IN BRIEF

A380 TAKES TO THE SKIES

On 27 April 2005 the first A380, the world's largest commercial aircraft, successfully took off on its maiden flight from Toulouse. Weighing 421 tonnes, Airbus's 21st century flagship is the heaviest civil airliner to date and is powered by four Rolls-Royce Trent 900 engines.

The first flight marked the beginning of a rigorous flight test campaign which will lead to the certification of the A380 by the European and US authorities, allowing the aircraft to enter into service in 2006 with its first operator, Singapore Airlines.

The A380 benefits from cutting-edge technologies in systems and materials. Its significant weight savings are brought about by composites and other advanced materials (such as GLARE) which comprise 25% of its structure, and from the weight, reliability and cost benefits of new systems such as its 5,000 psi pressure hydraulic system. It also has an advanced cockpit with the latest interactive displays and avionics that retains the unique advantages of Airbus's operational commonality between all fly-by-wire models.

The 555-seat A380 offers passenger comfort, longer range and much lower operating costs, and its engines minimise noise, fuel burn and emissions. The A380 is a significant evolutionary step in the history of commercial aviation that will ease congestion at major airports by transporting more people more efficiently on the world's major air routes.

The A380 takes off from Toulouse © Airbus 2005 Photo by C Brinkmann

To date 15 customers have announced firm orders and commitments for a total of 154 A380 family aircraft, comprising 127 passenger aircraft s and 27 freighters. The freighter version of the A380, the A380F, will enter into service in 2008.

For more information see: **www.airbus.com**

ENGINEERING AFTER THE ELECTION

In his first speech after his re-election on 6 May, Tony Blair set out his priorities for the third term. Notably, his first priority was a strong economy that needed investment in "science and skills and technology for the future".

To meet this priority, the expected changes in personnel and departmental responsibilities have already begun with Alan Johnson's appointment as the new Secretary of State of Trade and Industry. His background as a trade union leader – former General Secretary of the Communication Workers Union – suggests he will pay particular attention to the productivity agenda. The aim of this agenda is to improve the skills of the workforce by investing in training and development, and the science and engineering skills base will be a significant component of this policy. Lord Sainsbury retains his role as Minister for Science and Innovation.

The UK's energy policy is another focus for the Government's attention, and the issues surrounding new and existing energy sources will be pivotal to the debate on what kind of energy policy the UK will have in the future. The new Secretary of State's early comments have indicated that the future role of nuclear power is a key topic.

Along with energy, other critical issues will be the environment, Britain's transport infrastructure and the importance of effective IT systems in the delivery of public services. These are all issues that will be of interest to the Associate Parliamentary Engineering Group, whose secretariat is provided by The Royal Academy of Engineering. Please see: **www.apeg.org.uk** for further information.

John Arnold

THE ACADEMY AWARDS 2005

The Royal Academy of Engineering held its annual Awards Dinner in London on 2 June to celebrate the achievements of engineers in the UK as *Ingenia* went to press. Here we list the recipients of the awards and medals.

The President's Medal is awarded to an organisation or individual not eligible to be elected to the Academy, who has contributed significantly to the Academy's aims by promoting excellence in engineering:

Jonathan Ive, Vice-President Industrial Design, Apple Computer, for his outstanding achievements in engineering design, particularly the iPod, which represents the very best of human interface engineering.

The Lifetime Achievement Award is a new award this year, given to an engineer normally resident in the UK whose achievements have had a profound impact upon their engineering discipline. This award applies particularly to those engineers who have not been recognised earlier in their careers because of the latency in the impact of their work or late disclosure due to national or commercial secrecy:

Dr P Woodward, Retired Deputy Chief Scientific Officer, recognising him as an outstanding pioneer of radar and for his work in precision mechanical horology.

The Sir Frank Whittle Medal is named after Britain's jet engine genius and has been established to recognise outstanding sustained engineering achievement that contributes to the well-being of the nation:

Professor Peter Lawrenson FREng FRS, for his work in the development of electrical machines used worldwide including the invention and commercialisation of switched reluctance drives.

The Silver Medal is awarded annually to engineers aged 50 or under who have made outstanding contributions to British engineering, reflected in market success.

Simon Brueckheimer, one of the UK's leading communications engineers. As Consultant Architect at Nortel, he is a pioneer of Next Generation Networks, which are changing the face of telecommunications by integrating voice, mobile, and broadband wireless and data communication into one digital system.

Peter Price, one of Rolls-Royce's top aerospace engineers. Recently appointed Director of Engineering and Technology for the company's Civil Aerospace sector, he is now responsible for technical leadership of civil engine research and project programmes such as the Trent 1000 engine for the new Boeing 787.

Nigel Schofield, pioneer of new vacuum systems for the semiconductor industry. He has helped to make his company, BOC Edwards, the leading supplier of vacuum systems for semiconductor preparation, with export revenue approaching $1 billion.

Barry Trimmer, one of the UK's most respected radar designers. As Research Technology and Engineering Director of Thales UK's aerospace business, he is the design authority for the UK's WATCHKEEPER Unmanned Air Vehicle (UAV) programme, for which the MoD recently made Thales UK its preferred bidder in this £800 million programme.

The Public Promotion of Engineering Medal is awarded to an individual, small team or organisation, who has contributed to the Academy's aims by promoting engineering to the public:

Dr Lindsay Sharp, Director, National Museum of Science & Industry, the Science Museum, for his work in the promotion of engineering, including the passion, energy and imagination he has brought to museums and the dialogue he has created between the public and the world of science and engineering.

The Prince Philip Medal is awarded periodically to an engineer of any nationality who has made an exceptional contribution to engineering as a whole through practice, management or education:

Professor James Dooge FREng, retired Chair in Civil Engineering, University College Dublin, recognising him as an outstanding figure in the field of hydrology.

The MacRobert Award comprises a gold medal and £50,000 and is Britain's most prestigious prize for engineering innovation. It is awarded annually to an individual or small team who have demonstrated excellence and innovation, proven by commercial success:

To CSR plc for the single chip Bluecore™ family, which has brought wireless applications to a huge range of consumer products, from mobile phones and headsets to medical devices. See the feature on page 8 for a summary of the CSR entry along with those of the other three finalists. (Ingenia hopes to publish more detailed articles on the technologies behind the finalists' entries in future editions).

EDUCATING ENGINEERS IN DESIGN

The Academy recently launched a report on the effect of the Visiting Professors Scheme in Principles of Engineering Design since its inception. The report, entitled *Educating Engineers in Design: Lessons Learnt from the Visiting Professors Scheme*, explains exactly what impact the scheme has had, why it is necessary, why it is evolving and the way forward. The report can be viewed at:
www.raeng.org.uk/events/pdf/ Design_Engineering.pdf