
COMPLEX LIGHTWEIGHT STRUCTURES VERSUS BIM: COMPARISON OF DIFFERENT APPROACHES OF THE IMPLEMENTATION OF LIGHTWEIGHT STRUCTURES IN BIM ENVIRONMENTS

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Abstract

This article describes and compares current structural design workflows for the integration of lightweight structures into various BIM environments. The article starts with a presentation of the current real planning situation in the context of the modeling of lightweight structures in BIM environments. After a first software-independent description of the challenges of the BIM representation of lightweight structures, the developed solutions are presented in detail and evaluated concerning advantages and disadvantages, as well as the required resources of the individual approaches. All procedures are presented using the example of a real project engineered by the authors.

The used example structure is a hybrid roof structure using a PTFE-material supported by a steel grid shell structure with a glazed façade underneath.

The outlook concerns necessary adjustments of the working methods and also further requirements of the software packages used.

References

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