

Arbetstunnel Hagalund Excavation Support

Stockholm, Sweden

- Keller installed 1700m² sheet piles (VL 603, 606), beams and struts (UPE 300 and HEB).
- Rock dowels 132 pcs Ø 100 mm.
- Jet-Grouting 199 pcs of Ø1m columns to seal between bedrock and sheet piles.
- DDSM 441 lime cement columns, approximately 5400 m stabilized.
- Inclined anchors, 53 pcs MAI76n.



The project

Arbetstunnel Hagalund is a part of the extension of the Stockholm metro with the new Gula linjen. The project is located in Solna and is an entrance to a construction tunnel.

Keller executed the works by excavation support and water sealing for an access road descending to the tunnel mouth, by using several in-house techniques, sheet piling, rock dowels, beams, DDSM, jet-grouting and anchoring.

The challenge

Some of the challenges in this multi-technique project was the number of different types and lengths of sheet piles that also had to be prepared by welding casings on them for rock dowels and jet grouting. The longest sheet piles being 19 meters. The sheet piling done with both excavator with mounted Movax and a mobile crane with a free hanging vibro-hammer demanded good cooperation between personnel.

Another challenge was due to a sloping bedrock surface which made drilling of the inclined anchors difficult.

The solution

Careful planning by which sheet piles were to be prepared and stored for sheet piling works. Coordination with client and planning of which areas to be used. Inclinometer measurements were done to detect faulty anchors because of slipping on the sloping bedrock.

Project facts

Owner(s)

Implenia Sverige AB

Keller business unit(s)

Keller Grundläggning AB

Main contractor(s)

Region Stockholm

Solutions

Excavation support

Markets

Infrastructure

Techniques

Ground anchors

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