



PT. Amerta Indah Otsuka

Turbine Model	OP16-3A Dual Fuel
No. of Packages	2 Units
Application	Electricity and Steam
Location	Sukabumi, Indonesia.
Installation Date	October 2012

PT. Amerta Indah is the manufacturer and distributor of a popular isotonic drink called 'The Pocari Sweats'. Covering approximately 21 hectares of land, PT. Amerta Indah requires 3MW of continuous electrical power and 12 ton per hour of steam for their 24 hours production line. The achievement of this project not only marked the geographical significance since it is the first OPRA package to be installed in Asia but also OPRA Turbines commitment and capability in providing the complete turnkey solution.

PT. Amerta Indah is fully owned by the pharmaceutical giant Otsuka and was established in Sukabumi since 2004. The unpredictability of electrical supply demands the use of the more reliable and robust OP16 gas turbines to support the organization's sales volume of more than USD 200 million each year. Furthermore, the plant is located 550m above sea level with a relative humidity of 90%, posing its own challenges.

It was determined that a new facility will be required to fulfill the plant's demand for a reliable heat and power supply. Two units of OP16-3A® dual fuel all-radial gas turbine, designed by OPRA Turbines, was the equipment of choice, each

delivering up to 1.5 MWe of electricity and approximately 4.3 MW of heating power under local conditions. The heat that is obtained directly from the exhaust gas is used to produce 12 tons of steam every hour. The steam will be used to sterilize the water bottles and to prepare the isotonic drinks.

The OP16-3A® is designed to provide the most reliable and efficient system, as the minimum gas fuel supply pressure required to operate the gas turbine is 9.5 Bar. This is achievable due to its simplicity and sophisticated technology, with a moderate pressure ratio of 6.7:1.

In addition, OPRA also facilitate a gas compressor for the project to resolve the fluctuation in the pressure of the gas fuel supply that could reach between 1 bar up to 25 bar. Furthermore, the gas turbines are also equipped with dual fuel capability in which the gas turbines are capable of operating equally well on liquid and gaseous fuels and can switch under full load, to ensure the client consistently gets access a continuous power and steam supply. With the aim to become completely independent to the local electricity provider, the gas turbines are to be run in an isolated mode.

The combined heat and power system is completed with a waste heat recovery steam boiler (WHRSB), which was arranged by OPRA Turbines. The WHRSB is directly attached to the OP16-3A® exhaust, in which each unit delivering 7.7 kg of exhaust gas, at the temperature of 595 °C, every second. A supervisory control and data acquisition system (SCADA), designed by OPRA Turbines, is also provided to ensure the entire system operates accordingly and is manageable by the local technicians.

OPRA Turbines is driven to provide the best services to all of our clients. In times of emergency, quick response and availability of service is critical. OPRA guarantees availability of service 24 hours per day, 365 days per year. A service agreement ensures that maintenance is executed in accordance with OPRA guidelines. This improves the safety, reliability and availability of the unit and reduces total cost of ownership.

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