



The Old Fliers' Group

Attached to the Royal Aero Club of WA (Inc).

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April Meeting

At the April meeting, which came soon after Anzac Day, Bob Russell reminded us of the effort and sacrifices made by Australian troops during World War I at Villers Bretonneaux, in France. He showed nice images of a previous trip the area.

We then moved into the world of the modern jets with our *Mini Speaker* Peter Yates, a retired Cathay Pacific check captain, and *Speaker of the Day* was Graham Hartree, a current Emirates training captain. Both did their elementary training with the club.

Both spoke on the technical the problems associated with high altitude flying; in particular the cold fuel at high altitudes – above about 35 000 ft. Both talked on the problems associated with volcanic ash, which if ingested into the jet engine, even in small amounts, causes it to cake onto the turbine blades and block their minute cooling ducts. The talks by both presenters dove-tailed together very well and we all learned much from their deliveries.



An Emirates Boeing 777 taking off.

Graham also talked about the typical polar operations where Emirates fly from the Middle East to USA many times per week, using the wide-body Boeing 777. Depending upon the destination in USA, the route takes them either over the North Pole, or very close to it.

Graham mentioned typical numbers associated with a polar flight: Pilots, 4. Cabin crew, 16. Passengers, 440 plus. Max take-off weight, 351 tonnes. Average fuel burn, 8 tonnes per hour. Outside air temperature, about -40°C at cruise altitude (and the possibility of

fuel freezing in the tanks). Cruise speed, Mach .83 to .84 (or just under 1000 kilometres per hour). Engines, two GE 90B, producing 115 000 lbs of thrust each.

Navigation is carried out by multiple GPS and Inertial Navigation Systems (INS) which back each other up. Magnetic compasses are useless at the high polar latitudes due to the large and sometimes variable magnetic variation. All operations are carried out on True headings.

He told us that if the B777 did fly into ash and lose power on both engines then a ram air turbine would be deployed automatically, and it would generate sufficient power to drive the emergency electrical and hydraulic systems of the aircraft.

His well-constructed slide show carried photos of the “glass cockpit” instruments, the emergency checklists and the images from on-board cameras that assist in ground manoeuvring – the pilots sit 35 metres in front of the main gear!

The probing questions from members at the end of the session proved that our speakers attracted more than a passing interest in the operations of the modern jet aircraft. Our sincere thanks go to both of them for their professional delivery.

Cruise with a Difference

There is still room for a couple more people on Margaret Murray's Nile Cruise to the *Land of the Pharoes*. See last month's bulletin for details.

Seen on TV

Irving Hutchinson, who has attended a number of our meetings, was seen on TV news last week at the controls of a helicopter. Irving, who is well into his nineties, still enjoys flying.

May Meeting

The Speaker of the Day at the next meeting will be John Wager who will tell about the life and inventions of Charles Redrup – he was a truly amazing man who witnessed the dawn of aviation and participated in design and development until 1960.

So try to make it the Royal Aero Club on Friday, 28th May at noon to have a nice lunch and to hear our interesting speaker. Hope to see you there.

Brian Hernan