Case Study: Biochar Production & Renewable Steam – Jalgaon, India

Project: Biomass Gasifier for Biochar and Steam Generation
Location: Jalgaon, India
Scope: Design, engineering, manufacturing, and supply of a biomass gasifier system

Objective
To install a biomass gasifier operating in charcoal mode for maximum biochar production, while utilizing producer gas as a renewable fuel for steam generation.

Overview
Ankur Scientific is supplying a PG-2200 Biomass Gasifier designed to operate in Hot Gas Mode. The system will process 48 TPD of biomass (mango seeds or corn cobs) to produce biochar as the primary product and producer gas as an energy source.

Operating in charcoal mode, the plant is designed to achieve a biochar yield of ~25%. The producer gas generated is used as fuel in a boiler for steam generation, replacing conventional fossil fuels and enabling efficient renewable energy recovery. The system is currently under dispatch and installation activities.

Key Benefits

- ~25% biochar yield from biomass
- Renewable fuel for steam generation
- Reduced fossil fuel consumption
- Value addition to agricultural residues
- Lower emissions and operating costs

The system at Ankur Scientific factory for FAT and trials