References

Berliner Bogen



Uponor involvement

52000

Berliner Bogen

Berliner Bogen in Hamburg – cutting-edge architecture combined with state-of-the-art technology

Project Facts:

Location	Completion
Hamburg, Germany	2002
Vrsta objekta	Product systems
Office building	Površinsko grejanje i hlađenje
Address	Project Type
Berliner Bogen	New building

It was the first time that the prestigious MIPIM award of the world's largest real estate trade fair in Cannes had been given to an architect from Germany. Hadi Teherani (BRT Architekten), a Hamburg-based architect, received the award for Best Office Building, the "Berliner Bogen" in Hamburg. The new office building has been erected over a canal basin. With a length of approx. 140 metres, the building spans the end tip of a high-water reservoir. Twenty-two steel girders with a height of up to 33 metres (diagonally entangled in pairs) bear the total load of the building shell and large components of the solid reinforced-concrete arch as well as the concrete ceilings. The area of the former canal basin, which serves today as a mixed-water detention reservoir, was spared most of the load thanks to this construction.

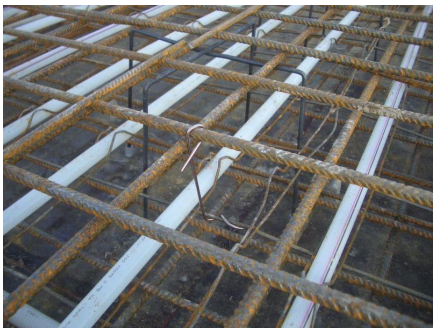
The modern office building Berliner Bogen has been designed as a house-within-a-house. Inside the building one finds a massive component whose ceiling panels are suspended from the steel arches that cover the entire space. The Berliner Bogen is encased in a glass shell of 14,000 sq. m. in a crest-like shape. The entrance is found here, which provides access to the maintenance installations, such as work platforms and gardening equipment, which are designed as conservatories. From

the central section, eight trapezoidal transverse sections fan out. They lead to the outer shell of the building. The conservatories between the eight entrances are spread out across the entire height of the building. Visitors can reach the spacious foyer via a wide bridge in the main axis of the building. At the end of this main axis is a terrace directly overlooking the canal.

The indoor climate of this building dominated by glass is regulated by Uponor Contec concrete core activation (18,000 sq. m.). Given the size of the surface areas, concrete core activation constitutes an efficient and energy-saving solution that incorporates thermal ceiling panels to cover the basic loads. The main components of the system consist of factory-made prefabricated pipe matrices, the Contec modules. They are equipped with solid polyethylene pipes (PE-Xa pipes) according to the Engel method measuring 20 x 2.3 mm. The heat generated inside the building is absorbed by the cooling elements, which are installed in concrete and filled with cooling medium, and then dispatched outside the building. This way the building will maintain a pleasant indoor climate even in summer, and temperature amplifications are avoided effectively.

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