

Experts on The Complex Design of Curved Glass Envelope

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Despite the increasing research on architectural structures of curvilinear forms and technological and practical improvement of the glass production in the past years, there is still a lack of comprehensive codes and standards, recommendations and experience data linked to real-life curved glass structures applications regarding design, manufacture, use, performance and economy. However, more and more complex buildings and structures with large areas of glass envelope geometrically complex shape are built every year. The aim of the presented research is to collect data on the existing design philosophy on curved glass envelope cases. Moreover, the purpose of collected data will be to define and map the complex process of design and construction of geometrically complex form of building envelopes. How the geometry represents theoretical assumption and defines the process of design and manufacture regarding the forms and curvature, maximum and minimum dimensions, physical and mechanical properties, the typology of the glass panels has been proposed according to their geometry curvature type and generating mode of the surface. The investigation includes a survey about how architects and engineers deal with different design aspects of curved glass envelopes with a special focus on design and construction process, glass types and structural and fixing systems. It was made a proper balance between the number and kind of questions on one hand and the relevance and usefulness of the response on the other. This resulted in an eight question survey. The survey was distributed among architects, engineers and researchers known to have experience with the use of structural glass and glass facades, more specifically the members of several professional institutions, companies and glass manufacturers. The paper gives a brief overview about the findings of the survey.

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