

Our GET-System for the Department of public order Frankfurt/Main – Germany

Erdwärmesondenanlage für das Ordnungsamt Frankfurt

Project description:

The department of public order in Frankfurt has more than 600 employees and is one of the biggest departments of the municipality. The building they used was too small and so they planned a new building with over 18.000 m² (picture 1)



Picture 1: Department of public order FRA, Germany



Picture 2: View from a crane onto the geothermal pipes

The operating costs should be economically and cost-reducing. A modern heating and cooling system with geothermal probes would have featured the new building in Frankfurt. One geothermal probe (reversible between heating/cooling) has an output of 600kw which provides the heating or the cooling in the rooms.

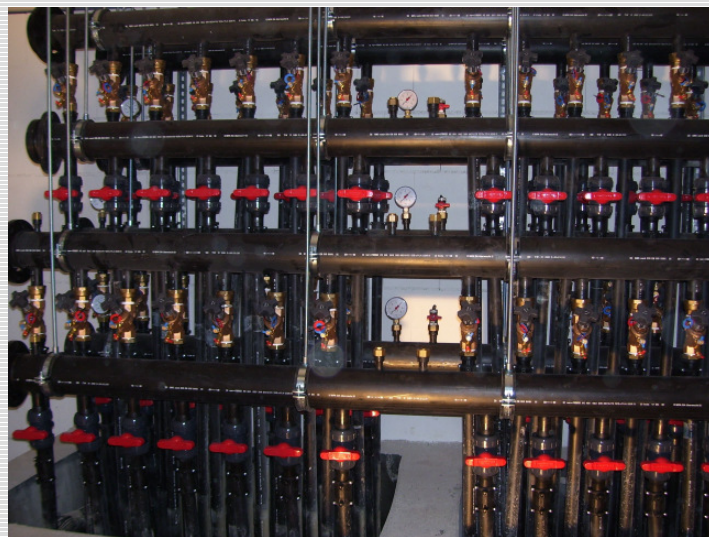
The energy generation had been realized by 112 FRANK geothermal probes OD32 with a length of 85 m. The drilling, the inserting of the probes and the fill out with thermal improved material had all been realized in only 6 weeks by one German drilling company.

Due to the minimum open space, the complete probe area had to be placed under the building. To lead the connection pipes through the wall (up to 1,5m thick) , a special designed formwork made of concrete protection liners had been constructed. (see picture 3+4).



**Picture 3+4: Casing for the insertion of the pipelines
Schalung für die Einführung der**

There was a big area of probes and there were different lengths of the pipes to be connected. The FRANK distributors made of PE are equipped with hydro controls for the hydraulic balance of the probes. This ensures the equal thermal loading of the probes. (picture 5)



Picture 5: FRANK distributors with hydro controls

This project shows the future-oriented application for renewable energies in public buildings as one of the biggest installation of geothermal probes in the area of Frankfurt.

Scale of delivery

- 112 FRANK duplex probes OD32mm, length 85 m
- FRANK PE100 distributor with hydro control
- PE concrete protective liners

Data of building

Size of the site: approx. 9.300m²
Building area: approx. 9.200m²
Converted space: approx. 25.000m²
Total office space: 18.089m²
Offices: approx. 540

Construction phases:

Start of project: December 2005
Start of construction: March 2007 (cut with spade)
Topping-out ceremony: May 2008
Opening: May 2008

Partner

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