

Research project:

“Catalogue of thermal bridges for modernisation and refurbishment of existing buildings in order to avoid mould growth”

The research Projekt was promoted with means of the Federal Office for Building and Regional Planning.

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Summary

The energetic refurbishment of existing buildings represents an important task regarding the efforts to reduce energy consumption along with pollutant- and CO₂-emissions.

The relevance of modernisation and refurbishment of existing buildings is well known and undisputed. The problematic nature of mould growth must be particularly focussed on however.

Caused by altering utilisation and air ventilation habits, an increase of damages caused by mould growth could be noted during the last years. Thermal bridges play a major role within this context.

The catalogue of thermal bridges for existing buildings provides a compilation of typical detail component connections . It shows weak points and possible alternatives for refurbishment.

The presented results, based on numerous parameter studies will help to answer frequently asked questions. Extrapolation of the analysed influencing variables can be accomplished easily due to graphical presentation of the results.

There may be areas remaining, even after appropriate revamping measures, which show an increased mould-risk. It is required to instruct the user about these circumstances.

An adjusted user behaviour and awareness of the risks is therefore absolutely essential.

Suitable actions like

- control and reduction of relative humidity, if applicable
- adaptation of ventilation behaviour
- Consideration of advice concerning furnishing
- Selection of adequate materials for surface design
- Maintenance, cleaning and preventive treatment of areas susceptible for mould-growth

will ensure that mould growth will be deprived of its basis and thus the risk of spore exposure will be reduced.