Polybutene
Piping Systems Association

Case Study

Amager Bank HQ Copenhagen, DK

Thermaflex I Flexalen

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Keeping critical data storage cool at Amager Bank HQ in Copenhagen

The Amager Bank headquarters is situated on the historic Kongens Nytorv Square in the heart of the Danish capital of Copenhagen.

As a large financial institution with a high volume of data traffic and storage, the bank needed a reliable and economical method to cool down its server room to a constant temperature for smooth operations.

The solution to this requirement involved a new cooling concept, using seawater from the nearby harbour area in cooperation with Copenhagen Energy and Bodrum VVS, the installer. To realize this, they needed to secure an efficient distribution method that could be smoothly and quickly implemented in the heart of the city.

For Copenhagen Energy, this was the first pilot project completed using Polybutene-1 (PB-1) pipes for connections to the main lines. They were pleased to collaborate with PBPSA member company

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Thermaflex, using the Flexalen insulated piping system made from PB-1 as an efficient, easy to install and long-life system with which to construct their seawater cooling project. Copenhagen Energy believes cooling is essential for the commercial office buildings in the city, and similar initiatives are following.

Details

The secondary line for the Amager bank cooling system is located in the city center of Copenhagen and was installed using the Flexalen PB-1 piping system. The pipes used were 90/160 mm ø with PB/steel connections to the steel main lines located in the street, and flanges for the boiler room. For the distribution system between the floors of the bank and within the wall structures, the flexibility and security of the welded connections were a crucial aspect for Bodrum VVS, the installer.

Goals

The main goal for Copenhagen Energy was to reduce CO_2 by 3,000 tons per year by connecting companies such as Danske Bank, Magasin, Sydbank, Berlinske hus, Egmont and Amager Bank. In this part of Copenhagen it was crucial to minimize installation time and disturbance as much as possible. Most buildings are quite historic and multi-use, and there is considerable daily traffic in this area. The working space was also highly restricted outside the building, and the ease and speed of installation were crucial to the success of the project. The fact that the project could be realized within just a few days was highly valued by all stakeholders involved. Securely welded connections were also important to allow installation of the pipes in the wall sections of the buildings making Flexalen an ideal choice for this application!

Results

The flexibility and extremely low bending radius of the Flexalen PB-1 pipes made it possible to pull them underneath the existing road and under the building through a concrete shaft, despite the existing curvature in the shaft. The total length of the pipes in the street area was 2x50 meters, and internally 2x40 meters of 75 mm ø pipes. It was the installer's first job working with Flexalen 600, and they were highly satisfied with the efficiency of the working process using the versatile Flexalen PB-1 system by Thermaflex.

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Organisations
Copenhagen Energy (contractor)
Brondum VVS (installer
Amager Bank (customer)

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Statistics
- 3,000 tons of annual CO_2 savings = long term goal
- 180 meters of Flexalen pre-insulated pipes laid
- Project duration: 2 months

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