HOCHSCHULE BREMEN
UNIVERSITY OF APPLIED SCIENCES

Englischer Kurzbericht
zum Forschungsvorhaben:

Kennwerte für energieeffiziente Wohnungslüftungsgeräte

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Das Forschungsvorhaben wird mit Mitteln des Bundesamtes für Bauwesen und Raumordnung gefördert.
(Aktenzeichen: Z 6 – 5.4-02.15 / II 13 – 80 01 02 – 15)

Bremen, im März 2005

Projektpartner:

Passivhaus Institut, Darmstadt

Ingenieurbüro für Energieberatung, Haustechnik und ökologische Konzepte GbR, Tübingen

Europäisches Testzentrum für Wohnungslüftungsgeräte e.V., Dortmund

Summary

The subject of this project was a device to aerate people's residence. These devices are able to work all alone or in combination with a foul air heat pump /hot water storage. A combined airing device deprives so much heat of the foul air that it gets a temperature much slower that the surrounding air when it leaves the building. This combination of devices gets more and more a higher importance because it enables a heat accommodation without a pumped circulation heating system provided that the buildings have good heat insulation.

The aim of this project was to find out some variables so that the constructor or the architect is able to get a significant comparison of certain combined airing devices. One of the most important criteria for the determination was to minimise the inspection duration and the testing costs so that the development of this energy-saving technology can be supported strongly.

The research work has been done together with a few partners from certain sections of science and practice. The inspection regulations of the DIBt and current inspection standards for airing devices have been the fundament of this research work. The parameters have been differentiated from theoretical basics and afterwards have been verified by means of a combined airing device.

The essential result of the research work has to be seen in the proof that combined airing devices can be comparable and described as concisely just with the help of a few parameters. A new fact is the description of the combined handling with a heat pump. The aim of cost-saving could definitely be reached: the inspection duration of a combined airing device including a heat pump (heating in general and heating the drinking water) could approximately be halved so that the testing costs can be slowered as well.

The tests only could have done with one device because there wasn't more time. To validate the research results, the check of the measurements has to be done contemporary at more airing devices and combined airing devices.