

The Multi Service Group.



Due to the extension of the St. Olav's Hospital in Trondheim the main building of the hospital had to be underpinned using the "Jet Grouting Method".

The underpinning structure had an excavation height which varied from 3.50 m to 4.10 m. One row of ground anchors was required to secure the underpinning.

The soil conditions varied from pure silt, so called *Lera* and gravel. In the *Lera* the high pressure columns had to be pre-cut with water while in the gravel a cement slurry was used. The parameters for the construction of the high pressure columns were adjusted frequently. The resulting backflow out of the silt layers was too stiff for pumping and had to be removed by excavator.

The works had to be done at temperature as low as -5°C .

Quantities:

92 NOS. core drillings in concrete, length up to 2.00 m

1,727 m³ underpinning using jet grouting, 182 NOS. columns, d=1.30 m, grouting length up to 7.15 m/column)

Contract Value (net):

0.570 Mio. EURO

Construction Period:

11/2005 – 02/2006

Client:

Kynningsrud Fundamentering AS
Trondheim

Owner:

St. Olav's Hospital
University of Trondheim

Services:

Core drilling
Jet grouting

Execution:

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