

CASE STUDY

AUSTRALIAN SYNCHROTRON

DURRA™

A **synchrotron** is a large machine (about the size of a football field) that accelerates electrons to almost the speed of light. As the electrons are deflected through magnetic fields they create extremely bright light. The light is then channelled down beamlines to experimental workstations where it is used for research.



A state of the art Victorian Government sponsored Land Mark scientific facility for the study of physical elements at the sub atomic level.

A challenging 206 million dollar construction project with 11,000m² of circular roof area. Construction time lines were highly critical and largely dependent on how quickly a roof could be installed to obtain weather protection.

Other challenges in this area included how to safely and quickly install a high performance acoustic and thermally insulated ceiling system at a height of 3 storeys above the ground level without expensive and restrictive internal scaffolding hindering other construction trades.

The Ortech proposal was to install the complete acoustic ceiling as a pre engineered roof / ceiling system. The system elements to be delivered to site pre cut for assembly into 100m² modules at ground level and then are crane hoisted and bolted onto the primary steel structure using the Durra Lifting Frame.

The ceiling modules when bolted into position could be safely walked upon and were weather resistant. The metal roofing was attached to the Durra beam purlins in each module making it a fast safe roof installation process.

Building System

- Ortech Trafficable Acoustic Roof and Ceiling

Project Size

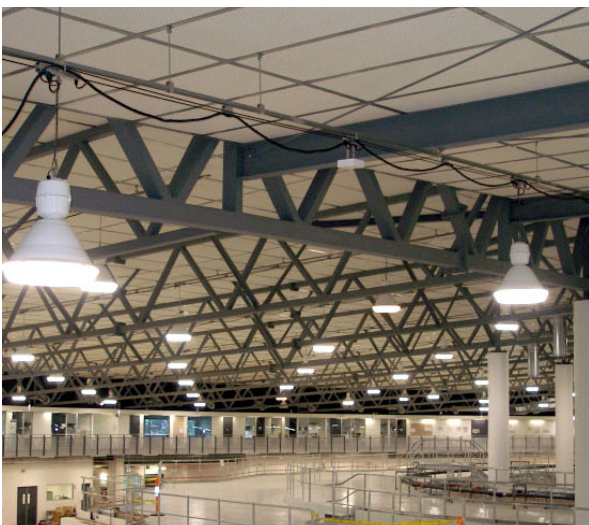
- 9,500m²

Ratings

- STC 48
- NRC 0.49

Benefits

- Enhanced worker safety
- Compressed build time
- Reduced construction costs
- Eliminates Birdcage scaffolding
- Internal reverberation control
- Sound isolation
- Thermal insulation



Durra is a Registered Trademark of Ortech Industries.

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