

The design of the dome of the Sanctuary of Vicoforte (Piedmont, Italy) among idea, geometry and construction practices: researches on the shape and the size of the largest oval dome in the world

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Abstract The largest oval masonry dome in the world, the Sanctuary of Vicoforte in Italy, is subject to a monitoring and structural investigation program in order to control the deformation of the building and avoid the risk of collapse. The most recent structural studies are based on the tridimensional modeling of the building. This study wants to add information about the geometrical conception of the dome using the modern modeling possibilities based on recent laser scanner survey,. In particular it integrates the analysis of the archival drawings and the 3D survey of the dome in order to investigate the geometrical shape of the temporary centrings used in the dome construction.

Keywords representation, oval shape, geometrical modeling

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