Antarctic air transport contract signed

EADS CASA

The C212 aircraft will provide the AAD with unprecedented levels of air support in Antarctica. The aircraft has close to twice the range/payload capabilities of the Twin Otter that was operated in support of PCMEGA last season.

The signing in June 2003 of a 12-year contract for an internal Antarctic air transport system for Australia's Antarctic Program came after a successful 2002–03 season in which runway trials got under way at the planned landing site near Casey.

Announcing the contract between the Australian Antarctic Division (AAD) and the Australian company Skytraders Pty Ltd, the Parliamentary Secretary for the Antarctic, Dr Sharman Stone, said the agreement would enable intra-continental flights between Australia's three Antarctic stations from 2004–05.

Runway construction trials at Casey last summer followed an extensive reconnaissance, led by ice runway specialist George Blaisdell, locating and surveying a runway site on the upper Patterson Glacier.

Trials of plant and construction techniques confirmed the suitability of the site and enabled the team to produce a 3.7km-long laser-levelled foundation. An end-of-season visit by a team from the Australian Civil Aviation Safety Authority and Skytraders resulted in approval for aerodrome plans and the ice runway.

The AAD-Skytraders contract involves the use of two European-made CASA 212 aircraft for transport and field support. In the 2003–04 season, two Canadian Twin Otter fixed wing aircraft will be chartered to test aspects of the intra-continental system.

CASA, a subsidiary of the European Aeronautic Defence and Space company, is a world-leading maker of light and medium transport aircraft. Its C212 aircraft, registered in 42 countries, have a short take-off and landing capability and a reputation for robustness, with more than 2.5 million flight hours logged.

The C212-400 has large, relatively low pressure tyres so it can operate most of the time on ice using its wheels. For Australian service however it will also be fitted with a hydraulic wheel or skis configuration for use on a wider range of surfaces. A large rear door and ramp will enable remote deployment of small ground transport vehicles such as skidoos and quad bikes.

The aircraft will have additional fuel tanks for longer-range operation including aerial survey work, which will virtually eliminate the need for fuel depots in remote locations. Its long range will also allow it to be flown directly from Hobart to Casey between seasons.

The CASA 212-400 aircraft will lessen the AAD's reliance for Antarctic field support on helicopters, which are limited in range, cargo capacity and ability to fly in adverse weather conditions.

Besides serving the CASA 212-400 aircraft, the Casey runway is planned to be the southern terminus for future inter-continental Falcon jet flights linking Hobart and Antarctica.

At right: Runway construction trials at Casey last summer. Top to bottom: a) After finding melt conditions at the proposed runway site, the construction team explored higher up the glacier looking for a colder site. Using satellite photographs and precision GPS equipment the team assessed many sites before identifying an ideal location for the runway; b) Core samples were taken at potential runway sites to assess their suitability to support the weight of heavy aircraft; c) A Unimog was used to push snow and spoil to the edge of the runway, while the grader was used to cut into the ice. The blade of the grader was controlled by a laser levelling device to achieve the finest tolerances possible; d) A Schmidt snow cutter was used to clear the spoil pushed to the edge of the runway. It is vital to ensure that no spoil mounds are left behind as they can quickly accumulate far more wind blown snow than was originally removed from the runway.

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e) Towards the end of last season the first landing on the runway was made by a ski-equipped Twin Otter. Once a thin snow cap is applied next season the runway will be ready for wheeled aircraft and at 4000m in length it will also be Australia's longest.