

Pilot Project "Introduction to Energy Efficiency and Energy Management Systems in SMEs in Mexico"

Example of energy efficiency improvement Medidores Delaunet: Induction Furnace

Background information

The implementation of the pilot project began with the introductory workshop to ISO 50001 in October 2015. The companies then conducted energy audits to identify and prioritize various opportunities for improvement, with the guidance of Mexican consultants with expertise in energy efficiency.

One of the participating companies is called **Medidores Delaunet** and is located in Mexico City. This company produces water flow meters and brass fittings.

Description of the improvement

The induction furnace is one of the significant energy uses at the plant and operates 24 hours a day, but the smelting process only requires 8 hours of operation to cover the quota of parts per day. Only 11.2% of the energy consumed by this equipment is required to meet the production needs for fittings.

The pilot project was instrumental in establishing and setting criteria for the effective operation and maintenance of this significant energy use, as stated in point 4.5.5 of ISO 50001: 2011.

The opportunity for improvement was detected as a direct result of the energy audit for the pilot project and basically involved designing and implementing an operational control system for the induction furnace to achieve and maintain optimal energy performance. The implementation is scheduled for February 2017.

This successful case study was documented as a result of the energy management system being implemented with the PTB and CONUEE project.

Savings achieved, results and additional benefits

Key indicators	
Total energy saving for the plant	77.7%
Annual economic saving	USD \$ 16 311
Annual energy saving	191 904 kWh
Investment needed	USD \$ 35 000
Payback period	2.1 years

The energy diagnosis, also known as the energy audit, facilitated self-analysis by the company and provided the basis for identifying improvements in operational control!