

## First Class Airport Acoustics

Aesthetics and acoustics play a vital role at airports, which are well known for their alienating effect on people.

But with the latest design techniques and materials including specially developed products from ACI Insulation, Brisbane's new International Airport sets new standards of architectural

appearance and performance.

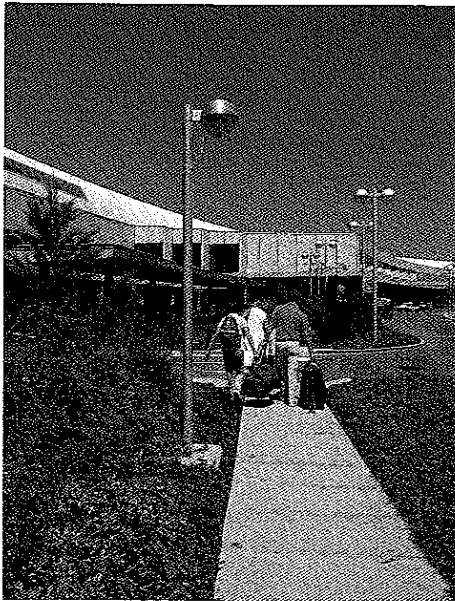
The largest single component of the project is the domestic passenger terminal, designed to handle 10,000 people per peak hour, including passengers and visitors, or 7 million passengers per year to cater for Brisbane's needs up to the turn of the century.

The terminal is a two storey crescent-shaped building, about half a kilometre long, covering around 60,000 square metres. Twenty-six aircraft can park together at the new terminal; eight along the curved front wall and another eighteen at the three satellite buildings.

Besides the specialised demands

of airport operations, designers had to ensure the terminal would be efficient and economical, while remaining aesthetically pleasing. Hence the building's sweeping curved lines of glass and aluminium which give the exterior a streamlined appearance.

One of the most prominent finishes is the Ceiling Panels developed by Contractor, KH Stramit Limited, incorporating ACI Insulation Commercial Building products.



The Panels are based on the KH Stramit Soundsorb ceiling system, which is designed to meet acoustic requirements such as sound absorption and prevention of external noise entry. These acoustic properties are required by Architects, Consultants and Designers for today's modern buildings.

According to Dick Nicholas, Airport Manager, the passenger terminal is a comfortable area for both travellers and airport staff.

"One of the greatest features of the terminal is the virtual absence of outside noise. Both acoustics and aesthetics have been combined to provide Brisbane with an extremely quiet airport which looks superb."

Soundsorb combines 50mm thick KH Stramit Easiboard faced with 25mm ACI Insulation Sonocoustic, a rigid glasswool baseboard faced with a vinyl film.

The absorptive Sonocoustic surface forms the finished ceiling, offering an attractive, perforated, low maintenance vinyl surface, with excellent structural strength and stability.

The resultant 75mm product combines the features of both products to give a high performance acoustic ceiling capable of excellent sound transmission loss.

Panels used at the airport are installed above a Luxalon ceiling system and feature a textured charcoal grey vinyl film to tone with the restful greys used throughout the building.

To meet the Noise Reduction Co-efficient (NRC) of 0.72, the Glasswool component was made to 25mm with the panel achieving a Sound Transmission Class (STC) of 31 and the roof/ceiling system achieving an STC of 48. Excellent thermal resistance for the panel system was also achieved.

The roof design called for the use of single tapered steel sheet which were especially manufactured from KH Stramit Colourbond Speed-Deck to allow for the surface curvature.

This was Insulated with ACI Permastop, a 50mm thick ACI Building Blanket adhered to heavy-weight ACI Sisalation 470, above the purlins.



## **ACI** Insulation

*For further information on ACI Insulation Industrial Products contact any of the following office*

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