



District heating project Sempach, Switzerland, 2025

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Project

A new district heating transfer pipeline was constructed in Sempach between two RWF heating plants. The aim of the project is to ensure a reliable heat supply via a 2,200-meter-long PRE-MANT UNO DN150 pipeline with a capacity of 4.5 MW. The pipeline transports hot water at temperatures of up to 90 °C at a delivery pressure of 8 bar and a volume flow of approx. 150 m³/h.

Execution

The project was carried out under the leadership of Korporation Sempach in close cooperation with leading specialist companies. GUNEP AG was responsible for planning the pipeline construction, while SSP Fernwärme GmbH was responsible for the pipeline construction and welding work. BRUGG Pipes was used as the district heating pipeline supplier. The main pipeline supplies several customers, including the Felsenegg central substation with 3.5 MW and other consumers with a total output of 1 MW.

The project placed high demands on planning and implementation, as numerous structural and geological challenges had to be overcome. One of the central tasks was to underpass the SBB railway tracks and the Grosse Aa stream with a radius of 170 meters. This was achieved using flush drilling technology, which safely guided the district heating pipeline under the railway tracks and the stream bed without disrupting rail operations or the flow of water. Another challenge was crossing the Kleine Aa stream, where a custom-made culvert was used to develop a load-bearing and weather-resistant solution to safely guide the pipeline over the water.

The work on the busy Luzernstrasse also presented special challenges. Precise coordination and traffic management ensured that the construction work was carried out efficiently, minimizing disruption to road traffic. One of the most technically demanding tasks was drilling through rock to the Felsenegg school building, which connected it to the old headquarters. Thanks to state-of-the-art drilling technology, this challenge was mastered precisely and efficiently.

In addition, the general "construction in groundwater" was a decisive factor in the implementation of the project. As some of the work took place in groundwater-bearing layers, careful sealing was required to ensure the long-term stability of the pipeline.

This was achieved using the patented INDUCON induction welding process. Despite these challenging conditions, the project was completed on schedule and with a high degree of precision.

The new transfer pipeline ensures a sustainable and high-performance heat supply for Sempach. The successful implementation once again demonstrates the strength and expertise of the partners involved in the realization of complex infrastructure projects.

Erweiterung Fernwärmenetz Süd, Korporation Sempach
ERWEITERUNG FERNWÄRMENETZ SÜD
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- LEGENDE:**
-  Bestehendes Fernwärmenetz
 -  Erweiterung Fernwärmenetz Süd; Transportleitung Heizzentrale Korp. Sempach - Beat Riis AG
 -  Heizzentrale

