



South Harbour district in Aarhus

Optimal supply for visionary urban development



KEY INFORMATION

Customer

AffaldVarme Aarhus
Aarhus, Denmark

Time scale

January - October 2019

SOLUTION

District heating system

Length & dimensions

565 m \varnothing 610/1000 mm series 3 &
 \varnothing 610/800 mm series 1

565 m \varnothing 406/710 mm series 4 &
 \varnothing 219/400 mm series 3

Leak detection system

isoalarm model 4500

SALES RESPONSIBLE

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Important contribution to urban development

In the South Harbour district in Aarhus, the second-largest city in Denmark, a new heating transmission line from the Aarhus Heat Plant to Sydhavnsgade is intended to support a major urban development and ensure security of supply to the city.

The neighbourhood of the city's old coal-crane track is facing a continuous development that will make it Aarhus' version of New York's Skyline.

Here, we find old railway tracks, the cobble stoned streets and historic industrial buildings - a cultural environment to preserve and which, combined with new buildings and activities, shall become a modern commercial district with 6,500 work places, vibrant urban life and room for the socially vulnerable.

To make room for this urban development, which also includes new carparks and other construction, the district heating transmission line between the Aarhus Heat Plant and Sydhavnsgade will be rerouted, and dimensions will be increased from DN450 to DN600. The transmission line will be co-excavated parallel to the DN400 distribution line that will connect to the new business area. For the project, isoplus is responsible for pipe delivery, design, static dimensioning and problem solving during installation.

By choosing a pre-insulated pipe system with optimised insulation in both transmission and distribution lines, the utility company AffaldVarme Aarhus, who is in charge of the project, ensures supply with a minimum of heat loss and optimal economy.

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Map of the new transmission and distribution lines in the South Harbour district in Aarhus.

About AffaldVarme Aarhus

AffaldVarme Aarhus (Department of Waste and District Heating) is a municipal, contract managed company.

Its most important job is to supply and develop safe, environmentally correct, climate friendly and competitive waste management and district heating to customers in the City of Aarhus.

More about AffaldVarme Aarhus
www.aarhus.dk/english

Regard for cultural environment and smart solutions

isoplus delivers a total of approximately 1,200 m of pre-insulated pipes for the transmission and distribution lines, which will lead from the Aarhus Heat Plant past JyllandsPosten's new office building, below the railway track, past Kohalen and along the slaughterhouse to Sydhavnsgade.

isoplus is responsible for the pipe supply, planning, static design and has met various challenges during the installation work.

In some places, pre-insulated steel pipes with reduced jacket pipe dimensions were installed to show regard for historic buildings and safeguard existing sewers.

One of the important things was to avoid deep excavations at the Kohalen, a slaughterhouse from 1907, which is now a popular lunch restaurant serving traditional Danish food.

Furthermore, isoplus has made special curved pipes in the dimension DN600 to be installed along the railway track. These pipes are curved from the inside using a high-tech hydraulic tool – a curving method which ensures that foam insulation, alarm wires and outer jacket pipe remain undamaged. This also preserves the pipe system's insulation values, thereby ensuring a technical lifetime of 30-50 years.

Approved according to the PED directive

Due to water temperatures exceeding 110°C, the pre-insulated pipes used for the transmission line, as well as the other parts of the installation, must be CE labelled according to the Pressure Equipment Directive.

Therefore, the pipes meet the special requirements for material quality, safety, documentation and control according to the Danish Working Environment Authority's order no. 190.