

Dortmund-Ems-Canal Münster-Amelsbüren

Project Owner:

City Münster (represented by Wirtschaftsförderung Münster GmbH)

Client:

Josef Möbius Bau AG

Quick Info:

Tie-back of a ca. 1,5 km long sheet pile wall in the course of the diameter enlargement of the Dortmund-Ems-Canal (DEK)

Technical Information:

System:	Dywidag-permanent anchor/ steel diameter 40, 50 and 63,5 mm
Quantity:	491 pcs.
Length:	9,20 – 18,50 m
Service Load:	up to 1040 kN
Technique:	overburden drilling with up to 2 secondary injections
Building Ground:	clay/marl/bedrock
Time Frame of Works:	July 2009 – April 2010

With continuously rising freight shipping orders numerous canals, e.g. Dortmund-Ems-Canal (DEC), are being enlarged in breadth and depth in order to increase domestic shipping capacities. In terms of the diameter enlargement of the DEC, an approx. 1,5 km long sheet pile wall had been rammed in a section by Münster-Amelsbüren. This wall had to be tied back with Gewi-anchors in order for subsequent excavation works from the riverside to take place. We were hired by our client and general contractor in order to conduct these anchoring works.

Having produced 30 test anchors in various parts of the section beforehand, we succeeded in producing another 461 permanent anchors in ever changing ground conditions ranging from silty clay to solid marl and even bedrock. Since we could not reach load bearing building ground in some parts we had to extend 40 anchors into load bearing depths by up to 6,0 m each. While our drill works could be conducted for the most part from a raised sand platform (see Image 1), our testing and prestressing works had to be executed largely from a pontoon due to subsequent excavations. In order for anchor forces to take hold via the sheet pile wall, we performed targeted injections in some areas to stabilise the softer building ground. Only a grim winter hindered us from a smooth and continuous work flow forcing us to a 3-month long break.



Image 1

QUERSCHNITT UMSCHLAGBEREICH MIT POLLER

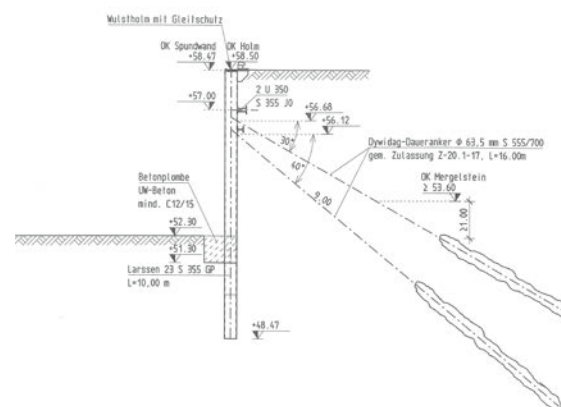


Image 2