ARMSTRONG

NETWORKED HEATING

A DISTRICT HEATING INSTALLATION

Sarrebourg District Heating System

Armstrong Intelligent Fluid Management Systems (iFMS) integrate superior pump- and control technology into a single packaged solution that is ideal for partial or all variable speed applications. Powered by Design Envelope 4300 pumps with built-in intelligence, iFMS systems save 30% or more over other parallel pumping configurations.

The new boiler room is now serving 2900 housings through 32 delivery stations, delivering a total of 29 Gwh of heating per year. Energy savings are over 70% compared to a constant speed system.

"Armstrong provided great support all the way through the project, from the design phase to final commissioning."

Lionel Petermann
Project Manager, ENGIE

Background

Sarrebourg (pop. 13K) is a town in the administrative region of Grand Est 350 km northeast of Paris.

To reduce the territory's dependence on fossil fuels, municipal leaders agreed to fund a hot-water district heating system using wood heating to provide heat and domestic hot water. The system design would eventually grow to include 32 delivery stations and an 8km network of piping. The decision represented a total investment of 12 million Euros.

To generate and maintain flow within the system, designers chose a packaged iFMS solution, including 3 Design Envelope Vertical In-Line pumps, Suction Guides and Flo-Trex valves Control. Optimization of the flow modulation and load distribution was provided by an IPS 4002. The iFMS was augmented by 6 additional Design Envelope pumps at different locations in the network.

Final construction, installation and commissioning were completed in 2022. The system uses a 5 MW biomass boiler as the heat source, with 85% of wood supplied locally.

Powered by renewable energy, the new boiler room is now serving 2900 housings through 32 delivery stations and delivers a total of 29 Gwh of heat per year. In case of additional demand or emergency, supplemental heating can be provided by gas boilers. The project represents an investment of 12 million euros for the community and has created 8 local jobs.

The new system will avoid the emission of more than 123,000 tons of CO_2 over the next 20 years. Energy savings from the efficiency of the iFMS and the additional 6 Design Envelope pumps are over 70% compared to a constant speed system of similar size.

Reflecting on the system design and the choice of equipment, Lionel Petermann, Project Manager with Engie stated, "The decision to use a packaged solution from Armstrong was based on our experience using the same technology at other sites. Plus, Armstrong provided great support all the way through the project, from the design phase to final commissioning."

Tech-info

6 Design Envelope Pumps Packaged iFMS system with:

- 3 Design Envelope Pumps
- Suction Guides
- Flo-Trex valves
- IPS4002

TORONTO
+1 416 755 2291
BUFFALO
+1 716 693 8813
DROITWICH SPA
+44 121 550 5333
MANCHESTER
+44 161 223 2223
BANGALORE
+91 80 4906 3555
SHANGHAI
+86 21 5237 0909
BEIJING
+86 21 5237 0909
SÃO PAULO
+55 11 4785 1330
LYON
+33 4 26 83 78 74
DUBAI
+971 4 887 6775
JIMBOLIA
+40 256 360 030

FILE NO.: 9.594
DATE: JULY 2023
SUPERSEDES: NEW
DATE: NEW