

Shell structure contract for SHIP building

Logistically challenging shell structure at harbour district Aarhus Ø



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In May 2018, Per Aarsleff started on the preliminary work for construction of the shell structure for the significant SHIP building. The work was carried out in a subcontract for the main contractor Jørgen Friis Poulsen A/S and the client Olav de Linde. The name SHIP is inspired by the building's location at the "stem" of the harbour front at Aarhus Ø, and it is placed in an area in rapid growth right between the new Aarhus International Sailing Center and the Z-huset building.

Extra focus on planning and logistics

Prior to the shell structure contract, Aarsleff established the construction pit for the client. This work comprised installation of 500 running metres of sheet piles, driving of approx. 3,000 reinforced concrete piles, removal of contaminated soil and incorporation of 11,000 cubic metres of sand.

The location of the building plot caused several logistical and weather challenges. In relation to logistics, there was very limited space at the tip of Aarhus Ø between the many new buildings. That was why we focused on the planning of the project to ensure that all working processes were carefully planned in the right order. Throughout the project, we also had to deal with the sometimes challenging wind and weather conditions at Aarhus Bay.

Shell structure for residential and commercial mixed-use building

The completed SHIP building features 202 exclusive flats on 5 storeys. The total floor area is 24,800 square metres of which 21,800 square metres are flats and the remaining 3,000 square metres are for commercial use. In addition, there is 11,800 square metres for underground parking and courtyard area.

Aarsleff's work for the shell structure comprised element installation, in situ concrete, earthwork and sewer work, paving work and planting work. The building is designed as a conventional element structure founded on prefabricated piles. All foundations and basement were cast in situ. The work was coordinated, planned and executed in One Company collaboration across different Aarsleff departments.



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Data

- 500 m of sheet piles for construction pit
- 3,000 reinforced concrete piles (54 kilometres) driven for construction pit
- 11,000 m³ of sand incorporated for construction pit
- 10,000 tons of soil excavated
- 1,500 piles cut
- 5,000 m of cables in the ground, DN110-DN500 mm incl. drainage
- 250 m of pressure pipe
- 12 pumping wells from DN1000-DN2500 mm

- 6,500 m³ of concrete cast in situ
- 7,000 m² of slab, cast in situ, above underground parking
- 3,000 m² of floor slab cast in situ
- 25,000 m² of element installation for residential and commercial use
- 8,000 m² of pavement in underground parking

Client

Byggeselskab Olav de Linde

Contractor

Per Aarsleff A/S

Type of contract

Subcontract

Consulting engineers

Søren Jensen Rådgivende
Ingeniørfirma A/S
Arkitema Architects

Construction period

May 2018-June 2021

Contract value

Approx. DKK 122 million

Contact

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