

"PROMOTING ENERGY EFFICIENCY AND RENEWABLE ENERGY IN SELECTED MSME CLUSTERS IN INDIA"

To develop and promote a market environment for introducing energy efficiency and enhanced use of renewable energy technologies in process applications in the selected energy-intensive MSME clusters, United Nations Industrial Development Organization (UNIDO) in collaboration with Bureau of Energy Efficiency (BEE) is implementing a project titled "Promoting Energy Efficiency and Renewable Energy in selected MSME clusters in India" funded by Global Environment Facility (GEF) and co-financed by Ministry of Micro, Small and Medium Enterprises (MoMSME) and Ministry of New and Renewable Energy (MNRE).

Insulation of dewaxing tank to minimize heat losses in a foundry

Objective

Energy conservation by minimizing the heat losses from the dewaxing tank.

Implementation

Installed a brick wall insulation to all sides of the dewaxing tank and also provided a removal top cover to minimize the surface losses.

Principle

Uninsulated and uncovered heated tank results in heat losses from the tank to the atmosphere and evaporation loss of the liquid from the top surface of the tank. To minimize these losses, brick wall insulation is provided for the outer walls of the tank along with a removal top cover. This results in fuel savings.



Savings

₹ 96,600



Investment

₹ 40,000



Pay Back

5 months



Unit Profile

Mallika Alloy Cast Pvt. Ltd. is a smallscale foundry unit located in Pithampur, Madhya Pradesh. They manufacture different type of precision investment casting and sand casting. Production capacity of the unit is 650 MT per annum.

Benefits

- **Reduced wax evaporation loss**
- **Reduced fuel consumption**



Outcomes



2,100 L of annual LDO saving



₹ 96,600 of annual cost saving



5.9 of CO₂ reduction per year (74.3 kg CO₂/GJ of LDO)



Replication Potential

In all the units with transformers on No-load

Cost Economics

Fuel saved per year	2,100 L
Cost savings per year (₹ 46/L)	₹ 96,600
Investment cost	₹ 40,000
Simple Payback period	5 months



Calculation

Fuel saved annually = (fuel consumption before implementation/day - fuel consumption after implementation/day)* no of working days/year

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Cluster Leader

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