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### **TRANSLUCENT PRE-FABRICATED STRUCTURAL CAST GLASS: A new unitized U-channel assembly**

A new type of translucent pre-fabricated structural cast glass assembly with high thermal performance, good light transmission and acoustic rating.

The cast glass assembly is made from project specific 404mm wide low-iron U-channel cast glass which is enameled on one inner inside face. Two U-channels are unitized into a 'flange-to-flange' arrangement and are bonded together with 2-part structural silicone in a bespoke polyamide extrusion. The cast glass assembly can span in excess of 4.2m without intermediate support or vertical mullions, and the overall thickness of the façade is only 144mm.

The void between the U-channels is filled with optically white translucent glass-fiber insulation, which is hung and held in slight compression. This provides the thermal performance of the assembly and the light transmission levels which in turn provide a quality of diffused 'white' natural light for the well-being and comfort of the users. The translucent envelope also offers users privacy, with none of the overlooking issues associated with the inner city. The assembly structurally supports openable triple-glazed windows and openings with no additional vertical support, and the unitized system is adaptable to include additional layers of security to protect against intrusion (hard body impact resistance).

The assembly represents an innovation in large unitized U-channel cast glass elements that have been fabricated and sealed off-site and installed on site in modules, thus maintaining the quality of workmanship (especially the silicone) while facilitating a faster on-site installation than any previous U-channel cast glass façade.