

Green Steam Supply for a Textile Major



The Textile major entered into a long term outsourced 'Steam Supply' contract with TOESL in May, 2017

Thermax Onsite Energy Solutions Limited (TOESL) provides outsourced utility delivery services based on the **Build-Own-Operate (BOO)** business model, enabling customers to **optimise costs**, reduce **CO₂ footprint** and remain focused on their **core business**.

The customer is the leading player in the textile industry and one of the marquee customers of TOESL. It uses state-of-the art technology to manufacture wide range of **high quality nylon processed yarns**.

COMBIPAC Biomass Boiler Model: CPRG160 with Reciprocating Grate using Lambion, GmbH Technology

Boiler Capacity: 16 TPH
Site Location: Pune, Maharashtra
Fuel: Biomass Briquettes
Estimated CO₂ Reduction: 15,600 TPA

Project Overview

The customer's manufacturing unit was operating with 5 boilers for generating process steam, out of which 4 were oil-fired (subsequently two were retrofitted to run on biomass) and 1 was biomass-fired. Due to process expansion and hence an increase in the steam demand, the following was observed:

- Existing retrofitted boilers, being manual fired and inefficient, were unable to deliver economically.
- The retrofitted boilers were unable to consistently meet the environmental standards in spite of Bag Filters being installed.
- The retrofitted boilers had also run their lifetime and were unsafe to operate, thus requiring high maintenance costs.
- More furnace oil was required to meet the enhanced demand which further added to the cost of production.



Boiler at a Glance

Model

CPRG160/17.5

Capacity

16 TPH (F&A 100° C)
each

Type

Horizontal
Multi-tubular
Shell Type Smoke
Tube with Water
Wall Furnace

Design Pressure

17.5 kg/cm²

Operating Pressure

15 kg/cm²

Thermax Onsite's Offering

TOESL has installed a **biomass briquette-fired** boiler of **16 TPH @ 17.5 kg/cm² (g)** to be operated and managed through a long-term comprehensive **OPEX** contract under **Build-Own-Operate (BOO)** business model, replacing the previous boilers and ensuring energy (steam) delivered at an optimum price leveraging high-end automated biomass boiler installation. **Electrostatic Precipitator** was included in the scheme to meet the stringent environmental standards.

Benefits to Client

- Optimum cost-effective steam price
- Guaranteed boiler uptime & efficiency throughout the product lifecycle
- No investment for boiler plant and machinery by customer
- Comprehensive O&M
- Significant decrease in SPM in emissions-upto 50 mg/Nm³
- Dedicated biomass fuel supply chain ensuring consistent quality at right price
- The customer focuses on its core business while TOESL takes charge of steam supply



Reduced Carbon Footprint – Our plant is equivalent to carbon offset by 4 Lakh trees *

* Reference - <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>



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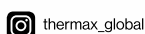
Sustainable Solutions in Energy & Environment

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