



Project Case Sweden, 2015-17 – The Liljevalchs art gallery



Project scope

- Ground reinforcement with drilled steel pile casings into bedrock
- Number of holes: ~400
- Geologic formation: Fill on clay on friction soil on bedrock
- Depth: 8-22 m, 26-72 ft.
- Scope of drilling/total meters: ~6 000 m, ~20 000 ft.
- Why water-propelled drilling? Drilling with casings as above was realized with the water-propelled drilling technology with respect taken to good working environment and the risk of influencing the surroundings. In addition the method was cost-efficient.



Photo: Liljevalchs konsthall

Equipment & geology

- Hammer model/sizes: WAI 30i and WAI 40i
- Drill bit/Casing system: 95 mm/RD Ø115 and RD Ø140; threaded joints and element length of 1 m
- Pump: GDS 720 Twin, 720 lit/min @ 190 bar, serving two rigs in parallel !
- Water source: Potable water
- Drill rig: SPD MD40 Kellermas and Commachio MC-235, small-built underpinning rig

Main stakeholders

- Commissioner: Liljevalchs konsthall, Stockholms Fastighetskontor
- Responsible designing engineer for ground reinforcement: Golder Associates, Stockholm
- Main contractor: PEAB
- Sub-contractor: Besab



The unique Twin 720 diesel pump from GDS

Project & drilling results

Risk of settlements minimized as well as major cost savings thanks to the GDS Twin pump solution.

