

Engineered plywood big player in construction of Perth sports arena

Hoop pine 'pieces' fit perfectly into puzzle design

THE Perth Arena has been lauded as the new architectural icon in Western Australia and a sports venue pacesetter for the nation.

The building has been designed as a landmark structure with an internationally recognisable and innovative design based on the Eternity Puzzle and inspired by the 12-sided Round House in Fremantle, which is one of Perth's oldest buildings.

But there's nothing puzzling about why natural-grained engineered wood dominates the arena.

"We've had a lot of experience, good experience with Queensland hoop pine plywood and we used it a lot this time around," said architect Stephen Davies of ARM Architecture in Melbourne which was awarded the project in a joint venture with Cameron Chisholm and Nicol.

"The same plywood was our choice for the Melbourne Recital Centre which was basically a completely lined plywood box construction."

The Perth Arena, which will hold up to 13,910 spectators for tennis events, 14,846 for basketball and a maximum of 15,500 for concerts, was the biggest project ever undertaken by Brisbane-based Austral Plywood at Tennyson.

"We supplied close to 15,000 sheets of 19 mm AC interior plywood over a 12-month manufacturing period," sales manager Gary Holmes said.

"The Perth Area used plywood everywhere – for walls, bulkheads, panelling, ceilings and counters. We were required to produce 400 plywood sheets a week to meet construction deadlines..

"We met the specifications on our factory floor and delivered and not once were we required



The Perth Arena .. plywood everywhere.

to visit the work site."

Austral's premium AC (interior) hoop pine plywood, manufactured to AS 2270, is used in non-structural, interior applications where a high quality aesthetic finish is required.

Typical applications include internal wall panelling, furniture and fitments, interior door skins and ceiling linings. It all certainly fitted together like a gigantic puzzle.

"Hoop pine plywood has become very popular in commercial applications where the natural warmth of hoop

pine is combined with the acoustic properties of panel perforations," Mr Holmes said.

Sizes range from 2400 x 1200 and 2700 x 1200 mm in thicknesses of 6.5 mm, 9, 12.5 and 16 and the plywood carries a Super E0 emissions rating.

Stephen Davies said the plywood also "finished well." He said the architects had worked with a coating systems manufacturer who achieved the exact finishes and colouring required for the plywood.

"The natural hoop pine grain shows through in an array of panels coloured in purple, red,

blue and natural honeycombe stains."

Located on the northern fringe of Perth's CBD, the stadium, opened in November last year, is expected to bring more than 250,000 people into the city link precinct each year and is the catalyst for the renewal of the whole precinct, re-establishing a connection between Perth's commercial and entertainment hubs.

The venue features a retractable roof that can open and close in 14 minutes allowing natural light to flood the centre court, state-of-the-art acoustics, function spaces, corporate hospitality suites, cafes and a basement car park. The stadium has a very flexible design, allowing for crowds of up to 12,000 in concert mode and up to 15,500 in tennis mode. The stadium can accommodate shows with a centre stage or end stage and performances in the round such as motocross, equestrian and ice shows.

It also features a range of sustainability initiatives, including one of the largest PV (solar) arrays installed on any building in Western Australia.

Plywood at Austral is produced from 100% plantation grown hoop pine sourced from HQ Plantations in southeast Queensland. Products have chain of custody certification under Australian Standards AS 4707:2006, which is linked to the Australian Forestry Standard, and was awarded through an independently audited process carried out by the Engineered Wood Products Association of Australasia.



Natural-grained engineered wood dominates the Perth sports complex.

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