

Bigger by design

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Sulzer supports expanding Chinese power infrastructure with large start-up boiler feed pumps

China is leading the world in the construction of solar, wind and thermal power plants to support its increasing demand for electrical energy. For those that use steam turbines, boiler feed pumps (BFPs) are a crucial asset and selecting the best design to suit the needs of an individual station can have many benefits. When a recent project needed some of the largest start-up BFPs available, Sulzer was selected as the preferred supplier.

Large thermal power plants use high-pressure steam to rotate turbines that drive electrical generators as well as other equipment such as the main boiler feed pumps. This cyclic process reduces operational costs. However, following a shutdown there is no steam, so the main pumps cannot operate. Consequently, there is a need for start-up boiler feed pumps that are electrically powered. Once the boilers are fully operational, the main pumps can take over and the start-up units taken offline.

Building the biggest

Sulzer was appointed to supply two start-up BFPs capable of delivering flows greater than 1000 m³/h. The company's wide portfolio of pumps for this application means an optimal solution can be found for every power station. The whole range is based on proven designs that are engineered to suit the specific requirements of each project.

In this case, other pump manufacturers could only achieve the required discharge specifications by running the pump at high speed, which required the addition of an gearbox, as well as a booster pump, increasing the total investment cost.

Sulzer's solution uses a 2-pole, 5.6 MW motor that runs at 3'000 rpm, which allows for a direct connection to the GSG-BFP pump. The hydraulic design ensures that the required net positive suction head (NPSH) is achieved without the need for a booster pump. This makes the overall footprint of the pump skid more compact and ensures a cost-effective solution for the power plant.

Tang Qixu, Tendering Manager, Power for Sulzer, commented: "Sulzer was primarily selected for this contract because of our renowned ability to deliver high-quality pumps with industry-leading efficiency figures. In this case, we achieved excellent performance thanks to the expertise of our designers and manufacturing facilities."

Real-world efficiency

Sulzer's modern GSG-BFP pumps had a high efficiency over 80%. When talking about pumps with multi-megawatt motors, these real-world efficiency figures would deliver a considerable saving.

Sulzer's latest addition to the power generation market will be delivered later this year with installation and commissioning being supported by the company's field services engineers. The project will also be bolstered by the supply of essential spare parts for ongoing maintenance over the next few years, helping to maximize equipment availability and overall productivity.

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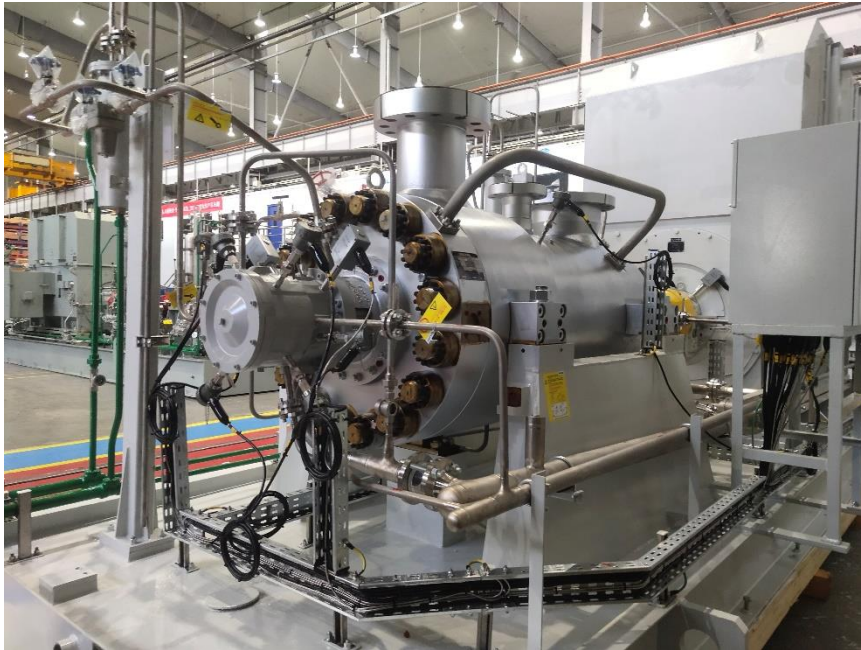


Image 1: Sulzer's modern GSG-BFP pumps have a high efficiency over 80%.

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About Sulzer

Sulzer is a global leader in fluid engineering. We specialize in pumping, agitation, mixing, separation and purification technologies for fluids of all types. Our customers benefit from our commitment to innovation, performance and quality and from our responsive network of 180 world-class production facilities and service centers across the globe. Sulzer has been headquartered in Winterthur, Switzerland, since 1834. In 2021, our 13'800 employees delivered revenues of CHF 3.2 billion. Our shares are traded on the SIX Swiss Exchange (SIX: SUN).

For more information, visit www.sulzer.com

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