

Project implementation report

Infiltration system for aircraft movement areas North-west runway Fraport, Frankfurt am Main



Construction project:

Frankfurt, Fraport / storage tanks /
storage/infiltration system / drainage
structure of North-west runway

Planning:

Dr. Born – Dr. Ermel GmbH Ingenieure
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Construction execution:

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MAX BÖGL

Fortschritt baut man aus Ideen.



DRAINAGE SYSTEMS

ELECTRICAL SYSTEMS

BUILDING TECHNOLOGY

INDUSTRIAL PRODUCTS

Infiltration system for 317,000 m² of connected area



System description:

In order to accommodate the growing international air traffic in the long term, a new runway with a length of 2,800 m is being constructed at Frankfurt/Main Airport. Infiltration of the entire stormwater of the "North-west runway" shall take place on the property! Slot channels connected laterally and a network of channels with an overall length of approx. 60 km transport the accumulating stormwater to the structures of the infiltration system.

These include:

- three pump stations
- two underground storage tanks (total volume: 25,000 m³)
- eight filter tanks (emptying through Strabusil drainage pipes), and
- two structures (Rigofill inspect) for infiltration (capacity of more than 600 m³)

This allows up to 4,300 cubic metres of purified stormwater per day to be returned to the natural water cycle. Rigofill and Strabusil therefore make a valuable contribution to handling natural resources in an environmentally compatible manner.

The entire area connected to the infiltration system amounts to 317,000 m² (equivalent to approx. 65 football fields).

Specific features:

- Just-in-time delivery within 4 days
- Installation depth of approx. 4.00 m
- Complex installation conditions at the "Fraport" major construction site
- Special lengths Strabusil 8.0 m – 8.50 m pipes to facilitate installation

Scope of delivery:

Due to the modular design, quick and smooth completion of the project was possible in just a short time period. Two underground structures with a size of 32.80 m x 13.60 m were created. A total of 1,374 Rigofill inspect blocks and 16 QuadroControl shafts were used.

The filter tanks were implemented using more than 7,000 m of Strabusil pipe in special lengths.