
Buildings with historical facades: opportunities and limits of indoor insulation

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Abridged Version

Especially houses built before 1980 have the biggest renovating and energy saving potential regarding insulation standards. Among this group there are many buildings under monument conservation which can only be renovated by indoor insulation measures. Another group are buildings that would exceed the building lines when renovated outside. Indoor insulation is very difficult because of the water vapour condensation and demand highly qualified architects and planners.

Dangerous water vapour condensation has to be avoided. By making use of the high sorption capacity and the capillary conductivity of insulation material one can achieve a lot of advantages when using indoor insulation construction components, because there is no vapour barrier which tend to be fault-prone. Another advantage is that most vapour barriers that are made of plastic will not be needed any longer in the future. Needless to say that these vapour barriers are not sustainable. The use of ecological insulation material can be increased. Rooms that are renovated with indoor insulation material also have acoustic advantages: they absorb sounds with low frequencies which is difficult with conventional methods. There will be many further applications in the future.