MICRO, SMALL & MEDIUM ENTERPRISES
सूक्ष्म, लघु एवं मध्यम उद्यम

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BEE
Energy is Life, Conserve it

Ministry of New and Renewable Energy
Government of India

"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).

Installing relay timer to avoid idle running for shot blast machine in a foundry

Objective

To reduce the energy consumption of the shot blast machine by avoiding idle running of the motor by installing a relay timer.

Implementation

Installed a relay timer to the shot blast machine to avoid idle running of motors within 3 minutes.

Principle

The shot blast machine was running continuously, resulting in idle running leading to high specific energy consumption. Relay timer is installed to the shot blasting machine to switch off the idle running motor. This will result in the energy savings in the shot blast machine.

Savings
₹ 72,000

Investment
₹ 12,000

Pay Back
2 months

Prepared & designed by:
CII
Confederation of Indian Industry

Unit Profile

AKP Foundries is foundry unit established in 1979, manufacturing S.G. Iron and cast iron castings. Unit produces 3000 to 3600 MTs of castings per year.

Benefits

- **Avoid idle running**
- **Reduction in energy consumption**
- **Quick payback period**

Outcomes

9,600 kWh of annual energy saving

₹ 72,000 of annual cost saving

7.9 T of CO_2 reduction per year (0.82 kg/kWh)

Cost Economics

Energy savings per month	**800 kWh**
Energy saving per annum	**9,600 kWh**
Cost savings per year	**₹ 72,000 (₹ 7.5 /kWh)**
Investment cost	**₹ 12,000**
Simple Payback period	**2 months**

Replication Potential

In all the foundry units with unnecessary holding time

Calculation

Energy savings per annum (kWh/year) = (Energy consumption before implementation- after implementation, kWh/month) * 12

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