



Industry Case Study

Chemicals & Fertilizers



Case Studies:

Challenge

Solution

Benefits



The project is driven by 500KW back pressure steam turbine installed for a leading multi-national petrochemical complex in (Haldia) West Bengal, India

Challenge

- Pressure Reducing Station was used to reduce the low pressure saturated steam from 3.5 bar (g) to 0.5 bar (g) to maintain the header pressure at 3.5 bar (g). The maximum quantity of steam being reduced was 23 tonnes per hour (TPH).
- Space limitation for turbine installation at the existing site (Turbine size is larger due to high volumetric flow rate)
- The Turbo Generator set located 500 meter away from the existing main control room.

Solution

- Team from Triveni Turbines visited the facility and explored the space identified for turbine installation.
- Replaced the Pressure Reducing Station with a 500 kW Back Pressure Turbine Generator set.
- The turbine governor is programmed to operate in inlet steam pressure control mode to maintain the header steam pressure.
- As the inlet steam is a saturated steam, a steam separator has been installed at the inlet steam line to prevent carryover of wet steam into the turbine thereby increasing the life of turbine.
- Offered turbine with remote start/stop facility along with pneumatic operated valves at inlet, exhaust and drain lines.
- Optimized the turbine design to meet both the customer budget and space availability.

Benefits

- Over 4 Million units of “Green Power” generated annually.
- Return on Investment (ROI) achieved in less than 1.5 years of operation

Thank you.

