

Marzahn combined heat and power plant, Berlin

Data and facts

Company	PORR GmbH & Co. KGaA
Type	Power plants
Runtime	09.2017 - 07.2020
Principal	Siemens AG

[Project report online](#)

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Ultra-efficient plant with up to 90% fuel utilisation

In addition to the foundation slabs for the steel structure, a turbine foundation, a turbine platform, two staircases reaching heights of up to 45m, and the switching station building that presented considerable geometric challenges were all erected in a very confined space. The towers for the staircases, which were constructed as climbing formwork, posed an especially high challenge for the civil engineering team. In deference to the tight schedule, very rapid-setting concrete was used. The staircase towers were also heated and covered with insulating frost mats over the weekends.

Complex turbine platform

The turbine platform is another masterpiece of civil engineering. It sits on six vibration dampers at a height of 15m, where it serves as the supporting structure for the turbine and the generator. An auxiliary structure was erected between the columns and transoms for the concrete pour. This structure was able to support a total of 45t of reinforcing steel, 170 built-in parts, and 280m³ of concrete. The high reinforcement ratio and installation tolerances of 10mm for the formwork and built-in parts meant that the reinforcements had to be inserted with the utmost concentration. In view of the high compressive strength requirements, a special concrete formulation was developed, which was tested in advance in a series of trials, and monitored with temperature sensors during concreting and subsequent hydration.

Impressions

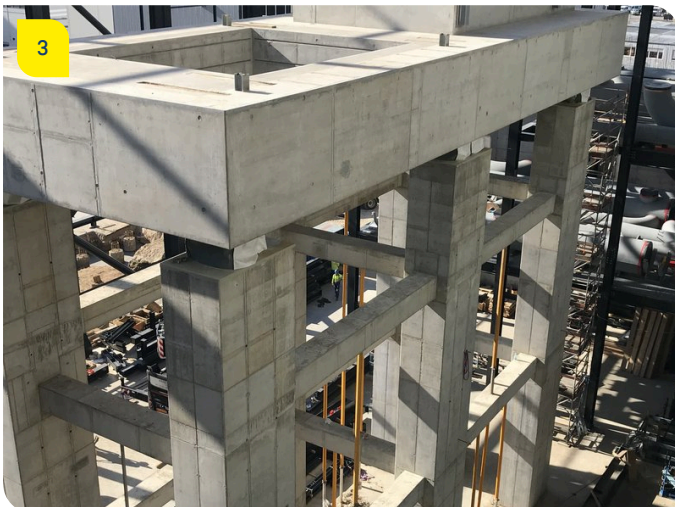


Image notes

1

Marzahn combined heat and power plant, Berlin

The main construction work for the Marzahn combined heat and power plant was realised by PORR structural engineering.

2

Marzahn cogeneration plant, Berlin

In addition to the foundation slabs for the steel construction, a turbine foundation, a turbine table, 2 stairwells with a height of up to 45 metres and the geometrically particularly demanding switchgear building were erected in a very confined space.

3

The turbine table after completion.

Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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