

Summary of study: Air compressor in a foundry unit: Unit - 5

Industry : Foundry (Investment Casting)

Unit profile : A foundry located in Rajkot (Gujarat) engaged in production of precision steel and alloy castings

Technology :

- Inverter type compressor
- Operating practice improvements

Application : Energy savings in compressed air system

Year of investigation : 2012

Key features:

- Adopting inverter type compressor in place of existing screw compressors (22 kW X 3 units)
- Improvement of pipe sizing of compressed air lines
- Adoption of overhead compressed air pipelines
- Cleaning of air filters
- Reduction of leakages

Energy and cost saving:

Details	Existing	Recommended
Compressed air system	22 kW X 3 units (Screw compressor)	22 kW X 3 units (Inverter type compressor)
Input power (kW)	66.0	49.5
Power savings (%)		25
Energy saving (kWh/yr)		118,800
Energy cost saving (Rs/yr)		683,100 (@ Rs 5.75 per unit)
CO2 reductions (tonnes/yr)		110

Note:

This report is an example for investigating the potential of application of Japanese low carbon technology (LCT) in Indian industries. Adoption of energy efficient technologies and practices can generate greater benefits in compressed air applications in industries.

