



# TEKLA® Structures

## Aldar HQ, Abu Dhabi

Client: Aldar/Laing O'Rourke JV

Multi-discipline consultant: Arup

Architect: MZ&Partners

Steel Contractor: William Hare Ltd.

Façade: Gartner/Permasteelisa

*"Arup has used Tekla Structures software for approximately 10 years now and realized a long time ago that handing over a steel skeleton model to a contractor has the potential to significantly save time in producing connections and shop drawings. Once Arup convinces contractors that this is a collaborative effort and that the liability issues can be resolved, significant progress can be made."*

*– Stuart Bull, BIM Coordinator at Arup, Sydney*

*Stuart Bull has been in the Sydney office pushing Tekla for the past 5 years*



TEKLA STRUCTURES IN PRACTICE:

# ARUP, AUSTRALIA

# A REAL TOOL FOR BUILDING INFORMATION DELIVERY

"Tekla Structures use by consultants is a fairly recent development in the mainstream of construction in Australia," says BIM Coordinator **Stuart Bull** of Arup, Sydney. The realization that BIM is a real tool to deliver information both upstream and downstream in the construction process has pushed the use of Tekla Structures into the Arup workflow.

> Arup has used Tekla Structures software on many

## ARUP

projects around the world. According to Stuart Bull, the Arup UK offices have benefited greatly from the model-handover approach. "The Swiss Re tower project and the More London development alongside Tower Bridge in London, to name a couple, have proved significant time saving in design-documentation-delivery approach," he says. "Even more encouraging examples are happening in Asia and Australia where steelwork detailers and contractors seem to be much more open to this collaborative approach," he notes.

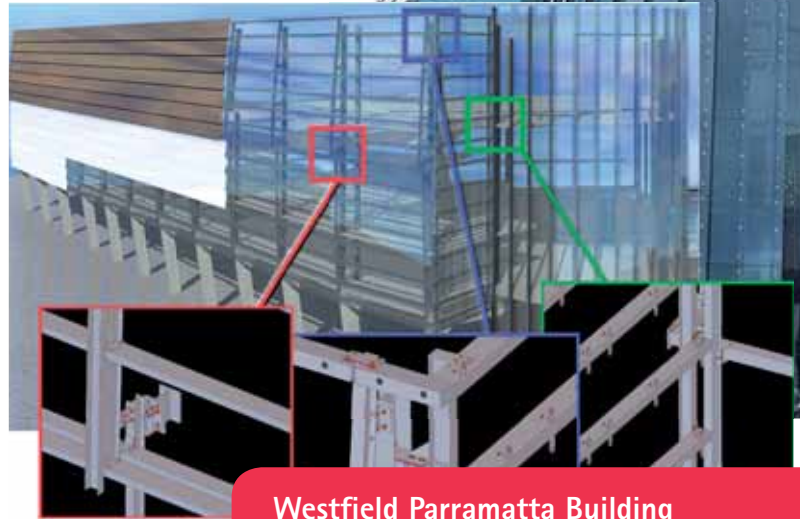
"Generally the use of Tekla Structures significantly saves time when complex geometry is involved," says Bull. "A contractor utilizing models created by Arup can concentrate on the complexity of connection detailing rather than spending weeks in geometry creation and coordination with the continued RFI prior to fabricating the first elements. The steel contractor might have to modify certain elements of the model to best suit his workshop procedures, but this process still benefits Arup, the contractor, and, ultimately the client."

Stuart Bull says that in some projects up to 3 months have been saved due to the model-handover process. "On other projects a couple of weeks were saved, but ultimately the numbers of queries from the detailing office, the fabrication yard and site have significantly reduced, as more problems are discovered up front in the design office."

"Where real progress has been made is in the areas of accuracy," he continues. "Custom links to in-house design software has allowed engineers to quickly see results to their analytical models within Tekla Structures. We are finding a 12-15% increase in productivity using 3D software. Benefits in Tekla development are already helping Arup with inter-office collaboration as currently we have major projects in Singapore and Abu Dhabi where Tekla Structures is being utilized fully for the creation, procurement and checking of models."

Tekla's Web Viewer application is used on a regular basis for coordination meetings at Arup. The next stage of construction staging and 4D sequencing is of particular interest to them and is a service that they are actively selling. In Bull's opinion, 4D and potentially 5D out of Tekla Structures will assist in pushing BIM to the next level. "With precast solutions applicable, Tekla could

*Westfield Parramatta Department Store, Sydney, is an example of Arup's collaboration with a steel detailer*



### Westfield Parramatta Building

Owner: Westfield

Architect: Westfield Design & Construction Pty Ltd.

Façade: Austress Freyssinet Pty Ltd.

Consultant Engineer: Arup

Steel Detailer: Elmasry Steel Design & Detailing Ltd.

be the single package solution that the industry is looking for," he says. "The new licensing system is a major step forward in using the software in a true collaborative environment, and at Arup we look forward to using the latest version whenever a project and the contractor are fully up to utilizing this improved workflow." More information at [www.arup.com](http://www.arup.com) or by e-mail: [stuart.bull@arup.com.au](mailto:stuart.bull@arup.com.au)



## TEKLA

> Tekla is an international software company whose model-based software products make customers' core processes more effective in building and construction, energy distribution, infrastructure management, and water supply. Tekla Corporation has area offices and partner organizations worldwide. International operations account for 80% of net sales. By enabling the creation of the most accurately detailed and data-rich structural models, Tekla provides the building and construction industry the best constructability on the market.

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