

LE DIVERSE CONSISTENZE DELL'ACQUA. DOTAZIONI IMPIANTISTICHE E CONTROLLO DEL MICROCLIMA A VILLA TUGENDHAT A BRNO

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Abstract. Villa Tugendhat in Brno, an iconic architecture of the 20th century, represents a significant case study in order to deepen some aspects about the relationship between water and cultural heritage, from its special use for the sophisticated (at that time) plants and systems, to the parameter of relative humidity which characterises those spaces.

Since the advent of industrialization, the Heating, Ventilation and Air Conditioning (HVAC) systems guarantee the microclimatic indoor conditions of architectures and – in a holistic conception – this is not a role of the architectural complex anymore. In this regard, the HVAC systems evidence, as the formal and constructive elements of the historical heritage, a continuous search of evolution.

In Villa Tugendhat, this progress is documented by innovative solutions which are the result of pioneering choices, characterised by a high testimonial value, also in relation to the singularity of them.

This paper aims to investigate the above-mentioned issues related to the complex and sophisticated plants of Villa Tugendhat, born with the project of the building. In so doing, it compares them with the technological solutions which can be found in the manuals from that time, as well as with the systems adopted in Teatro Dante Alighieri in Ravenna, an Italian case study. Finally, the plant engineering approach of Ludwig Mies van der Rohe is compared to that of other famous architects of the 20th century, such as Frank Lloyd Wright and Le Corbusier.

Keywords: water, HVAC, microclimate, preservation, Villa Tugendhat.