

English Summary

“Basic Design Principles for the Application of Lightweight Materials in Interior Finishing”

The goal of the research project with the short name “light partition walls” was to develop basics for the application of lightweight materials for interior finishing. Main problems of the project were examined on the basis of non-loadbearing partitions. Connected to the problem aforementioned is the question how to construct weight optimised non-loadbearing partition walls with the use of lightweight materials, e.g. honeycomb sandwich panels. A guideline for the construction of light partition walls was developed in the conclusion of the project. This guideline is intended for enterprises to help trigger product developments.

The task of the project was to show possible solutions as well as limitations of the use of lightweight materials for interior finishing, emphasising on non-loadbearing internal walls. The core problems of the project were the further processing of lightweight materials in small and medium sized enterprises for interior finishing, the interconnection of building units and building elements with the use of lightweight materials as well as mechanical and acoustical characteristics.

The HDZ project “TP09 Konstruktionsgrundlagen für den Einsatz von Leichtbauelementen im Innenausbau” was segmented in to the following parts: requirements, research and material selection, conceptioning, choice of systems and development, material tests, FEM analysis, preparation of prototypes and the development of a guideline for the construction of light partition walls.

Practical investigations which were performed throughout the entire project formed an integral part of the project and required the establishment of contacts with businesses in the industry. These contacts were integrated into the process of the project and included manufacturers of lightweight materials as well as finishing enterprises, producers of system components for interior finishing, research institutes and planners.

This project formed part of the subject area „Neue Werkstoffe, neue Bauteile“, which provides synergies with “TP 08 Marktforschung” as well as to “TP 16 Holzbeton “ and “ TP 17 Holzleichtbeton im Fassadenbereich”.