



FAIR particle accelerator, Darmstadt

Data and facts

Company	“FAIR Anlagenbereich Nord” consortium (“FAIR facility, north area), comprising PORR GmbH & Co. KGaA and PORR Bau GmbH
Type	Structural design, Research facilities
Runtime	01.2018 - 01.2024
Principal	Facility for Antiproton and Ion Research (FAIR)

[Project report online](#)

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Complex construction site logistics: up to 250 lorry trips per day

The concrete is produced directly on site with a mobile mixing plant to ensure a continuous supply of 150m³ per hour – up to 3,000m³ per day. Over the construction period, PORR will handle over 100 large-scale concreting operations with an average of 1,500m³ of concrete each. Given that the excavation and backfilling of the construction pit are being carried out simultaneously, 250 lorry trips per day are not uncommon.

The pipeline construction also matches the other dimensions of this project: the team has installed 10km of steel and HDPE pipelines with diameters up to 2m, and 25km of cable conduits. As this work had to be completed in parallel with the backfilling work, it was no mean logistic feat.

Working shoulder-to-shoulder: from planning to implementation

The experienced PORR team, comprising pde Integrale Planung GmbH's Structural Planning and Work Preparation departments and the on-site construction team, is working shoulder-to-shoulder to guarantee smooth execution of the project.

PORR Spezialtiefbau was also involved in the preparatory work as a member of the consortium working on the northern construction pit. Stump-Franki was tasked with the specialist civil engineering measures for improving the soil conditions. This included creating the construction pit, including anchored soldier pile walls and pile walls, dewatering and earthworks.

Impressions



Image notes

1

FAIR particle accelerator, Darmstadt

The new particle accelerator centre is to be built on a 20ha site by 2025.

2

Teilchenbeschleuniger FAIR, Darmstadt

PORR's contract includes the construction of a 1.1 km long accelerator tunnel.

3

Teilchenbeschleuniger FAIR, Darmstadt

In order to meet the high requirements, the buildings are predominantly constructed in solid reinforced concrete with thicknesses of up to 6 metres.

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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