References

Refrigeration technology at the city icerink of Pápa



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History of Pápa Pápa is a city of township rink, with a historic redolent cityscape, sights and cultural show-places. The city is located on the border of Bakony hills and the Kisalföld plains, and is the economic and cultural centre of the Bakony area.

Project Facts:

Location
Pápa, Hungary

Completion
2013

Building Type
Sports facilities

Product systems
Radiant Heating & Cooling

Project Type
New building

Her history goes back to year 884 and is rich, with a Roman martial road, fortress battles, memories of the fight for freedom, redolent school, famous factories (meatworks, "kékfestő" factory, mills, Elektermax factory), swimming pool, front-rinking sports club. Famous Hungarian poet Petőfi and writer Jókai were both students in the reformed college. The main square ("Fő tér") is a sail-arm shaped place, surrounded by nationwide known monuments, formed by roads arriving slightly offset axis. Next to the Eszterházy castle, on Fő tér, stands the most famous creation of architect Jakab Fellner, the roman catholic parish-church, built from 1774 to 1783. The two-towered, classicized façade shows the features of the copf style that followed the baroque style. The nice residential buildings of the Fő tér are from the 18th century, this is the largest square of the country, which is built in harmonic unity of the baroque style. The building of the parsonage, the "Lábasház", and the Bezerédi house, which includes a domed passageway to the spectacular walking and shopping Kossuth street, are exceptionally nice. The Zichy house and the baroque Kenessey house are also of outstanding value. Fő street, starting from the square, is also rich in sights. (Griff Hotel, reformed church, Benedictine church, Township Office, Courthouse)

Preparation and project implementation

The City Mayor's Office announced a program for the large-scale rehabilitation of public premises, and renovation of the city, which included the reconstruction of the Fő square.Permit plans have been completed in the same year. With the design of the reconstruction, architects Mezei Építész Műhely and the Timpanon Mérnökiroda were commissioned, while construction was delegated to the Boroszlán Zrt., and the plans were completed in June 2009. Permit plan of the ice-rink was completed in 2008, the execution plan was completed in 2009. By the original plans, the surface of the trapezoid-shaped ice-rink was 1,400 m2. Because of the excavations of the sights, the fountain and the entry to the church, the surface of the ice-rink was reduced. Direction of the cooling pipes was modified to perpendicular compared to the original plans. The new plans were completed in February 2013. Installation of the cooling pipes of the ice-rink of the Fő square was completed in May 2013. The City Skating-rink of Pápa is in the middle of the Fő square, surrounded by old monuments. The skating-rink is suitable for speed-skating, ice-hockey, figure skating, ice-disco, ice-show, ice-carnival, ice-motorbiking, curling, pastime skating, etc., also for teaching ice sports, skating, or even for exercise classes. The ice surface is 950 m2, required cooling power is max. 240 kW. The cooling system can maintain the ice in excellent quality in rain-free conditions, in case of slight wind or calm, and diffused sunlight, up to +15 °C outdoor temperature. In rain, wind or sunshine the ice is still suitable for sports up to +20 °C. The season of the ice-rink is from end of October till the beginning of April, with the exception of some warm days.

The cooling system of the ice-rink consists of three parts:the cooling system providing the cooling energy,the pipelines of the intermediate mediumthe pipe system of the ice-rink.

Required cooling power for the cooling of the ice-rink, the freezing of the ice and for keeping it cool, is provided by the cooling system installed in the power-house and outside in the yard of the building block. The cooling system is a single-stage system, operating with chlorine-free cooling medium mixture (blend), cooling the intermediate medium (ethylene-glycol). The power-house, which is placed in the cellar of the house of 7 Fő street, is cooling down the intermediate medium with a rotary s

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