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Aarsleff Reinforces and Piles Södertälje canal with GDS Gjutvinda

Purpose

The Södertälje canal and lock are being rebuilt to be able to handle ever larger ships. To do this, extensive foundation work is required to secure the slopes and channel bank, all so that dredging work (to deepen the channel) can be carried out.

Different stages carried out by different companies, the different stages are foundation laying (Aarsleff). Other companies are responsible for crown beams, reconstruction of lock facilities and dredging.

General Layout

2,093 RD piles with a diameter of 323 & 406mm, a total of 30,000 meters of pipe. The piles are between 11-19 meters long. The pipes are drilled in rock and soil.

In total, approximately 3,000 cubic meters of concrete will be needed to fill the piles.

The piles have high demands on the undercasting and therefore GDS Gjutvinda is used for all piles. Gjutvindan's own integrated hose is 25 meters long. The longest distance from the concrete pump to Gjutvindan is just over 100 metres.

Method

The work is carried out in an active fairway with requirements for how much space may be taken up by the canal, (8 meters between 07:00-11:00), (15 meters between 11:00-19:00). The Casting Winder is placed on a barge.

Difficult geotechnical conditions prevail in the area. Some of the pipes are buried in a very soft sediment layer, which results in material penetration into the piles, which means that you need to use the mammoth suction technique before casting. This is something the Cast Winder can be used for, but only fine-grained materials such as sand due to the small diameter of the hose, the Cast Winder can be equipped with up to 76 mm diameter hose.

Machinery and Equipment

- Cast winding GDS
- Concrete pump Putzmeister 720
- 2093 RD-Piles

"The Casting Wind facilitates the work through its mobility and flexibility. The mobile crane does not need to be used. Undercasting can be controlled and being quality assured".

-Adam Tomt, Production manager Aarsleff

