



PROJECT SUMMARY

Organization:

Vattenfall Europe Berlin
AG & Co.KG

Solution:

District Heating

Location:

Berlin

Project Objective:

- Network calculations for the 1300 km district heating network
- Calculations for two-pipe and three-pipe networks

Bentley Products used:

Bentley® sisHYD

VATTENFALL EUROPE BERLIN USES BENTLEY SISHYD FOR NETWORK CALCULATIONS

Vattenfall Europe Berlin manages a large district heating network with a highly complex structure. Tasks like network planning, modeling and incident simulation are typically demanding, but handled adequately using Bentley sisHYD network calculation features.

Vattenfall Europe Berlin (formerly known as Bewag) is one of the largest district heating providers in Western Europe. A network of pipes of almost 1300 kilometers connects 14000 customer installations. District heating covers about 27% of the total heating demand in Berlin. Offering district heating in Berlin is a challenge: ten district heating plants feed the main network, while smaller insulated networks are serviced by 13 heating facilities and two block heating plants.

The eastern part of Berlin is covered by a two-pipe network, while the network in the western part of the city is a predominantly three-pipe infrastructure.

In July 2000, when Bentley sisHYD replaced the two network calculation systems used for the previously separate networks in the east and west, one of the key strengths was its ability to perform calculations on the three-pipe system without additional programming. Its interface, the product's stability and the availability of solid references were also important criteria for selecting Bentley sisHYD.

Bentley sisHYD covers three key areas in the district heating services offered by Vattenfall

FAST FACTS

- Network calculations for the two-pipe and three-pipe network in Berlin with a total length of 1300 km and 14000 customer installations
- Support during revision planning and incidents by offering alternatives for service provision
- Determining the best option for connecting new customers to the network



*"In essence,
Bentley sisHYD helps
network operators
to maintain balance
between efficiency,
operational
reliability and
dependable supply."*

ABOUT BENTLEY

Bentley Systems, Incorporated is the global leader dedicated to providing comprehensive software solutions for sustaining infrastructure. Architects, engineers, constructors, and owner-operators are indispensable in improving our world and our quality of life; the company's mission is to improve the performance of their projects and of the assets they design, build, and operate. Bentley sustains the infrastructure professions by helping to leverage information technology, learning, best practices, and global collaboration – and by promoting careers devoted to this crucial work.

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Europe Berlin. First, it supports the company's network calculations when it needs to decide how to connect new customers and what the implications are for the overall hydraulics of the network. Second, it performs scenario calculations on the generation side, to optimize service/performance and location for heat supply. Third, it supports the daily network operations. It is instrumental when coping with incidents, for example when part of the network shuts down or a heat generator fails. Hydraulic simulation on the network shows where

restrictions are required during network operation and how they can be controlled. Obviously, network calculations also cover revision planning, when different supply alternatives are analyzed and tested.

In essence, Bentley sisHYD helps network operators to maintain balance between efficiency, operational reliability and dependable supply – and without a doubt all requirements are met here in the best possible way.

