As seen from the bridge

A stylish high level glass walkway is the most recent in a long line of high profile projects for the Essex glass processor F A Firman

The glass walkway at 150 Cheapside is a viewing platform leading from the building's atrium (out of picture)

A stylish high level glass walkway is of the most recent in a long line of high profile projects for the Essex glass processor F A Firman.

The project joins the two storey atrium inside a new office block at 150 Cheapside in the City of London, a new landmark building that makes extensive use of glass and Portland stone.

The glass bridge functions as a viewing platform, allowing visitors to take in views of St Pauls Cathedral, which is situated opposite. The 1.5 metre wide, 18m long walkway comprises glass floor panels supported on a frame of glass beams, which in turn are suspended from the concrete structure of the atrium by means of solid stainless steel rods. The total weight of the glass is approximately 12 tonnes and the walkway's total loading is 32 tonnes.

Malishev Wilson Engineers (MWE) produced the detailed design for the walkway, under a concept conceived by Michael Aukett Architects for St Martins Property. Firmans manufactured and installed the complex design last year, over a 16 week period.

Due to the complex nature of the structure, MWE used finite element analysis software to evaluate stresses, deformation as well as natural frequency and response of the whole model. This was performed at the CAD design stage. CAD drawings were then issued to Firmans, which then produced the fabrication drawings.

Laminating techniques

Given the choice of low iron glass, the client opted for the greener standard float glass.

Firmans used a combination of resin laminating and PVB laminating on the project. The floor panels were made of 45mm resin laminated: three sections of 10mm plus a 12mm layer. The balustrades consist of two sections of 15mm float laminated with PVB. There is no handrail.

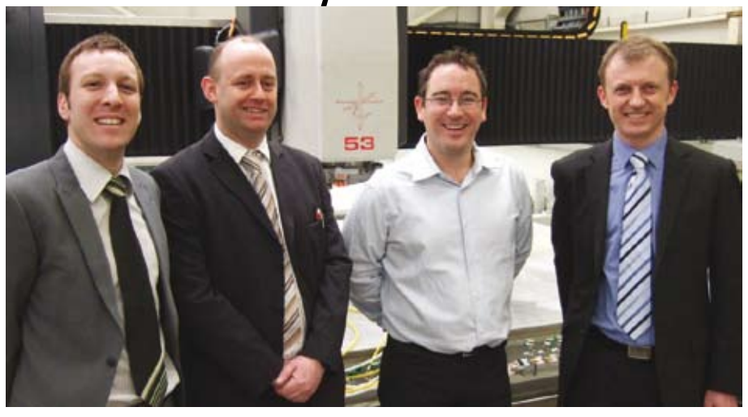
The structure is hung from the ceiling by steel rods which join the glass beams that cradle the walkway. In the past Firmans has used acrylic bolts to connect glass laminated glass beams. On this occasion, steel was used but a generous clearance was factored in – the holes are 44mm diameter and the sleeves for the bolts are 34mm.

Mark Leddra, Contracts Director at Firmans, oversaw the supply and fit operation, which included a 25 year warranty.

The structure has been called the longest internal glass bridge. True or not, the glass walkway adds a stunning feature to the 204,000 sq. ft development (www.1fiftycheapside.com" www.1fiftycheapside.com).

Malishev Wilson Engineers are due to present the project in detail at the Glass Processing Days conference, 12-15 June in Tampere, Finland (see www.gpd.fi)

Firmans buys third Intermac



Firmans buys a third Intermac machine, L-R: Phil Berridge, Darren Bill, Jody Hodgson (Sales Manager and Estimator, FA Firman), Arran Langford

F A Firman of Haroldwood, Essex, has recently taken delivery of its third and largest Intermac CNC processing machine. The Master 53 is able to process five metre glass pieces and features four axis operation for extra functionality. Firmans can now process large architectural glass sizes, using brilliant cutting and cup wheel processing to produce a high quality finish on thick glasses and laminates.

"Last year we found that the larger machines were becoming more popular" says Darren Bill, Intermac Sales Manager. "Glass companies want a machine that can do everything, not just door fittings." Glass furniture is expected to be one application of the machine. This is one of the largest machines supplied to the UK, although Intermac does manufacture smaller models with the same processing features.

Two of Firman's operatives were trained on the machine as part of the installation process. The company has taken out a service contract as part of the deal, and the Italian-made machine has a one year warranty. The largest machine built by Intermac has a 15 metre bed size, supplied to a German firm.

Glass machinery specialist Intermac has expanded its sales team with the appointment of Arran Langford as Technical Sales Engineer. Arran's background is in the stone industry, making him a good fit for glass processing.

Darren Bill states "A highly successful 2007 has enabled us to invest in our workforce and sales network." Arran will cover the North and he joins technical sales engineers Phil Berridge (Midlands) and Derek Byrne (Ireland), while Darren covers the South and Scotland.