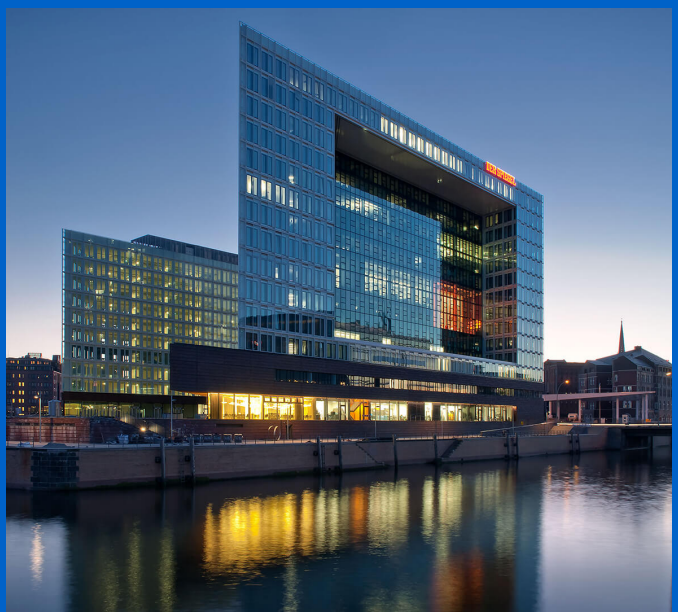
Referencje

Ericusspitze Spiegelhaus



Zaangażowanie Uponor

50000

Ericusspitze Spiegelhaus

New company HQ of the Spiegel Group is located at the Ericusspitze. The concrete core activation from Uponor ensures pleasant temperature levels in the building.

Fakty o projekcie:

Location
Hamburg, Germany

Zakończenie projektu
2011

Rodzaj budynku
Budynek biurowy

Product systems
System ogrzewania/chłodzenia płaszczyznowego Uponor

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Rodzaj projektu
Nowy budynek

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The new headquarters for the Spiegel Group is located at the Ericusspitze in Hamburg, Germany. Uponor's concrete core activation ensures pleasant temperature levels throughout the building at all times.

The basic heating and cooling of the new Spiegel Group building is realised with the Uponor Contec concrete core activation. Approximately 8,150 m² of the ceiling surface was equipped with the pre-fabricated Uponor Contec concrete core activation modules; the modules are integrated with cross-linked polyethylene pipes (PE-Xa), with a nominal width of 20 x 2.3 mm.

In so doing, the thermal ceiling activation achieves coverage of up to 30% of the base loads. The remaining heating and cooling loads are covered using suspended ceiling panels that are also thermally active. The loads still remaining for climate control are covered using a heating-cooling panel, and in areas with increased cooling requirement, using a conventional air conditioning system. For heating, the energy retrieved from the geothermal system is sufficient to cover the base loads using the concrete core activation as well as the ceiling panels with an intake temperature of 35°C and a return temperature of 30°C. To address demand peaks in secondary areas of the building and for additional heating, district heating is used according to the prevailing demand.

"In addition to a geothermal system, when planning the surface temperature control in the floor and ceiling, the use of district heating was also taken into account in the energy concept", explained Ralph Valtinke, specialist planner at DS-Plan Ingenieurgesellschaft für ganzheitliche Bauberatung und Generalfachplanung mbH.

When it comes to cooling, higher thermal power is required to supply the cooling panels. To achieve this, the cooling circuits of the concrete core activation used here are set up as separate cooling circuits. External protection against the sun as well as back cooling of the double facade are employed so that the new Spiegel building is protected against excessive temperature rises.

A bivalent surface temperature control in the ground floor is integrated in the energy concept. The well-proven Uponor Classic support element system ensures uniform heating and cooling. When heating, an intake temperature of 40°C with a return of 30°C is planned and for cooling an intake temperature of 18°C with a return of 21°C. With this overall energy concept the basis has been created to be awarded the "Gold"-Status for the new Spiegel building at the Ericusspitze. With the overall concept, the annual primary energy demand of the building is below 100 Kilowatt hours per m².

The Uponor Quick & Easy system components were used for the 3,000 metres of connecting pipes. This type of installation decreases time-consuming pressing, welding or soldering. After a locking ring has been placed over the pipe, the PE-Xa pipe is expanded using an expansion tool and then inserted in the fitting. As a result of the memory effect of the material, when the pipe shrinks, the it is firmly connected to the fitting.

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