Siemens to supply compression and power generation equipment for Balikpapan Refinery in Indonesia

Siemens Gas and Power has been selected to supply a range of compression and power generation equipment for the Balikpapan Refinery located on Borneo Island in East Kalimantan, Indonesia.

The facility is owned and operated by PT Pertamina (Persero). The equipment will be installed as part of Pertamina’s Refinery Development Master Plan (RDMP). The RDMP involves the construction of a residual fluid catalytic cracker (RFCC) unit with a design capacity of 90,000 barrels per stream per day (bpsd); a liquefied petroleum gas (LPG) sulfur removal unit; a propylene recovery unit; and an 80,000 bpsd middle distillate hydrotreater.

Siemens Gas and Power’s scope of supply includes 17 reciprocating compressors, along with a single-stage, hot gas expander. Specific compressor models to be provided include eight HHE-VL compressors, two HHE-FB compressors, four HHE-VG compressors, and three HSE compressors. Additionally, Siemens Gas and Power will supply four SGT-800 industrial gas turbines and five SST-600 steam turbines for the Balikpapan power plant.

The hot gas expander will recover waste heat (i.e., flue gas) from the RFCC reactor to produce approximately 20 megawatts (MW) of free power, which will be used to drive the plant’s central air blower, along with a single steam turbine. This unique arrangement will reduce overall steam consumption and result in significant operational cost savings for Pertamina.

The HHE reciprocating compressors will be used in various refinery processing units and help ensure stabilized plant operation. The compressors feature a heavy-duty,
cast iron frame, which reduces vibrations transmitted to associated piping and provides maximum stability using internally ribbed walls and integral cross-member bearing saddle supports located between each crank throw. The first HHE-class compressor was installed more than 50 years ago. Today, more than 3,000 units are in operation worldwide.

“Siemens Gas and Power is proud to partner with Pertamina on this project,” said Matthew Chinn, Executive Vice President New Equipment Solutions for Siemens Energy Oil & Gas Division. “The strong performance of our existing fleet of compressors across the region and strong in-country service capabilities played a key role in this strategic win. These factors, coupled with performance, efficiency, and reliability of the SGT-800 gas turbines, will enable the cost-effective expansion of the Balikpapan refinery and contribute to the success of Pertamina’s RDMP, which will play an important role in improving Indonesia’s energy security.”

The expansion project will increase the output of the Balikpapan refinery from 240,000 barrels per day (BPD) to 360,000 BPD. The project will also enable the refinery to produce high-quality fuels of the Euro V standard.

All the reciprocating compressors will be manufactured in Siemens Gas and Power’s Naroda Gujarat plant in India. The hot gas expander will be built in Olean, New York, USA, the steam turbines will be manufactured in Görlitz, Germany, and the gas turbines will be manufactured in Finspong, Sweden.

Installation and commissioning of the equipment are slated for 2022.
Above: The HSE reciprocating process compressor provides a reliable solution where full-time, medium-volume service is a requirement.

Above: Four SGT-800 industrial gas turbines will enable the cost-effective expansion of the Balikpapan refinery.

Above: Siemens SST-600 steam turbine tailor-made design; actual design depends upon project conditions.
This press release and press pictures are available at https://sie.ag/2zXgxQY
For further information on Siemens Gas and Power, see www.siemens.com/energy
For further information on reciprocating compressors, visit https://sie.ag/2Its2k6
For further information on the SGT-800 gas turbine, visit https://sie.ag/2Ug43u6
For further information on the SST-600 steam turbine, visit https://sie.ag/2U64c3m

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