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

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).

Arresting compressed air leakages in the compressed air system

Objective

To minimize energy consumption by arresting the compressed air leakages in the compressed air system.

Implementation

Arrested 150 leaks detected in the compressed air system during the leakage test and also removed the unnecessary pipelines from the compressed air system.

Principle

Compressed air is one of the most expensive utilities in an industry.So, it is essential to use it judiciously and arrest all the leakages in the compressed air pipelines. Leakages and unwanted usage can increase the power consumption of compressed air system. Ideally the leakage level in the compressed air system should be around 10 - 15%. Arresting a 0.8 mm diameter air leak results in 0.2 kWh energy saving per hour at 7 bar.

Savings
₹ 48,92,048

Investment
Negligible

Pay Back
Immediate

Prepared & designed by:
Confederation of Indian Industry

Unit Profile

AmulFed Dairy is a unit of Gujarat Co-operative Milk Marketing Federation (GCMMF). The dairy has milk processing capacity of approximately 90kL an hour and production capacity of 150t of skim milk powder a day and 120t of dairy whitener or baby food a day.

Benefits

- **Reduced pressure drop and zero down time due to low pressure**
- **Reduced energy consumption and energy costs**

Outcomes

6,11,506 kWh of annual energy saving

₹ 48,92,048 of annual cost saving

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

Replication Potential

In all the units with compressed air application where leakage levels are high

Cost Economics

Energy saving per day	**1,698 kWh**
Energy saving per year	**6,11,506 kWh (360 days/ year)**
Cost savings per year	**₹ 48,92,048 (₹ 8/kWh)**
Investment cost	**Negligible**
Simple Payback period	**Immediate**

Calculation

Energy savings per annum (kWh/year) = (energy consumption before implementation- after implementation, kWh/day) * no of working days/year

Contact details :

Unit
Mr. Paresh Mehta,
Amul Fed Dairy,
Plot no. 31, Near Bhat Village, Indira Bridge,
Airport Road, Gandhinagar, Gujarat- 382428.
+91 8347476668| electrical@mehsanaunion.coop

Cluster Leader
Mr Falgun Pandya
Gujarat cluster leader
falgun.bee@gmail.com

PMU
GEF-UNIDO-BEE
4th Floor, Sewa Bhawan, Sector-1,
R.K. Puram, New Delhi - 110066
gubpmu@beenet.in
+011-26194770

United Nations Industrial Development Organization
Mr Sanjaya Shrestha
Industrial Development Officer
UNIDO
s.shrestha@unido.org