

Economy Festival Pavilions 2016 & 2017, Trento

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Abstract

After the successful collaboration for the engineering and detailing of the pneumatic façade of the RCS pavilion for EXPO 2015, the architect and designer Monica Armani contacted Maco Technology srl and the University of Nottingham in order to develop an innovative concept based on pneumatic structures for the Trento Economics Festival. The client set challenging requirements in terms of overall architectural appeal, installation time and costs, weight of the components, packaging volumes and environmental impact of the structure.

The team of researchers from the University of Nottingham contributed to the project providing the expertise about the 3D digital form finding, the structural design and the generation of the cutting pattern for the pneumatic membrane envelope. The collaboration resulted in two pavilions, based on steel and timber portals covered with and inflated pneumatic roof, for the Trento Economics Festival 2016 and three pavilions covered by an inflatable structural slab filled with air for the 2017 edition.

This paper describes the design, manufacturing and installation of the two pavilions and presents the technical challenges faces during the several stages of the project from the initial concept to the production drawings, from the manufacturing to the annual installation of the pavilion.



Economy Festival Pavilion 2017



Economy Festival Pavilion 2016

References

- [1] www.monica-armani.com
- [2] <http://www.macotechnology.com>