



THERMAX MADE IT POSSIBLE! UP TO 45% FUEL COST SAVING USING 100% BIOMASS FIRING



Thermax is committed to 'Conserving energy and preserving the environment', two areas vital for the world. We support business establishments to be more energy efficient and environment-friendly.

ITC Group a multi-business conglomerate is one such customer for Thermax. They have various manufacturing plants across India and one of them is at Ranjangaon, Pune MH. This food production unit manufactures instant noodles and potato chips.

PROJECT INSIGHTS

In 2012 ITC was looking for **expansion with a cost-effective fuel solution** and was keen to have **100% biomass-fired** unit, yet the biggest challenge here was maintaining **steam-fuel ratio** as the **calorific value** of fuel i.e. biomass briquettes changes drastically.

There were three main criteria's for this project :

- 01** UNINTERRUPTED STEAM SUPPLY
- 02** FAST RESPONSE TO FLUCTUATING LOAD
- 03** HIGH EFFICIENCY

INNOVATIVE SOLUTION BY THERMAX

A heating system is the heart of any food processing unit. ITC group partnered with Thermax for a reliable solution which consisted of a **14 TPH boiler (CPRG 140)** with **economizer and air pre-heater** ensuring **higher efficiency and uptime** for high-pressure steam requirements in the chips and noodles frying process.

To ensure steam to fuel ratio of 5.0 Thermax has offered **Lambion Reciprocating grate technology**. Thermax has Licensed Lambion technology that has over 100 years of experience in **biomass firing solutions**. The grate offers progressive combustion with distinct combustion zones making it ideal solution for biomass firing up to 60% moisture content.

RECIPROCATING GRATE

Reciprocating Grate utilizes successive oscillation of grate linkage for the continuous movement of fuel; alternate movement of grate blocks pushes the fuel in the distinct combustion zones of a grate.

Advantages :

- 100% combustion
- Highest uptime and efficiency
- Low emission



POSITIVE IMPACT

The Adaptation of an efficient boiler system from Thermax and the change in fuel from FO (furnace oil) to biomass briquettes helped ITC to achieve these challenging results with just **3-4 people managing the complete plant operations**

- 01** STEAM TO FUEL RATIO **5.0**
- 02** FUEL COST SAVING UP TO **45%**
- 03** SPM LEVEL AS LOW AS **28 PPM**



Thermax welcomes another happy customer in its fold