

Annealing Application

Site of Intervention

- Vadodara, Gujarat. INDIA

Type of Intervention

- Supply, Installation and Commissioning of Biomass Gasification System for Thermal Application.

Title of the Case Study

- ANKUR BIOMASS GASIFIER FOR STEEL TUBES ANNEALING FURNACE

Objective of the Case Study

- To use alternative fuel in place of LDO / Furnace Oil for cost effective and pollution free operation.

Summary

- The system was installed for steel tubes annealing application.

Choosing the Intervention - Motivation

- Woody biomass locally available
- Reduction in fuel, pollution and overall operating cost
- Hassle free and clean operation

Description of the Intervention (150 words)

- “Ankur” Gasifier model WBG-60 in hot gas mode was installed and the existing oil burner was replaced by an appropriate producer gas burner. Combustion air was provided by a new combustion air blower. After initial trials to establish the Gasifier parameters, burner flame length, establishment of baffles inside the furnace to ensure proper distribution of flue gases in the furnace, Gasifier based steel tubes annealing was commissioned on 3/1/2002. The Furnace has since operated at its rated capacity and there has been 100% replacement of furnace oil with the use of about 48-60 kg of wood per hour. The Gasifier is run round the clock.
- In 2008 they had upgraded their plant and had also installed a new Gasifier WBG - 100 for the furnace application.

Intangible or Tangible Benefit (100 words)

- 55% reduction in fuel costs.
- Pollution of black smoke from Chimney is eliminated.
- Relieved from hassles of poor quality of fuel (LDO / FO)
- Operations become clean.
- Semi-skilled labour can operate the Gasifier.
- By-products like charcoal become fuel for local labor and can also be sold in open market.

Some photographs of the project:

