

Upper Secondary School, Midtbyens Gymnasium in Viborg

Construction of shell structure for new upper secondary school



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In a trade contract for Viborg's largest educational institution Mercantec and Viborg Municipality, Per Aarsleff A/S has constructed the shell structure for the new upper secondary school, Midtbyens Gymnasium, that unites Viborg's business and technical college under the same roof. The large new school is situated right by the railway station in central Viborg. Mercantec was the client on the school project, whereas the municipality was the client on the associated parking spaces, which Aarsleff also took part in constructing. The project comprised the construction of a 12,600-square-metre shell structure in six stories, cramped between a swimming bath, a railway and one of the arterial roads of the town centre.

Preliminary work

Before constructing the shell structure, Aarsleff's ground engineering specialists installed 28 drilled piles in an area above an old wastewater pipe. It was necessary to support the area with pile foundations rather than direct foundations as used for

the remaining building work. Additional preliminary works included casting of foundations and incorporation of friction soil around the foundations.

Concrete work and element installation

Several of the concrete elements such as columns, beams and slabs are prefabricated. However, at ground level and on the first floor, many of the walls, the three cores for stairways and lifts are all cast in situ. Also, we installed several beams, forks and frames in steel as well as some stairways. The logistic challenges on the cramped site meant that we were permitted to close part of one lane and carry out the element assembly directly from a truck.

Finally, the trade contract comprised the installation of steel trapezoidal roofs, external membranes and cast floors. Subcontractors delivered various masonry work under the management of Aarsleff.



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Data

- 4,000 m³ of concrete
- 1,300 voided slabs
- 286 concrete beams
- 311 concrete columns
- 160 tons of steel
- 7,744 m³ of incorporated frictional soil
- 910 m³ of incorporated base course gravel
- 28 bored piles.

Client

Mercantec and
Viborg Municipality

Contractor

Per Aarsleff A/S

Collaboration partner

Wicotec Kirkebjerg A/S

Type of contract

Trade contract

Consultants

ISC Rådgivende Ingeniører A/S
CUBO Arkitekter A/S

Construction period

June 2017 – March 2020

Contact

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