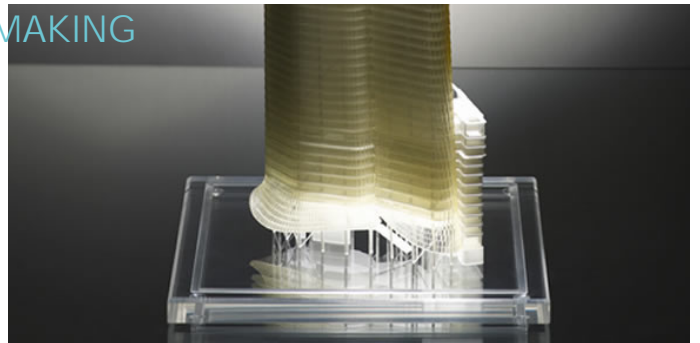


A PINNACLE IN ARCHITECTURAL MODEL MAKING

PROJECT: A Pinnacle in architectural model making
CLIENT: Kohn Pedersen Fox
DATE: 16 October 2008
DURATION: 2007-2008



PROJECT DETAILS

From the Burj Al Arab, Dubai and the National Aquatics Centre (Water Cube), Beijing to the Millennium Dome, London and the Ryugyong Hotel, North Korea, architecture is full of industry highs and lows.

A new high is scheduled for completion in 2010-2011.

The innovative design, from Kohn Pedersen Fox, is located at Bishopsgate, London, named the Pinnacle, is aiming for new heights. Set to be the tallest building in the UK and one of the tallest skyscrapers in Europe, at 945ft, is now under construction.

But getting a project like this off of the ground (no pun intended) is no easy feat. Models are an integral part of the design process at KPF and the design of the Pinnacle presented their model makers with quite a technical challenge.

They didn't hesitate in choosing Ogle Models and Prototypes. Ogle have a client list boasting some of the biggest and best companies in the world, and a reputation for perfection.

Neil Merryweather, at KPF, who has had a long relationship with Ogle and knows their expertise and experience, says 'I had no doubt that they could meet our expectations. It wasn't easy, but they didn't disappoint.'

Because of their size, architectural models need to be scaled down by a factor of hundreds in order to show how the building will look in context with its surroundings.

It wasn't just a simple process of resizing the CAD model of the whole building. This would have resulted in reducing component parts to dimensions too fine, even for the rapid prototyping processes available at Ogle.

Ogle worked closely with KPF ensuring the CAD models created were practical, from a technical point of view. They needed to ensure the models had no bad edges, no flipped triangles, no gaps and that all surfaces have a thickness. All the separate elements of the model then needed a Boolean operation to reduce the model to one shell. This ensures there are no build issues on the RP machines.

KPF chose to use Selective Laser Sintering (SLS) to build the core of the model.

This offered all the support required during the build process, whilst keeping costs and time of the project down. Stereolithography (SLA) was used for the stepped glazing skin. A lacquer was applied to reduce discolouring of the resin, which occurs in sunlight, this also enhances the clarity. An alternative material was considered to avoid this problem but, due to time and budget constraints, it wasn't possible.

The model Ogle produced has helped to bring KPF's vision to life. It has provided a glimpse of what is expected to be an outstanding architectural building of the future.

Now we just have to wait for the real thing!

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