Double Curved Facades: Standard Principles

Summary
This research pursues to find a form of standardization in the field of double curved facades. At the moment the engineering and construction of a double curved façade is time consuming and highly expensive. A form of standardization would reduce both and make the façade type more applicable in the ‘regular’ building domain.

The methodology of the research is based on research by design. Instead of looking at the numerous possibilities how a double curved façade could be constructed or standardized, a single design is made based on the outcome of an analysis to the current façade systems and solution found in reference projects.

A standardized production and engineering solution has been found by using generative modeling tools and rapid manufacturing. This allows the design to be manufactured with a serial manufacturing process, while still keeping the elements unique.

General Concept

Generative Modeling Tools

Possible Stresses

Rapid Manufacturing

Water Management

Reference Project

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