

## Sulzer's high-efficiency SNS pumps modernize water intake of steel factory

The metallurgical industry in Poland can look back at decades of glory. Between the fifties and the eighties, a lot of people worked in steel mills throughout Poland. After the market-economy transformation, the production declined consequentially. Also, the demand for water in the refrigeration processes has decreased significantly. The old pumping systems of the works, with no regulation, have become ineffective.

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*Sulzer delivered the first SNS pump to a Polish raw water pumping station in November 2017, and it operated 24 hours a day for the whole year. The customer is really satisfied with this non-problematic pumping, not to mention the fact that the power consumption dropped by 60%. Thanks to this performance, we delivered another SNS pump in November 2018.*

Grzegorz Wilkoszewski – technical support, clean water champion at Sulzer Pumps Wastewater Poland Sp. z o.o.

### The challenge

The raw water pumping station was designed for a large flow during the era of high production in the works. Pumps with high-power motors were used for water intake from the Vistula river. An old discharge system with large pipe diameters called for proper selection of equipment. It was necessary to install new piping and armatures as well as a new control algorithm for the cooling system of the steel factory.

### The solution

After having analyzed the valid expectations, Sulzer proposed a SNS pump with a 55.0 kW motor. We considered the large suction height of about 4.0 m carefully, but in the end the pump has proven to work well despite the unfavorable conditions. The user, accustomed to the high motor power of the old pumps, did not believe that the requirements could be met with such a low power. After having seen the SNS pump in operation for one year, he changed his opinion.

### Customer benefit

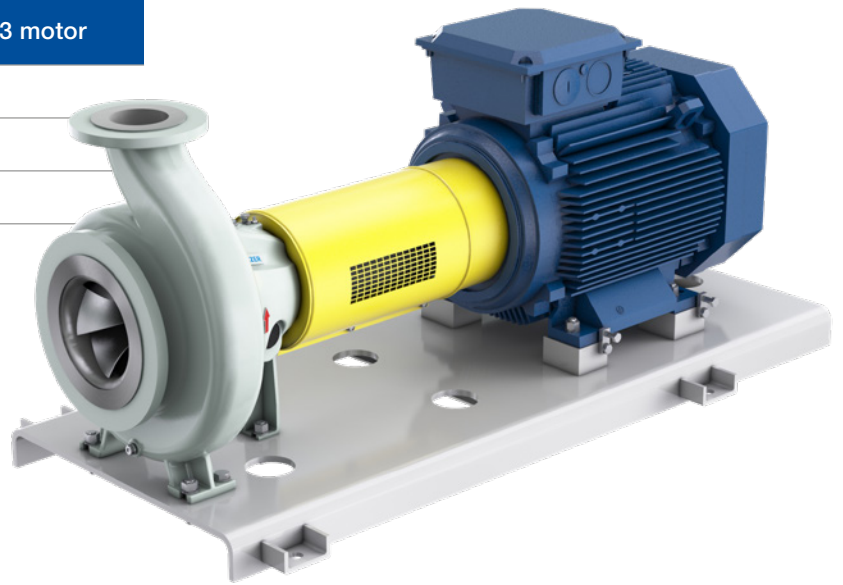
We replaced the old shaft pumps, which leaked and were very noisy, by small centrifugal pumps. The motors of 205 kW and 132 kW were changed to 55 kW motors operated by frequency converters. During smaller water demand, the power consumption is about 30 kW. The smooth speed control has saved about 60% in energy.

- The highest efficiency on the process pump market provides clear savings in energy consumption, exceeding clearly the MEI 0.4 efficiency requirements.
- Low installation and maintenance costs due to easy installation and unique design.



**SNS3-80 (150-80-250) with 55.0 kW IE3 motor**

<b>Flow</b>	250 m <sup>3</sup> /h
<b>Head</b>	60 m
<b>Hydraulic efficiency</b>	80.8%



**Contact**

[grzegorz.wilkoszewski@sulzer.com](mailto:grzegorz.wilkoszewski@sulzer.com)

[www.sulzer.com](http://www.sulzer.com)

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