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Reference

DB Tower





SHORT DESCRIPTION

The DB Tower project in the Europaviertel in Frankfurt am Main consists of a 60 m high-rise building with an adjacent plinth on a continuous 3-storey basement.

THE PROJECT

The subsoil in the project area consists of quaternary layers, which are underlain by pliocene sands / silts. Below the Pliocene layers follow the layers of the low-permeability marl and the Frankfurt Formation. The groundwater is approx. 4 m below the ground.

As part of the planning of the excavation pit for the DB Tower, Züblin Spezialtiefbau GmbH together with the central technology of Ed. Züblin AG prepared a special proposal for the 13 m deep construction pit, taking into account the client's tight schedule with only one layer of BBV-multibond® multi-strand anchors. This proposal envisaged a water-impermeable diaphragm wall with a depth of up to 45 m, an integration into the low-permeability clays and a single-layer anchoring. Due to the high anchor forces inherent in the system, BBV multibond® multi-strand anchors were used. Extensive suitability tests were carried out in advance to determine resilient planning bases and to verify the load-bearing capacity of this innovative anchor system in the silty sands and gravels.

For the DB Tower project, optimization through the use of BBV-multibond® multi-strand anchors meant:

- Saving of 2 anchor positions, in partial areas of an anchor position (against pressing groundwater)
- (Almost) all anchors could be drilled above the construction water level, i.e. not against pressing groundwater.

- Saving of 2 intermediate excavation levels
- several weeks of construction time savings

SERVICES IN DETAIL

Procedure:

- 185 BBV-multibond® multi-strand anchors

FACTS

Location	Frankfurt a.M. , Germany
Status	completed
Start of construction	January 2019
Completion	December 2020
Contracting entity	Züblin Spezialtiefbau GmbH
Planning	Zentralen Technik der Ed. Züblin AG und Prof. Quick und Kollegen