LSAA
Lightweight Structures Association of Australasia eNewsletter
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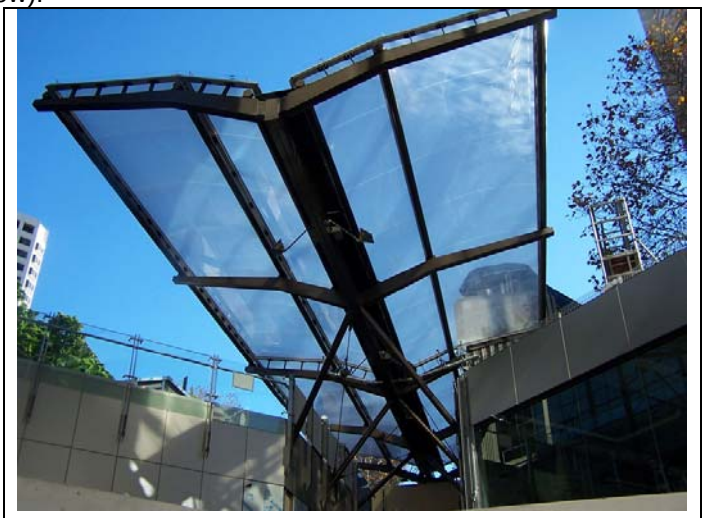
## WHO'S ON FIRST

- ACASPA (Australian Canvas and Synthetic Products Association) held a successful trade exhibition and convention in Adelaide towards the end of May. As a climax to that event, their annual Awards for Excellence involving 10 categories showcased some worthy examples of lightweight structures.
- LSAA members Taiyo Membrane Corporation received an award in Cat. 3 for awnings whilst Oasis Tension Structures won the Cat 7 award for tension structures with the Melbourne Showground Pavilion structure. Oasis also took out the coveted overall award of excellence. Congratulations are well deserved.
- Beijing officials said recently they were unaware that a German contractor working on the main stadium for the 2008 Games is on the brink of financial collapse. Agence France Presse reports that Covertex, the German firm contracted for the ETFE membranes around the sensational 91,000-seat National Stadium called the Bird's Nest", the centrepiece of the Games, has filed for bankruptcy and was desperately seeking a rescue package. Shu Lei, an official in the spokesperson's office of the Beijing City Government's Olympic Construction Headquarters, which oversees venue construction for the Games, said, "We have no information about this and we have nothing to say at this stage".
  Covertex filed for insolvency with the municipal court of the Traunstein in southern Germany, said Hubert Reiter, a member of the management team. He was quoted as saying it was "…not yet clear" what will happen with the Beijing Olympic Stadium. Work began in January and was to be completed in July.
- Dean Spencely is working with Oasis in Melbourne. They have won a string of projects as a consequence. Watch this space!
- David McCready is currently working with Hightex as Resident Project Manager on the Robina Stadium roof project.
- Taiyo Membrane Structures have 2-4 jobs going in India, more power to you boys!
- Taiyo won the contract for the car parks at Stage 2, Robina Stadium project, on which Hightex previously was awarded the main stadium roof contract.
- Russ Streader, previously Operations Manager with Taiyo Membrane Corp , and who later assisted Oasis Tension Structures on the award winning Pavilion project, is working with the Australian Government lead, RAMSI team in the Solomon Islands.
- Troy Jorgensen had re-joined Taiyo Membrane Corp as Project Manager.
- Justin Iscaro has left Tensys in Melbourne to broaden his engineering experience. He has been replaced by James Marr, who many years past did student work with Spacetech and has since worked in Australia and the UK with Connell Wagner.
- Bids are out, or imminent for four stadia for the World Cup in South Africa. Rumour has it that TMC is well placed on several!

- Vector-Foiltec recently completed the ETFE shower towers in the newly finished CH2 building in Melbourne, a council HQ building which has a 6 star energy efficiency rating. They are leading the way into the future.
- Taiyo has won the roof contract for the new Tennis centre in Brisbane.
- Vector Foiltec, who recently completed the ETFE pillow skylights for the Southern Cross Station, Melbourne, has completed its first ETFE project in Sydney. An escalator canopy in George St. was designed by Architects Peddle Thorp Walker. (See below).



## NEWS

### Website

Visit LSAA's website http://www.lsaa.org to update the latest news on projects and events. The website is proving to be a success with a steady stream of visitors from all around the world.
LSAA financial company members are able to provide a summary company profile document (in PDF) and get a link to your own website. Take advantage of this marketing tool!

Financial members are able to access a "members" area which will house additional material and permit a discussion forum on relevant topics.

### Conference 2007

The LSAA will hold its 2007 Conference and Design Awards on October 25/26 at the Crowne Plaza Surfers Paradise on the Gold Coast. The conference theme is ***"Lightweight Architecture" - Stretching our Boundaries Internationally.***

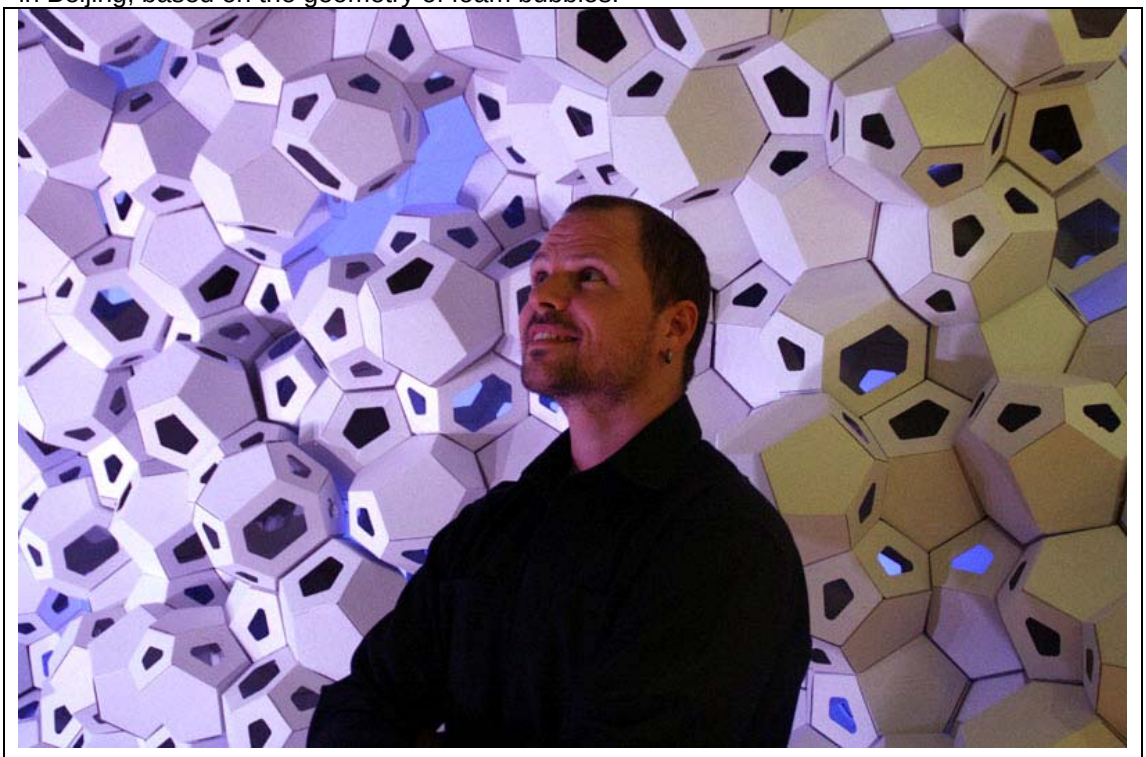
Last year the LSAA celebrated 25 years. When it started, the lightweight structures industry was in its infancy and we developed our design and fabrication skills largely in isolation from the rest of the world. Today, our members stand proudly on the world stage and regularly design and construct significant lightweight structures in all parts of Asia, the Middle East, Europe, the Americas and other corners of the globe. A distinguished group of keynote and other speakers have been assembled to present experiences of our quest to "Stretch our Boundaries Internationally".

One of the keynote speakers and general details about his presentation follow.

**Keynote Speaker Profile – Chris Bosse – PTW Architects:**
Chris Bosse was educated in Europe and worked for several high profile Architecture firms. His Masters-degree dealt with the implementation of virtual worlds into architecture.
He now is an Associate at PTW architects in Sydney, where he was a key member of the design team developing the Watercube, Beijing and several other international projects.
PTW is one of the largest Australian Architecture firms and has branch offices in Beijing, Shanghai, Ho Chi Minh City and Dubai. Chris guest-lectures at various international Universities.

For a number of years, German architect Chris Bosse has based his work on the computerised study of natural structures and resulting spatial conceptions.
His research lies in the exploration of unusual structures, pushing the boundaries of the traditional understanding of structure and architecture by means of digital and experimental form-finding.

He will present the design and construction of a number of unusual projects from a 10x10m marquee based on minimal surfaces to a 180x180m swimming centre for the Olympic Games in Beijing, based on the geometry of foam bubbles.



**Call for Papers and Further Information**
Visit the website http://www.lsaa.org for further details on location and program.

We would encourage you to submit a technical paper – perhaps on recent projects, new materials, industry issues or your experiences in working Internationally. Deadlines for a 500 word abstract is August 17th 2007 and for accepted papers, the final work (approx 8 pages) is due by September 14th 2007

## LSAA Design Awards 2007

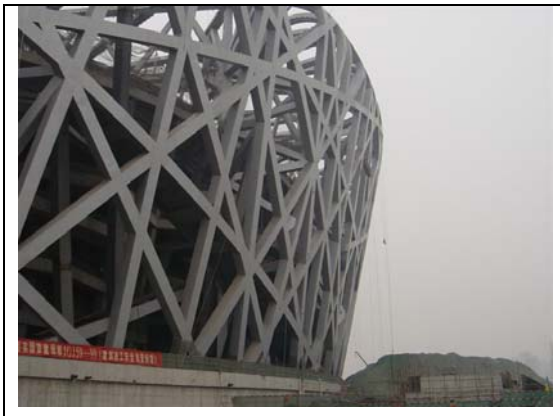
The LSAA invites entries for the 2007 LSAA Design Awards given in recognition of excellence in design, construction and application of Lightweight Structures. Entries in four categories are invited from individuals, companies and institutions. LSAA members and non-members may enter.
Awards will be presented in the following categories:

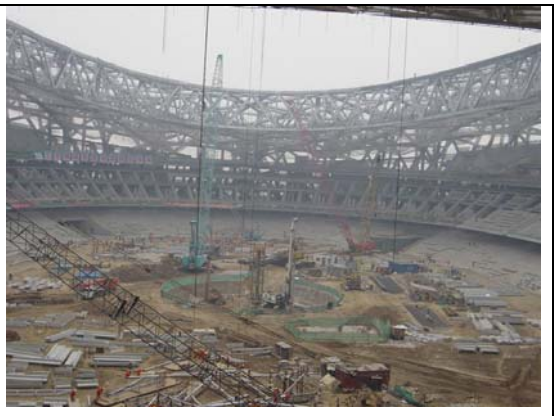
- SMALL STRUCTURES Project area less than 250 sqm
- MEDIUM STRUCTURES Project area between 250 sqm and 1,000 sqm
- LARGE STRUCTURES Project area exceeds 1,000 sqm
- SPECIAL APPLICATIONS
  Includes applications of lightweight structures used in an interior environment, manufactured as a product, and can be either temporary, demountable, relocatable or permanent structures. (Shade, interior structures, shelter structures, vehicles, and furniture are typical examples).

Note:The judges reserve the right to determine or change the category classification for any particular entry. Each entry will be considered in one category only.

## BEIJING PROGRESS

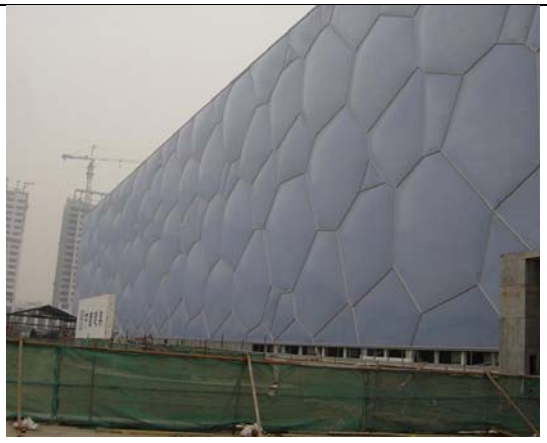
Peter Lim of Tensys Engineers visited Beijing recently and has provided some images taken on 18th March 2007 showing progress being made to the main stadium and swimming venues. The last two images are courtesy of Vector Foiltec. We are hopeful that papers on these exciting structures will be presented at the 2007 Conference.





Main Stadium - or Birdnest Stadium has most steelwork completed and installation of both roof transparent ETFE membrane and lower PTFE/Glass acoustic liner currently underway. ETFE membrane contractor - Covertex GmbH. PTFE/Glass membrane contractor - N&L China

Swimming Complex or WaterCube - work on double layer ETFE cushions currently in progress. ETFE membrane contractor - Vector Foiltec



## COMING TO A PLANET NEAR YOU;

The new Khan Shatyry Entertainment Centre in under construction in Astana, Kazakhstan. It comprises a major central mast of over 100m in height, with a cable net clad in ETFE pillows. The structure is under construction and will sorely test construction methodology with its great height and unusual shape for access. Apart from that summer is short and winter in Kazakhstan, is long and cold with -40 being not uncommon, with blizzards possible and significant snow. Volunteers for this work can apply in person to Angus Macleod of Vector Foiltec, whose company has won the contract for this extraordinary project.

## PROJECT SNAPSHOT – Skilled Park Robina Stadium

### Skilled Park Robina – Home of the Gold Coast Titans

Come to LSAA 2007 Conference to hear about, and to see this project!

Skilled Park facts:

- Seating capacity 25,000
- Western stand 14,000 square metres
- Includes player and event facilities, administration, catering, members area, function rooms, and corporate facilities.
- 100 Open Corporate Boxes

- 25 Enclosed Corporate Suites
- 500 person function room
- 16 food and beverage outlets

Construction to involve:

- 2,500 tonnes of structural steel
- 7,200 cubic metres of concrete
- Driving 640 piles
- 550 tonne of reinforcement
- 16,300 metres of precast concrete seating plats
- 23,000 square metres of PTFE Glass membrane roof
- 16,000 square metres of plaza works
- 600 m (10,000 square metres) of external roadworks

Roof Rafters:

The roof rafters, which measure 30 metres from the pitch to the tip, are the main component of the roof structure which will give the new venue its iconic Gold Coast look.
4 Hips, 16 Jack rafters and 48 rafters each weighing between 12 and 20 tonne will be erected over the seating plats via a mobile 180 tonne crane.

Roof Structure:

The roof membrane is made from PTFE coated woven fibre glass fabric. A total of 22,000 square metres of fabric (inclusive of façade wall structures), making it the largest fabric structure in Australia (when completed at the end of 2007)

Fabric roof contractors are Hightex of Germany. Tensys Engineers are providing the engineering design and engineering detailing support for the fabric roof. Currently installation of fabric roof structure is underway on site.

This project is another architectural masterpiece from HOK Architects. Engineering design support by SKM.

Main contractors – Watpac Australia Pty. Ltd.


Hightex Construction Supervisor Jorg Schwerdtfeger inspecting access on the Western Stand at the new Robina Stadium