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Siemens to deliver record-breaking steam turbine technology to China

- **Order for one of the world's most efficient steam turbines**
- **Deployment of advanced ultra-supercritical steam parameters**
- **Benchmark on competitive Chinese market: gross efficiency of more than 52 percent through innovative technologies**
- **Planned power output of 1,350 megawatts from the entire plant**

Siemens, together with its joint venture partner Shanghai Electric Power Generation Equipment Co. Ltd. (SEPG), has received an order to supply to China one of the world's most advanced and most efficient steam turbines. The innovative cross-compound double reheat concept, originally conceived in a co-development project involving Shenergy and Siemens, will feature the advanced ultra-supercritical steam turbine SST5-6000.

"The end customer Shenergy applies the patent technology of advanced elevated and conventional turbine design," according to Professor Feng Weizhong, who developed the layout and heads the Pingshan II steam power plant. "Together with several other innovative energy-saving technologies, the gross unit efficiency is expected to be more than 52.2 percent," he adds.

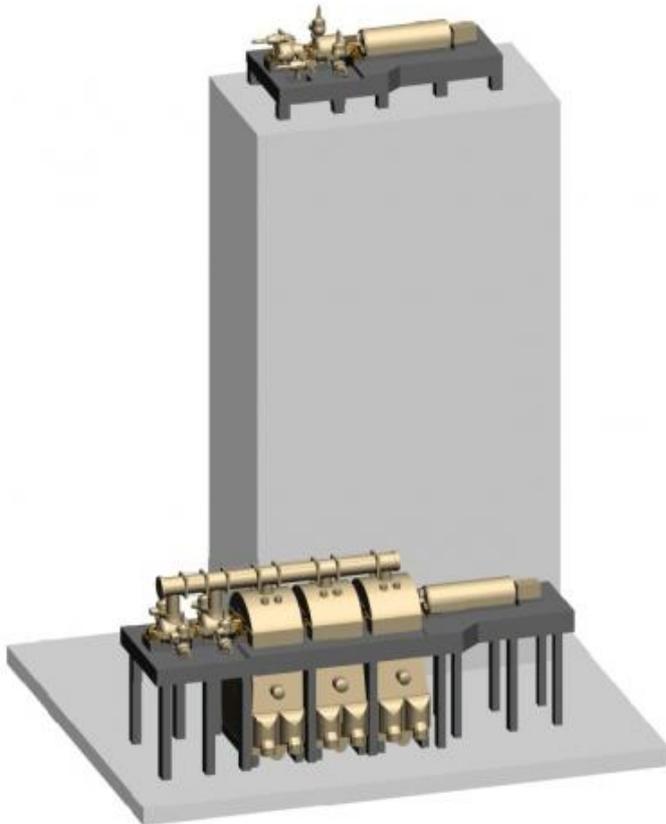
The turbine will be installed at the new Pingshan II steam power plant, with a planned power rating of 1,350 megawatts (MW).

The Pingshan Phase II coal-fired power plant is being built on the existing power plant site in Huaibei, south-eastern China. The full scope of supply for Siemens and SEPG includes an SST5-6000 steam turbine with two rotor trains, consisting of seven turbine modules and two generators. Siemens is responsible for engineering

the steam turbines and is manufacturing three of the seven modules and two live-steam valves. SEPG is building the four other turbine modules as well as the generators and the SPPA-T3000 control system for the power plant. Commissioning is scheduled for 2020.

The first turbine train consists of two high-pressure modules with different pressure stages and one generator and will be mounted at a height of approximately 83 meters. The patent technology used in this special turbine configuration allows the customer to shorten the expensive high-temperature pipelines and thus substantially reduce the pipeline pressure losses in addition to the costs. The second turbine train will be mounted on a standard turbine deck and consists of two medium-pressure and three low-pressure turbine modules, plus another generator.

“Siemens has supplied power plant technology to Shenergy a number of times in the past,” explains Zhen Guo Yao, Head of Siemens’ Power and Gas Division in China. “We will now be developing one of the world’s most advanced steam turbines for Pingshan II and setting a new benchmark in the field of steam turbine technology. Thus, this project is further proof of Siemens’ commitment to supplying its customers with highly advanced turbine technology that creates a major impact.”



Computer image of the two steam turbine trains for Pingshan II

The illustration shows the remarkable design of the Pingshan II steam turbine – the high-pressure train is due to be mounted at a height of approximately 83 meters.

For further information on the Power and Gas Division, see:

<http://www.siemens.com/about/power-gas>

For further information on steam turbines, see:

<https://www.siemens.com/steamturbines>

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