



### District heating

With its workforce of more than 4700, Salzgitter Flachstahl GmbH is the largest member of steelmakers in Salzgitter Group. In 2011, it produced some 4.5 million metric tons of raw steel for, among others, the automotive and building industries. At their power station, Salzgitter GmbH uses the process gas from the iron and steel works to generate electric energy, process steam and district heat.



### Demand-driven operation has reduced power consumption by 53 %

For conveying the district heat from Salzgitter Flachstahl's power station, the company has had 4 KSB pumps in service that have reliably and continuously provided the necessary flow rate since the 1960s. The volumes supplied fluctuated considerably, however; the pumps used to run at maximum capacity only 1 – 2 % of the annual operating time. As the pumps did not have speed control, they could only be adapted to varying demand by means of throttling, a method that invariably results in high energy losses. Because the pumps continuously ran at full load, a large part of the energy being expended remained unused. Following the system's optimisation with the help of KSB, power input can now be flexibly matched to actual demand, bringing total consumption down considerably.



**KSB is part of our energy-saving programme: We have been saving 53 % in district heating costs.** Frank Adam, Salzgitter Flachstahl GmbH, Salzgitter



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During a general overhaul of the plant, the customer decided to invest in a demand-based pump control system. The configuration selected comprises three pumps type Multitec with a motor rating of 390 kW each. At the customer's request, KSB Service GmbH also planned and commissioned the new control unit, including control cabinets, frequency inverters and transformers.

Actual operating data, such as speed, power input and pressure are now conveniently shown on a display in the control room and greatly help to make pump operation more transparent. The revised system has been running stably and without a single hitch since the day it was commissioned. On average, this has resulted in an impressive **energy saving of 53 %** in the district heating system.

## Salzgitter Flachstahl GmbH – Scope of supply and project details

3 Multitec MTC D150/2  
Flow rate: 580 m<sup>3</sup>/h  
Head: 190 m

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