



**ROYAL  
AERONAUTICAL  
SOCIETY**

AUSTRALIAN DIVISION  
SYDNEY BRANCH INC

# NEWSLETTER

MAY 2013

Vol 2013-4 PO Box 573, Mascot, NSW 2020 ABN 75 134 058 731 Email: [sydneybranch@raes.org.au](mailto:sydneybranch@raes.org.au) <https://www.facebook.com/groups/RAeSSydney/> www.raes.org.au

Date: **Wednesday, 22<sup>nd</sup> May 2013**

Time: **18:00 for 18:30 hours**

Speaker: **Dr Susan Pond AM, MD DSc, FTSE  
Chair**

**Australian Initiative for Sustainable  
Aviation Fuels, and**

**Adjunct Professor, United States Studies  
Centre, The University of Sydney**

Topic: **'From Test to Commercial Flights by  
Sustainable Aviation Fuels'**

Venue: **Rupert Myers Theatre**

**The University of New South Wales  
Kensington**

Refreshments will be available prior to the commencement of the meeting

## Speaker Profile

Dr. Susan Pond is Chair of the Australian Initiative for Sustainable Aviation Fuels and Adjunct Professor in Sustainability at the United States Studies Centre at the University of Sydney. Her interests include the transition of the transportation sector to alternative fuels; the market sectors driving demand for advanced biofuels; and the policy settings to enable development of integrated systems and the multiple product and business opportunities. Susan is Chair of the Australian Government's Clean Technology Innovation Committee, Vice President of the Academy of Technological Sciences and Engineering and Board Member of the Australian Nuclear Science and Technology Organization and Biotron Ltd.



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## Synopsis

Aviation, which has a strong heritage of opening up new horizons, is now at the forefront of global initiatives to secure sustainability and climate protection. Dr Pond will review the chapter of history being written currently on the emerging sustainable aviation fuels industry and its role in meeting aviation's ambitious environmental targets.

**PARKING:** Limited parking is available in surrounding streets with paid parking within the University of NSW car park tower, entry from Barker Street. Please observe parking restrictions and allow time to drive to the University



of NSW, park and walk to the venue. (Refer map).

**DINNER:** After the presentation DrPond will join us for dinner as the guest of the committee. Members and visitors are invited to attend the dinner to be held at Giovanna Italian Restaurant, 285 Anzac Parade, Kingsford. (approx \$35 pp including soft drink & wine.)

**RSVP:** Attendance registration for the Presentation & Dinner afterwards is preferred. Please register by clicking on this

link: or email by lunchtime Wednesday 22<sup>nd</sup> May to: [sydneybranch@raes.org.au](mailto:sydneybranch@raes.org.au)

## Boeing improves its Li-ion batteries

**April 3, 2013.** Boeing has initiated a comprehensive set of improvements that will add several layers of additional safety features to the lithium-ion batteries on 787 commercial jetliners that are in production and could be ready for initial installation within the next few weeks. New enclosures for 787 batteries also are being built and will be installed in aeroplanes in the weeks ahead. The improvements include enhanced production and operating processes, improved battery design features and a new battery enclosure. The enhancements to the battery system address causal factors identified by the Boeing technical team as possible causes of battery failure. The technical team's findings also were verified by an independent group of lithium-ion battery experts from a number of industries, universities and national laboratories. "We've come up with a comprehensive set of solutions that result in a safer battery system," said Mike Sinnett, vice president and chief project engineer, 787 program, Boeing Commercial Airplanes. "We have found a number of ways to improve the battery system and we don't let safety improvements go once they are identified. We incorporate them into our processes and products." The first layer of improvements is taking place during the manufacture of the batteries in Japan. Boeing teamed with [Thales](#), the provider of the integrated power conversion system, and battery maker [GS Yuasa](#) to develop and institute enhanced production standards and tests to further reduce any possibility for variation in the production of the individual cells as well as the overall battery. For further details refer:

[http://www.electroline.com.au/news/59870?utm\\_medium=email&utm\\_campaign=elec\\_1304\\_1&utm\\_content=elec\\_1304\\_1+CID\\_c9edfef414d9aa44f6f0babb1f9d5493&utm\\_source=Email%20marketing%20software&utm\\_term=READ%20THE%20FULL%20STORY](http://www.electroline.com.au/news/59870?utm_medium=email&utm_campaign=elec_1304_1&utm_content=elec_1304_1+CID_c9edfef414d9aa44f6f0babb1f9d5493&utm_source=Email%20marketing%20software&utm_term=READ%20THE%20FULL%20STORY)

**April 5, 2013:** EVERETT, Washington: Boeing completed a 787 certification demonstration flight on 5<sup>th</sup> April on line number 86, a Boeing-owned production airplane built for LOT Polish Airlines. Today's flight marks the final certification test for the new battery system, completing the testing required by the U.S. Federal Aviation Administration (FAA). The flight departed from Paine Field in Everett, Wash. at 10:39 a.m. Pacific with a crew of 11 onboard, including two representatives from the FAA. The airplane flew for 1 hour and 49 minutes, landing back at Paine Field at 12:28 p.m. Pacific. The crew reported that the certification demonstration plan was straightforward and the flight was uneventful. The purpose of the flight was to demonstrate that the new battery system performs as intended during normal and non-normal flight conditions. Boeing will now gather and analyze the data and submit the required materials to the FAA. Boeing expect to deliver all of the materials to the FAA in the coming days. Once the materials are delivered Boeing will stand ready to reply to additional requests and continue in dialog with the FAA to ensure that they have met all of their expectations. Photos and video

from this flight have been posted in the [787 Media Resource Room](#).

Reference also: [http://media.aerosociety.com/aerospace-insight/2013/04/26/dreamliner-recharged/8025/?utm\\_source=The+Royal+Aeronautical+Society+e-communications&utm\\_campaign=ca10e615ce-raes\\_nl\\_may13&utm\\_medium=email&utm\\_term=0\\_01701ea34d-ca10e615ce-291963153](http://media.aerosociety.com/aerospace-insight/2013/04/26/dreamliner-recharged/8025/?utm_source=The+Royal+Aeronautical+Society+e-communications&utm_campaign=ca10e615ce-raes_nl_may13&utm_medium=email&utm_term=0_01701ea34d-ca10e615ce-291963153)

### Battery Mods Add 185 Pounds to Boeing 787

**April 30, 2013:** Battery modifications required to get Boeing 787s flying again add 184.8 lbs. to each aircraft, Boeing's Alert Service Bulletin (ASB) detailing the upgrades says. Check out [the 516-page ASB here](#).



B787-81205-SB500003-00  
Issue 001, 19 Apr 2013  
AIRCRAFT SERVICE BULLETIN

Group 1-5:  
8. Weight and Balance Changes

Table 9

Airplane	Change in Weight (Pounds)	Change in Moment (Pound-inches)
All	+184.8	+150,469.6

9. Electrical Load Data  
Not changed.

10. References  
A. Existing Data:  
1. Change Notice CN-AA39616C and CN-AA39616E

Meanwhile, the carriers that experienced the two in-service battery issues--ANA and Japan Airlines, which also happen to have the most 787s (17 and 7, respectively)--aren't holding back with regard to keeping the public in the loop on resumption-of-flight progress. Both are posting aircraft-specific status updates for their 787 fleets. As of today, **ANA reported** having two planes modified, eight in progress, and seven "under preparation." **JAL said** it had one modified, three underway, and three waiting in the wings. ANA also is keeping a public log of daily test flights. **Today's update (pdf)** reported two additional flights, boosting the total to seven since the first modified 787 flew Sunday. Both the **ANA** and **JAL** websites have extensive information on the 787 situation, including airline-specific details and background on the grounding and subsequent investigation in general.

### Qantas pilot goes the extra mile for his customers

A Qantas pilot has earned praise for his customer service skills after turning a disappointing situation for his passengers into a memorable gesture. Some 400 passengers aboard a Qantas flight to London via Dubai were reportedly told by their pilot just 90 minutes out of Dubai that the plane's refrigerator had broken down and they would not be getting breakfast or lunch, due to fears the food might cause illness. The passengers were also told that food would be available in the lounges at Heathrow for frequent flyers and Qantas Club members after landing, while others would get "vouchers to have breakfast at one of three eating establishments". While some passengers were becoming disgruntled at the arrangement, the captain told everyone to write down his name and mobile number. The pilot was Richard De Crespigny, and he said if anyone didn't get a voucher or they weren't happy with the service, to call him personally and he would fix it. De Crespigny has experience in averting disaster, he was the pilot of flight QF32, which made an emergency landing at Changi Airport in 2010 after being rocked by an engine explosion.

### ACC urges airports to invest in service

The Australian Competition and Consumer Commission has called for increased investment from Australian

airports to boost their levels of customer service. In its annual report on Australia's five major airports - Adelaide, Brisbane, Melbourne, Perth and Sydney - the ACCC found overall ratings for the quality of service decreased in 2011-12 and for the first time no airport achieved an overall rating of at least 'good'. The ACCC, taking into the account the view of passengers, airlines border agencies, found the airports remained profitable and a combination of strong domestic demand from fly-in, fly-out passengers, increased international passengers and some higher prices boosted aeronautical revenues at all airports.

"It is apparent that continued growth in passenger numbers at most airports is placing pressure on existing aeronautical infrastructure, contributing to lower service standards," ACCC chairman Rod Sims said "More investment is required to avoid excessive congestion, and ensure that the needs of Australia's travellers can be adequately accommodated." The ACCC also found there had been a falling trend in punctuality at airports over the past decade, with the proportion of flight movements that are on-time dropping.

From Fifth Quadrant Pty Ltd newsletter dated 30<sup>th</sup> April, 2013

### Committee member's brother honoured

The brother of our long term committee member Mr Peter Marosszeky, Emeritus Professor Dr. Jenó (Ben) Marosszeky AM was invested on May 2nd, 2013 at Government House by the Governor of NSW Her Honour Dr. Marie Bashir in the General Order of Australia Day Honours as a Member of the Order of Australia for lifelong services to medicine in Rehabilitation Medicine and research into Arthritis and founding member of the Arthritis Foundation.

### RAeS Ties, Coffee Mugs, and Lapel Pins

Variety of RAeS Ties \$20 each, Sydney Branch coffee mugs (with new logo) & lapel pins available at Branch meetings for \$10 each.

### Diary 2012-2013

**14 May:** Presentation by Emeritus Professor John Richards, entitled 'Australian Earth Observation from Space: Digital Earth, Citizen Science and Social Media', at Engineers Australia, Level 3, 8 Thomas Street, Chatswood commencing 18:00 hrs. Refer for further details: [www.engineersaustralia.org.au/eminent-speakers/emeritus-professor-john-richards](http://www.engineersaustralia.org.au/eminent-speakers/emeritus-professor-john-richards)

**24-28 June:** 10<sup>th</sup> Annual Meeting Asia Oceania Geosciences Society, Brisbane. For further details refer: [www.asiaoceania.org/aogs2013/public.asp?page=sessionProposal.htm](http://www.asiaoceania.org/aogs2013/public.asp?page=sessionProposal.htm)

**Sept/Oct:** Ian. Q. Thomas, President, Boeing Australia & South Pacific to present the 55<sup>th</sup> Sir Charles Kingsford Smith Lecture followed by the Annual Branch Dinner.

### Aerospace Websites

[www.aerosocietychannel.com/aerospace-insight/2011/07/space-shuttle-the-end-of-the-beginning/](http://www.aerosocietychannel.com/aerospace-insight/2011/07/space-shuttle-the-end-of-the-beginning/)

[www.57rescuecanada.com](http://www.57rescuecanada.com): Follow Capt. Karl Kjarsgaard's adventures to recover Halifax bomber LW170 which is resting beneath 5000ft of water off the Irish coast;

[www.adastron.com/707/updates/updates.htm](http://www.adastron.com/707/updates/updates.htm): Diary of Boeing 707-138B XBA formally Qantas EBA.

[www.airshow.com.au](http://www.airshow.com.au)

[www.atsb.gov.au](http://www.atsb.gov.au);

[www.aviationmuseum.com.au](http://www.aviationmuseum.com.au) - Temora Aviation Museum;

[www.boxkite2014.org](http://www.boxkite2014.org): The Boxkite project.

[www.innovationnewsdaily.com/920-flying-robots-play-007-theme.html](http://www.innovationnewsdaily.com/920-flying-robots-play-007-theme.html)

[www.powerhousemuseum.com/whatson](http://www.powerhousemuseum.com/whatson);

[www.singapore.com.sg](http://www.singapore.com.sg)

[en.wikipedia.org/wiki/Rolls-Royce\\_Trent](http://en.wikipedia.org/wiki/Rolls-Royce_Trent)