
Indo-Bharat: Grundfos CRN pump secures trouble-free operation at the world's largest producer of viscose staple fibres

PT Indo-Bharat Rayon in Puwakarta, Indonesia, is the world's largest producer of viscose staple fibres. The production is totally dependent on continuous trouble-free operation of steam boilers, generating steam at high temperatures and a maximum pressure of 16 bar.

The system previously operated with a single-stage centrifugal pump, but this was found not to meet the company's very strict demands for reliability and long service intervals.

The Situation

PT Indo-Bharat Rayon produces viscose (rayon) staple fibres for the textile industry. The company employs more than 1,000 people and has an annual turnover in excess of USD 122 million. This makes Indo-Bharat Rayon the world's largest producer of such fibres.

The production is totally dependent on the continuous operation of one steam boiler. The boiler is fitted with an economizer where the boiler flue gas (at 168-276°C) passes over the boiler feed water (at 135°C), thus causing the boiler feed water temperature to increase. This reduces the required energy input with the same rated output and, thus, the boiler efficiency, while reducing operating costs, maintenance costs, water consumption, corrosion in economizer and emissions from the boiler.

The Grundfos Solution

TOPIC:

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LOCATION:

Indonesia

COMPANY:

PT Indo-Bharat Rayo

The previous solution with a single-stage centrifugal pump was found to be unsuitable for the situation, and after careful studies of the extreme operating condition, Grundfos suggested a solution with one CRN 64-2 pump with Air-Cooled Top. This model is suitable for handling liquids at temperatures of up to 180°C. The Grundfos CRN 64-2 offers low NPSH (Net Positive Suction Head) and is well suited for continuous operation under such extreme conditions.

The high efficiency of the CRN model – up to 80 % – results in extremely low energy consumption and low long-term operating costs.

The Outcome

Prior to installing the Grundfos CRN range, the Indo-Bharat boiler was subject to frequent unscheduled stops and high maintenance costs. These problems have practically been eliminated, and the pump has been in operation for more than two years, non-stop, and the service or maintenance costs, consequently, have been zero.

The Grundfos CRN pump has completely solved the problems previously encountered, and the savings generated – both in terms of energy consumption and the non-existing service costs – have already more than paid for the pump.

The general outcome has been a much more profitable operation.