BOSCH
Invented for life

Pieter Wiersma heating plant

Reference Report Bosch Industrial

Low-NO_X boilers for complex district heating network

Always reliable and ready for operation around the clock: since December 2015 two Bosch hot water boilers, each with 20 MW, have been in operation in the new Pieter Wiersma heating plant in Lent (Netherlands). Thanks to innovative boiler and burner technology, it is one of the lowest-emission plants of this type in Europe. It feeds heat into the Nijmegen district heating network, which in the coming years will supply up to 14,000 households in Waalsprong and Waalfront. The base load is generated by a waste energy plant operated by the company ARN. The Bosch boilers support the district heating network during winter peak loads and serve as back-up in emergencies. This ensures that the heat supply to the inhabitants is uninterrupted.

The used UT-HZ hot water boilers are particularly suitable for district heating supply due to their large modulation range. Each of the boilers is equipped with two natural gas burners, and the flame tubes and smoke gas passages are completely separated. This enables both burners to be operated in parallel, or also single operation with only one burner. The boilers can therefore react very dynamically to load fluctuations, and also operate particularly efficiently at low rates of loading. The reduced number of burner starts saves fuel and reduces wear significantly.

Highly modern and innovative: the Pieter Wiersma heating plant in Lent.

The boiler system is linked to the customer's existing energy management system. As soon as the pressure in the district heating network is no longer sufficient, the boilers switch in automatically. The precondition for this automated, supervision-reduced operation is the safety equipment including a wide range of automation equipment and the precise setting of the system. Nefit Bosch (Netherlands) also delivered all the necessary equipment components and customised control units, and carried out the commissioning and test operation. The company Strukton Worksphere was responsible for implementing the entire heating plant project.

Very low emissions were also an important factor in the project. Compared with heating that is produced in individual households, up to 70 percent of the CO_2 emissions can be saved by using the district heating network. The Bosch hot water boilers also contribute to this: in the case of all four burners, the NO_X emissions are under 50 mg/Nm³. In addition to this, they are very economical due to a wide range of equipment such as combustion control units and speed-controlled burner fans.

Nefit Bosch is also entrusted with the maintenance services to ensure a long service life and optimum system settings for continuous availability and efficiency. Further, Nefit Bosch guarantees the operator Nuon immediate on-site service if required. The fast reaction time offers additional reliability. The system and service concept fulfil the requirement of Nuon to be able to assure system availability of 99.5 percent over the next 10 years.

Delivery and positioning – each boiler had a transportation weight of 68 tons.

Operator:
NUON, part of Vattenfall
info@nuon.com
www.nuon.com

Local Bosch contact:
Bosch Thermotechniek B.V.
Tel.: +31 570 602-602
presales@nl.bosch.com
www.bosch-thermotechniek.nl

Bosch Industriekessel GmbH
Nuernberger Strasse 73
91710 Gunzenhausen
Germany
Tel. +49 9831 56-253
Fax +49 9831 56-92253
sales@bosch-industrial.com

Bosch Industriekessel Austria GmbH
Haldenweg 7
5500 Bischofshofen
Austria
Tel. +43 6462 2527-300
Fax +43 6462 2527-66300
sales-at@bosch-industrial.com

info@bosch-industrial.com
www.bosch-industrial.com
www.bosch-industrial.com/YouTube