**Background:**

While conducting energy audit for the ceramic industry; the heat & mass balance study was carried out for a calciner. The typical breakup of the input energy is represented as under.

**Scenario:**

The system comprised of furnace oil fired hot air generator, supplying heat to the calciner, operating at 950 °C.

- The heat loss from the connecting duct was observed to be very high.
- The heat losses through the exhaust were observed to be higher than design value.

**Improvement Measures:**

The above concerns and issues were addressed by taking the following measures.

- Redesigning the connecting duct
- Installing additional heat recovery system to preheat the combustion air.

**Outcome:**

- The overall furnace oil consumption reduced by 15%.