Pressinformation

BINE Informationsdienst

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First Passive House school with a timber frame structure

Monitoring and accompanying sociological research verify success

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St. Francis Primary School in Halle, which provides two parallel classes in each year, is almost entirely built using timber frame construction methods and meets the Passive House standard. It offers a pleasant indoor climate and attractive learning environment for around 200 school pupils. The new BINE-Projektinfo brochure entitled “Passive house primary school in Halle undergoes monitoring” (11/2018) presents the concept as well as the results of the multi-year monitoring and accompanying sociological research. The new building consumes 90% less heating energy than comparable primary schools in Germany, but still has reserves in terms of the electricity consumption.

In order to achieve the Passive House standard, the building envelope was constructed with high thermal insulation and, as far as possible, without thermal bridges. Six ventilation systems supply sufficient fresh air. The building is heated by the ventilation system and uses the district heating return from a neighbouring secondary school. A collector system in the facade is integrated into the hot water supply. Two photovoltaic systems principally supply the ventilation systems and the school kitchen with electricity. The multi-year monitoring showed that the heat consumption amounts to 14 kWh/m²p.a., including network losses. The average value for the CO2 concentration of the indoor air in the classrooms ranged between 1,000 and 1,500 ppm, and is thus classified as good.

The school building includes classrooms, an after-school care centre, the administrative area with four offices, a school kitchen, an assembly hall and a caretaker's flat. The project forms part of the Energy Efficient Schools – Eneff:Schule research initiative implemented by the German Federal Ministry for Economic Affairs and Energy. The client is the Edith Stein School Foundation from the Diocese of Magdeburg. The monitoring was carried out by Magdeburg-Stendal University of Applied Sciences.

The BINE-Projektinfo brochure, which can be obtained free of charge from the BINE Information Service at FIZ Karlsruhe, is available online at www.bine.info

or by calling +49 (0)228 92379-0. The brochure cover and additional image material can also be downloaded from this web portal in the press section.

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