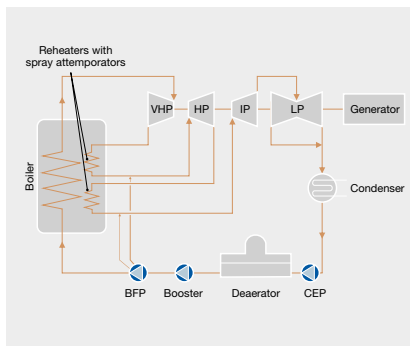


CASE STUDY

The Largest Boiler Feedwater Pump for Shenhua Beihai Supercritical Coal-Fired Power Plant

Ever-increasing stringent environmental regulations are changing the power generation landscape worldwide. In an attempt to increase power generation while decreasing the related environmental impact, China has been developing ultra-supercritical (USC) coal-fired power plants, among which the Beihai Power Plant, a 2x100 MW double reheat ultra-supercritical coal-fired plant.



Double reheat system

“ With Sulzer’s outstanding references on the large size boiler feedwater pumps worldwide and the successful operation of Shenhua Wanzhou 2x1,000 MW single reheat power plant in China, we trust Sulzer’s technology, engineering and manufacturing capabilities. ”

Quote from the customer

The Sulzer difference

Sulzer’s extensive references and experience in the field of supercritical application makes it a reliable partner in supplying quality products that meet customer’s requirements.

The challenge

The Beihai double reheat ultra-supercritical power plant will operate with steam temperature between 700 and 760°C and pressure up to 350 bar. Such extreme conditions will considerably stress the materials and components of the pump. In addition, the customer requested:

- High reliability for safe operation with just one boiler feedwater pump
- Optimized efficiency for economic operation of the power plant
- Compact construction while allowing double Interstage Take-Off (ITO)

The solution

A complete pump set including a main pump and a booster pump will be delivered. The main pump will be the largest size of Sulzer HPT pump; state-of-art technology will be implemented to meet the high operation duties, especially for the design of pressure boundary and double Interstage Take Off (ITO).

Customer benefit

By choosing Sulzer, the customer can rely on an experienced partner to provide:

- Proven hydraulics
- Predictable technical performance
- Pump efficiency over 87% with output over 40 MW

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Applicable markets

Power generation

Applicable products

Boiler feedwater pump