

Medusa, Making Ways and Ways of Making

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Medusa is a full scale built prototype for an umbrella structure, providing shade for public use.

Three interlocking concrete legs describe a central void and articulate a continuous transition from column to slab; an alteration of a mushroom column archetype.

The prototype reinterprets Felix Candela's umbrella projects with radically different formwork methods, responses to material properties and construction procedures.

The fabrication of the project explores means of conceiving concrete formworks that are more responsive and adaptive to the casting process by exploiting the short lived gap between liquid to solid. In doing so, the formwork is constructed from a range of materials, hard and soft, all accomplices in interacting with gravity loads, pressure and water seeping.

On making ways: With a group of architecture students, we took residency in a large precast factory in the Pearl River Delta, a region of China often labeled 'the factory of the world'. There, for three weeks we lived and worked with factory workers, learnt from their various trades and fully experienced how such a plant, geared towards mass production of precast elements, operates professionally but also socially. By meeting half-way in the realization of the prototype, productive working relationships were forged between students

and factory workers, at each stage of the process.

On ways of making: The temporary formwork was constructed upside down to make full use of gravity. After curing, the concrete prototype was flipped in its intended position. The main intention for the project was to influence the process of architectural design in reverse; that is by synthesizing an architectural proposal from the findings emerging out of a succession of built experiments. Throughout a trial and error process, geometry is employed as regulator of a short lived liquid mass in space and not as form making. During the casting process, geometry orchestrated the different interactive roles, given to each elements of the formwork, until a solid formation was finally reached.

MEDUSA



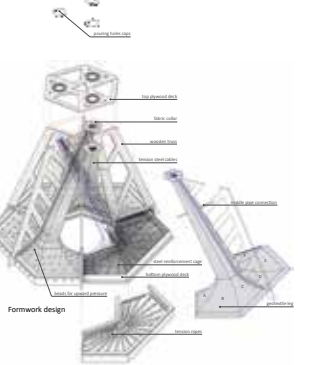
MAKING WAYS AND WAYS OF MAKING

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On ways of making: The temporary formwork was constructed upside down to make full use of gravity after curing, the concrete geometry was flipped in its extended position. The main intention for the project was to influence the process of architectural design in reverse, that is by synthesizing an architectural proposal from the findings emerging out of a succession of built experiments. Throughout initial and onerous process, geometry is employed as regulator of a short lived liquid mass in space and not as form making. During the casting process, geometry orchestrated the different interactive roles, given to each elements of the formwork, until a solid formation was finally reached.



1_ LEVELLING AND DECKING

2_ REINFORCING

3_ FABRIC FORMING

4_ PROPPING AND TENSIONING

5_ CONCRETING

6_ DEMOULDING

7_ RIGGING, LIFTING AND FLIPPING

1. Leveling and Decking: Includes a diagram of the central void and photographs of workers leveling the ground.

2. Reinforcing: Includes a diagram of the reinforcement structure and photographs of workers pouring and setting concrete.

3. Fabric Forming: Includes a diagram of the fabric geometry and photographs of workers handling fabric and creating physical study models.

4. Propping and Tensioning: Includes a diagram of the propping system and photographs of workers setting up the structure.

5. Concreting: Includes a diagram of the concrete pouring process and photographs of workers pouring concrete.

6. Demoulding: Includes a diagram of the demoulding process and photographs of workers removing the formwork.

7. Rigging, Lifting and Flipping: Includes a diagram of the rigging system and photographs of workers lifting and flipping the structure.