

Press Release

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Ravensburg celebrates inauguration of Passive House museum Energy-efficient building with optimal air quality for paintings and visitors



Darmstadt/Ravensburg. The new Museum of Arts in Ravensburg, Germany, not only showcases important works of art – the building itself is a masterpiece worth seeing: the first museum in the world built to the Passive House Standard. The inauguration ceremony, held on the second weekend in March 2013, celebrated not just a new meeting point for art lovers in the historical city centre, but also marked a highlight in

energy-efficient construction.

"The greatest challenge was the small number of windows", says Florian Lang of Herz & Lang, the architects responsible for the Passive House design. Works of art cannot tolerate natural light and are best displayed using artificial lighting, thus reducing solar energy gains. However, this lost potential is compensated by internal heat gains in the form of museum visitors. "After all, the Passive House principle of keeping the heat inside the building turned out to work extremely well in this context," explains Lang.

A special solution was also needed for the brickwork facade designed by Lederer, Ragnarsdóttir & Oei Architects from Stuttgart. For these Passive House experts, it was desirable to avoid the negative effects of thermal bridges on the energy balance. 24 cm thick mineral wool cavity insulation was inserted between the concrete envelope and the exterior wall. To attach the facade, Lang and his colleagues chose anchors and steel brackets with a minimum proportion of steel.

High indoor air quality standards had already been set on account of the building's use as a museum. An airtightness test resulted in an excellent n_{50} value of 0.3 l/h, well below the Passive House requirement. A ventilation system with heat and moisture recovery not only offers optimal conditions for sensitive works of art, but also provides a pleasant indoor climate for the museum's visitors.

"In the end, it turned out that Passive House was the perfect solution for the high indoor environmental quality necessary for these valuable pieces of art", says Lang. The overall concept had been very well thought-out, explains Dr. Wolfgang Feist of the Passive House Institute in Darmstadt. "I very much hope that the Museum in Ravensburg becomes a model for many other projects of this kind."

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International Passive House Conference with Specialists Exhibition
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www.passivehouseconference.org