisely reviewed.*

Machine Readable Travel Documents: Part 1 — Machine Readable Passports — Fifth edition. ICAO Doc 9303. International Civil Aviation Organization, 999 University Street, Montreal, Quebec, Canada, H3C 5H7. 2003. Irregular pagination. Illustrated.

Location Indicators — 107th edition. ICAO Doc 7910/107. International Civil Aviation Organization, 999 University Street, Montreal, Quebec, Canada, H3C 5H7. 2003. Irregular pagination.

Financial Data: Commercial Air Carriers 2001. ICAO Digest of Statistics No 505. International Civil Aviation Organization, 999 University Street, Montreal, Quebec, Canada, H3C 5H7. 2003. Irregular pagination.

Airport Traffic 2001. ICAO Digest of Statistics No 506. International Civil Aviation Organization, 999 University Street, Montreal, Quebec, Canada, H3C 5H7. 2003. Irregular pagination.

Airports and Route Facilities 2000: Financial data and summary traffic data. ICAO Digest of Statistics No 498. International Civil Aviation Organization, 999 University Street, Montreal, Quebec, Canada, H3C 5H7. 2003. Irregular pagination.

Avionics and Systems

Handbook on Radio Frequency Spectrum Requirements for Civil Aviation: including Statement of Approved ICAO Policies — Third edition. ICAO Doc 9718. International Civil Aviation Organization, 999 University Street, Montreal, Quebec, Canada, H3C 5H7. 2003. Irregular pagination.

Historical

Letters of the Wright Brothers: Letters of Wilbur, Orville and Katharine Wright in the Royal Aeronautical Society Library. Edited by B. Riddle and C. Sinnott. Tempus Publishing, The Mill, Brimscombe Port, Stroud, Gloucestershire GL5 2QG, UK. 2003. 288pp. Illustrated. £25. ISBN 0-7524-2584-6.

A major addition to the existing literature on the Wright brothers. None of the over 110 chronologically-arranged annotated original letters published in this volume — illustrated by 50 photographs — are included in the earlier compilations of Wright letters — M.V. McFarland (Editor), The Papers of Wilbur and Orville Wright. Volume One: 1899-1905; Volume Two: 1906-1948 (New York: McGraw-Hill Book Company, Inc, 1953. Reprinted 2000) or Fred Kelly (Editor), Miracle at Kitty Hawk: the Letters of Wilbur and Orville Wright (New York: Farrar, Straus and Young, 1951).

Appendices include a previously unpublished contemporary detailed technical description of the Wright A and Orville Wright's instructions for assembling the original 1903 Wright Flyer.

Taking Flight: Inventing the Aerial Age from Antiquity through the First World War. R.P. Hallion. Oxford University Press, 198 Madison Avenue, New York, NY 10016, USA. 2003. 531pp. Illustrated. \$35. ISBN 0-19-516035-5.

British Secret Projects: Jet Bombers since 1950. T. Buttler. Midland Publishing, 4 Watling Drive, Hinckley LE10 3EY, UK. 2003. 224pp. Illustrated. £24.95. ISBN 1-85780-130-X.



Testing Aircraft, Exploring Space: an Illustrated History of NACA and NASA. R.E. Bilstein. The John Hopkins University Press, 2715 North Charles Street, Baltimore, MD 21218-4363, USA. 2003. 218pp. Illustrated. £32. ISBN 0-8018-7158-1.

A concise history of over 75 years of American aerospace research and development from the formation of the National Advisory Committee for Aeronautics in 1915 through to NASA's plans for the International Space Station and the future of space exploration.

First to Fly: the unlikely triumph of Wilbur and Orville Wright. J. Tobin. John Murray (Publishers), 338 Euston Road, London NW1 3BH, UK. 2003. 431pp. Illustrated. £25. ISBN 0-7195-5727-5.

First Flight: the Wright Brothers and the Invention of the Airplane. T.A. Heppenheimer. John Wiley and Sons, Baffins Lane, Chichester, West Sussex PO19 1UD, UK. 2003. 394pp. Illustrated. £16.99. ISBN 0-471-40124-2.

Location of Aviation Memorials: (In the UK and Overseas). C.J. Gardner. Published by the author, 9 Claygate Avenue, Harpenden, Herts AL5 2HE, UK. 2003. 30pp.

The locations of over 1,400 aviation memorials (of which 1,100 are in the UK) are recorded in this reference guide alphabetically arranged by location.

Spreading My Wings. D. Barnato Walker. Grub Street, The Basement, 10 Chivalry Road, London SW11 1HT, UK. 2003. 224pp. Illustrated. £10.95. ISBN 1-904010-31-8.

A new paperback edition of these memoirs of a former Air Transport Auxiliary pilot who on 26 August 1963 set the world speed record for a woman pilot in a Lightning T4 XM996 (1,262 mph).

Mathematics and Dynamics

Basic Structured Grid Generation: with an Introduction to Unstructured Grid Generation. M. Farrashkhalvat and J.P. Miles. Butterworth-Heinemann, Linacre House, Jordan Hill, Oxford OX2 8DP, UK. 2003. 231pp. Illustrated. £35. ISBN 0-7506-5058-3.

Meteorology

Meteorology (MET) Divisional Meeting: Montreal, 9-26 September 2002. ICAO Doc 9812. International Civil Aviation Organization, 999 University Street, Montreal, Quebec, Canada, H3C 5H7. 2003. Irregular pagination.

Propulsion

The Merlin in Perspective — the combat years — Fourth edition. Historical Series No 2. A. Harvey-Bailey. Rolls-Royce Heritage Trust, PO Box 31, Derby DE24 8BJ, UK. 2003. 207pp. Illustrated. £15. ISBN 1-872922-06-6.

Incorporating additional appendices recording performance/type characteristics of the Merlin's numerous variants, this is a welcome amended reprint of the 1995 edition of this detailed history of the engine's wartime development.

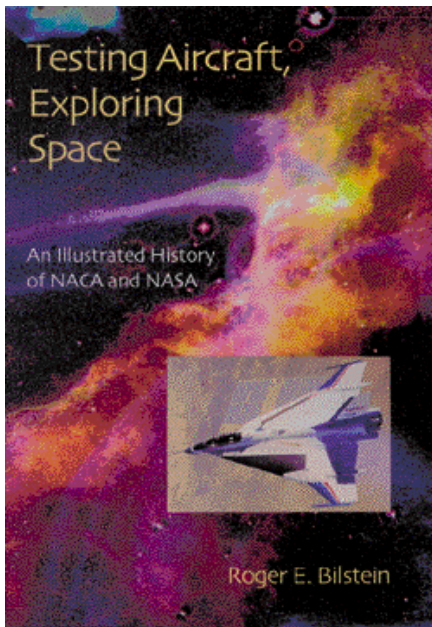
Service Aviation

Airwar: Theory and Practice. P.S. Meilinger. Frank Cass Publishers, Crown House, 47 Chase Side, Southgate, London N14 5BP, UK. 2003. 234pp. £45. ISBN 0-7146-5310-1.

Military Aircraft Markings 2003 — 24th edition. P.R. March and H.J. Curtis. Ian Allan Publishing, Riverdene Business Park, Molesey Road, Hersham, Surrey KT12 4RG, UK. 2003. 224pp. Illustrated. £7.99. ISBN 0-7110-2937-7. *The latest edition of this useful pocket reference guide to all military aircraft which are based in, or originate from, the UK. Also included are details of European-based military aircraft, RAF squadron markings and relevant Internet sites.*

Space

Advanced Space System Concepts and Technologies. I. Bekey. Copublished by The Aerospace Press, 2350 East El Segundo Boulevard, El Segundo, CA 90245-4691, USA and American Institute of Aeronautics and Astronautics, 1801 Alexander Bell Drive,



Reston, VA 20191, USA. 2003. 293pp. Illustrated. ISBN 1-884989-12-8.

Applications of Nanotechnology in Space Developments and Systems. Future Technologies series Vol 43 EN. VDI Technology Center, Future Technologies Division, Graf-Recke-Str. 84, 40239 Dusseldorf, Germany. 2003. 129pp. Illustrated. ISSN 1436-5928.

Current and potential future applications of nanotechnology in space are reviewed.

Structures and Materials

Passive Vibration Isolation. E.I. Rivin. The American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016, USA. 2003. Distributed by Professional Engineering Publishing, Northgate Avenue, Bury St. Edmunds, Suffolk IP32 6BW, UK. 426pp. Illustrated. £124. ISBN 1-86058-400-4.

SYMPOSIA

History of Rocketry and Astronautics: Proceedings of the Thirtieth History Symposium of the International Academy of Astronautics, Beijing, China, 1996. American Astronautical Society (AAS) History Series Vol 25. Edited by H. Moulin and D.C. Elder. Univelt, PO Box 28130, San Diego, CA 92198, USA. 357pp. Illustrated. \$60. ISBN 0-87703-499-0. *Solid rocket development in Japan and China, the Oberth rocket, K.E. Tsiolkovsky, Ariane, Redstone, SNCASE Cannes rockets, ORTRAG (Orbital Transport-und Raketen-Aktiengesellschaft), the French D1 satellite programme and the RAE-Vickers Transonic Model Aircraft (TMA) are among the subjects discussed.*

Unmanned Air Vehicle Systems (UAVs): Proceedings of 18th International Conference, Bristol, 31 March–2 April 2003. Department of Aerospace Engineering, University of Bristol, Queen's Building, University Walk, Bristol BS8

1TR, UK. 2003. Irregular pagination. Illustrated. £90. ISBN 0-86292-534-7.

Proceedings of 28th European Rotorcraft Forum: Bristol, 17-20 September 2002 — Vols 1-3. Royal Aeronautical Society, London. 2003. Distributed by Eurospan, 3 Henrietta Street, Covent Garden, London WC2E 8LU, UK. Irregular pagination. Illustrated. ISBN 1-85768-162-2.

The Beginnings of Powered Flight: Proceedings of a one-day conference, London, 10 May 2003. Royal Aeronautical Society, London. 2003. Distributed by Eurospan, 3 Henrietta Street, Covent Garden, London WC2E 8LU, UK. 83pp. Illustrated. £40 (members); £85 (non-members). ISBN 1-85768-123-1. *'From Antiquity to the Era of the Wrights' (J.A.D. Ackroyd), 'The Wrights and their Earlier Work' (R.P. Hallion), 'The Wrights' Achievement of Flight, 1903' (P. Jakab), 'The Wright Influence in Europe' (P. Jarrett) and 'The Wright Brothers: the United Kingdom Connection' (G. Bruce) were the papers presented.*

PAPERS

Is the Future Unmanned?: The 91st Wilbur and Orville Wright Lecture presented to the Royal Aeronautical Society 5 December 2002. Professor D.I.A. Poll. 7pp.

Scientific and Technical Aspects of the Wrights' Achievements: Paper presented at The Beginnings of Powered Flight: Proceedings of a one-day conference, Royal Aeronautical Society, London, 10 May 2003. Professor D.I.A. Poll. 6pp. Illustrated.

lifting-body and wing-body re-entry vehicle configurations. E.J. Saltzman *et al.* NASA TP-2002-209032. November 2002.

Source term model for an array of vortex generator vanes. K.A. Waithe. NASA TP-2003-212157. March 2003.

Investigations of the aerodynamic interference effects of wing-mounted advanced engines — analysis of high speed test results. H. Hoheisel. DLR FB 2002-20. June 2002.

Untersuchung von Längswirbeln in abgelösten hypersonischen Strömungen. H. Lüdeke. DLR FB 2003-04. October 2002.

Hypersonic flow on a blunted cone-flare and in the VKI-H3 Mach 6 wind tunnel. W. Dieudonné *et al.* VKI TN-193. May 1997.

Aeroelasticity, flutter and vibrations

Static aeroelastic predictions for a transonic transport model using an unstructured-grid flow solver coupled with a structural plate technique. D.O. Allison and P.A. Cavallo. NASA TP-2003-212156. March 2003.

Aerospace engineering

Dynamics and control of attitude, power, and momentum for a spacecraft using flywheels and control moment gyroscopes. C.M. Rothmayr *et al.* NASA TP-2003-212178. April 2003.

CryoSat: ESA's ice mission. R. Francis and H. Rebhan. ESA BR-199. April 2003.

Space product assurance. Cleanliness and contamination control. ECSS-Q-70-01A. 11 December 2002.

REPORTS

Aerodynamics

Aerodynamic assessment of flight-determined subsonic lift and drag characteristics of seven

Proceedings of the 5th ESA International Conference on Spacecraft Guidance, Navigation and Control Systems. Compiled by R.A. Harris and K. Fletcher. Frascati, Italy 22-22 October 2002. ESA SP-516. February 2003.

'Adopt'

a Library Book or Journal

Since its formation in 1866, the Royal Aeronautical Society has been acquiring aeronautical books, journals and other material which are now housed in its extensive library.

Owing to a combination of age and use, a number of the older volumes in the library are in a worn condition and require rebinding.

These books and journals date primarily from pre-1945 and form a major collection of the world's aeronautical heritage which should be preserved for current and future generations of researchers.

The average cost of rebinding a worn volume is about £30, depending on its size and condition. Anyone who would like to contribute to rebinding costs will have their donation recorded on the bookplate inside the particular rebound volume. **If you would like to 'adopt' a book or journal (possibly in memory of someone else) please contact Brian Riddle, RAeS Library, 4 Hamilton Place, London W1J 7BQ, UK. Tel: +44 (0)20 7670 4300. Fax: +44 (0)20 7670 4359. e-mail: library@raes.org.uk**

Library's photographic collections



The Royal Aeronautical Society's Library holds a very extensive photographic/glass lantern slide/lithographic collection of aviation images (over 100,000), from the early days of ballooning through to the modern technology aircraft, missiles and rockets of today, including a number of portrait photographs of aviation personalities. Prints from the collection can be supplied to members and non-members on a fee basis for reproduction in books, journals, CD-ROMs, Internet sites, lecture slides or for use as presentation prints.

All enquiries regarding the Library should be addressed to: **Brian Riddle, Librarian, Royal Aeronautical Society, 4 Hamilton Place, London W1J 7BQ, UK. Tel: +44 (0)20 7670 4362. Fax: +44 (0)20 7670 4359. e-mail: brian.riddle@raes.org.uk.**

Left: Bleriot III powered floatplane, with ellipsoidal wings and tail-unit, on the Lac d'Enghien, north of Paris, May 1906. The aircraft did not fly and was later modified to the Bleriot IV design with conventional wings and ellipsoidal tail.

CryoSat science report. ESA SP-1272. March 2003.

Reviews current knowledge of the influence of ice coverage on climate and outlines the instrumentation and data output for a space mission to study that coverage.

Aerodynamics, thermophysics, thermal protection, flight system analysis and design of asteroid sample return capsule. Edited by Y. Inatani. ISAS SP-17. March 2003.

Aerospace medicine and life sciences

Proceedings of the Second European Workshop on Exo-Astrobiology. Edited by H. Lacoste. Graz, Austria, 16-19 September 2002. ESA SP-518. November 2002.

Astronomy and geodesy

Local and global helioseismology: the present and the future. Proceedings of SOHO 12/GONG + 2002. 27 October-1 November 2002, Big Bear Lake, California. Edited by H. Sawaya-Lacoste. ESA SP-517. February 2003.

Report on the activities of the Research and Scientific Support Department 2001-2002. Edited by K.-P. Wenzel. ESA SP-1268. March 2003.

Education

Space Station Design Workshop 2002: Interdisciplinary student education. E. Messerschmid *et al.* ESA SP-1267. February 2003.

Reports on a student competition in space station design.

Electrical engineering and electronics

Flightweight carbon nanotube magnet technology. J.N. Chapman *et al.* NASA TP-2003-212342. March 2003.

Fluid mechanics

Advanced 2D two-phase flow simulation tool for application to reactor safety. E. Valero. VKI TN-198. February 2001.

History

Belgium's participation in the European Space adventure. D. Laureys. ESA HSR-29. February 2003.

Italy in Space. M. De Maria *et al.* ESA HSR-30. February 2003.

Switzerland in Space: a brief history. P. Creola. ESA HSR-31. March 2003.

Instrumentation and displays

Flight test comparison of synthetic vision concepts at Dallas/Fort Worth International Airport. L.J. Glaab *et al.* NASA TP-2003-212177. May 2003.

Magnetohydrodynamics

Pulse detonation rocket magnetohydrodynamic power experiment. R.J. Litchford *et al.* NASA TP-2003-212284. February 2003.

Magnetohydrodynamic augmented propulsion experiment: 1 — performance analysis and design. R.J. Litchford *et al.* NASA TP-2003-212285. February 2003.

Magnetic flux compression experiments using plasma armatures. M.W. Turner *et al.* NASA TP-2003-212341. March 2003.

Code to code validation of inductive plasma computations. D.V. Abeele *et al.* VKI TN-197. July 1999.

Physics

Computation of thermodynamic properties of arbitrary perfect gas mixtures at low pressures and high temperatures. VKI TN-195. November 1997.

Self-consistent Stefan-Maxwell relations for multi-component ambipolar diffusion in two-temperature plasma mixtures. A.F. Kolesnikov. VKI TN-196. January 1999.

Propulsion

Discharge coefficients of the cooled rotor blades. TATEF Task B3. F. Didier. VKI TN-192. December 2001.

Testing facilities and techniques

Particle image velocimetry using Bragg cell as optical shutter. A. Ramuzat and L. Angelucci. VKI TN-194. August 1997.

Library Additions is designed to keep members of the Royal Aeronautical Society informed of the latest acquisitions of the library at its headquarters: 4 Hamilton Place, London. The contents include those books, symposia, pamphlets, papers, videos, reports and UK patent applications added to the library in the two months prior to publication. **Library Additions** is published bi-monthly in **The Aerospace Professional**. A pdf version is available on the Society's website: <http://www.aerosociety.com>.

Access to the library is free to individual members, members of Engineering Council institutions as well as employees of member companies of the Royal Aeronautical Society's Corporate Partners scheme, while others pay a small daily access fee.

The Library's extensive catalogue of books, proceedings, technical reports since 1980, photographs and slides is now available to members via the Society's website, <http://www.aerosociety.com>.

For further information about the library or **Library Additions** please contact: **Brian Riddle, RAeS Library, 4 Hamilton Place, London W1J 7BQ, UK. Tel: +44 (0)20 7670 4300. Fax: +44 (0)20 7670 4359. e-mail: library@raes.org.uk.**