Summary of study: Air compressor in a foundry: Unit - 1

Industry : Foundry

Unit profile : A foundry located in Pune (Maharashtra) engaged in production of automotive and engineering castings

Identified technologies:

- Two stage compressor
- Invertor type screw compressor
- Operating practice improvements

Application : Energy savings in compressed air system

Year of investigation : 2014

Key features:

- Adopting a two stage compressor (150 kW) in place of twin single stage compressors (75 kW each)
- Adopting invertor type screw compressor in (V-M Combination)
- Reduction of discharge pressure
- Adopting booster compressor
- Reduction of leakages
- Use of blowgun
- Use of energy saving coupler

Potential energy and cost savings:

Details	Existing	Recommended
Compressed air system	75 kW X 2 units	150 kW X 1 unit
Input power (kW)	168	160
Discharge air (M^3/min)	24.8	28.5
Power consumption kW(m^3/min)	6.53	5.61
Power savings (%)		16

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.