



Industry Case Study

Sugar



Case Studies:

Backpressure Steam Turbine Installed in Vietnam

Straight back-pressure steam turbine installed in Belize,
Central America



Bagasse-based cogeneration plant driven by 30 MWe back-pressure steam turbine with an inlet steam of 65 Bar and inlet temperature of 500 Deg C with 2.5 Bar exhaust installed in Vietnam

Challenge: Customer's requirement was to deliver maximum efficiency with delivery expectation of 7 months.

Solution: Triveni Turbines designed and supplied steam turbine employing reaction technology and was successfully installed within the designated time frame, featuring a steam path meticulously engineered to manage significantly high volumetric steam flow. The rotor equipped with reaction blades contributes to elevated efficiency levels.

Benefits: Single-cast exterior casing with Guide blade carriers was designed to facilitate faster start-ups, while the reaction stages contribute to improved efficiency.



*Bagasse-based cogeneration plant driven by 2*16.5 MWe straight back-pressure steam turbine with an inlet steam of 42 Bar and inlet temperature of 400 Deg C installed in Belize, Central America*



Challenge: Customer's requirement was to deliver maximum efficiency and operation at 2 inlet steam parameters – 42 Bar (a) new boiler and with an existing 21 Bar (a) boiler.

Solution: The steam path was designed to meticulously handle extremely high volumetric steam flow.

Benefits:

- The blade and nozzle were made up of American Society for Testing and Materials (ASTM) grades to ensure longer blade life which resulted in reduced operational expenditures (OPEX) benefits.
- The exhaust steam is sent to the sugar processing and the excess power was sold to the national grid.

Thank you.

