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

Example of energy efficiency improvement action
US Technologies: optimization of dehydration processes (graphite and alternative fuel)

Background information

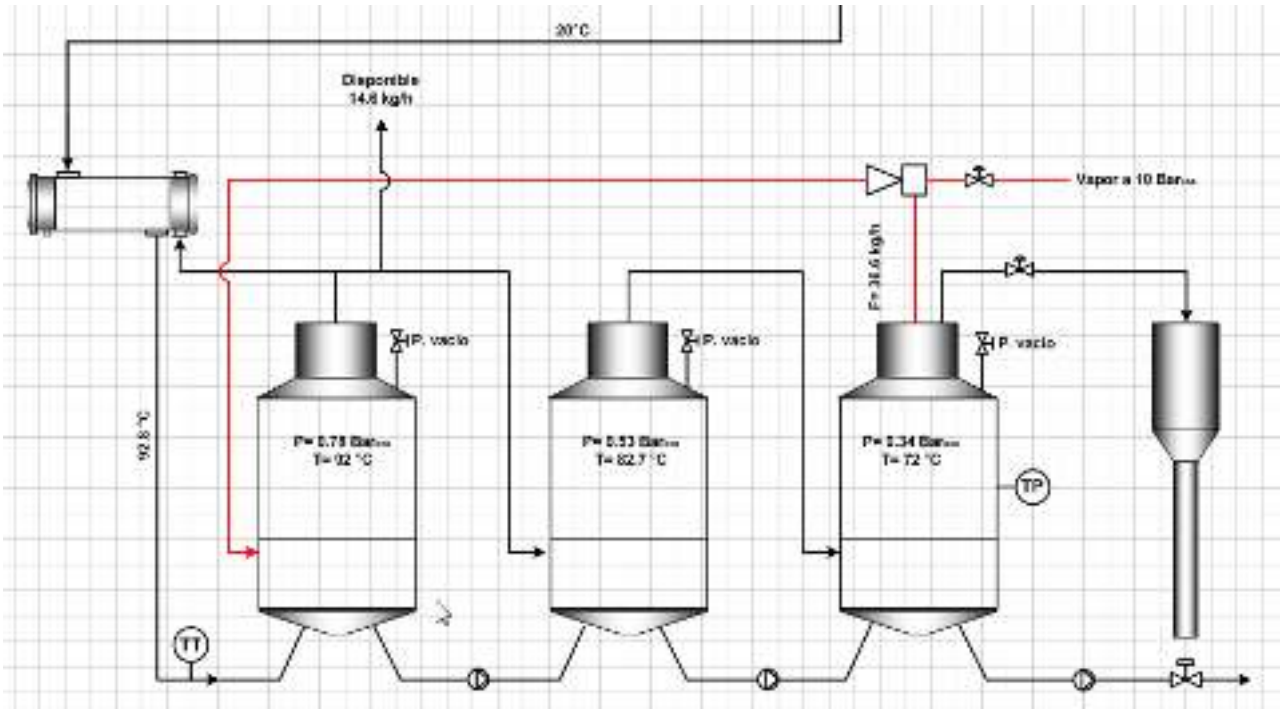
The implementation of the pilot project began with the introductory workshop to ISO 50001 in October 2015. The companies then conducted energy audits to identify and prioritize various opportunities for improvement, under the guidance of Mexican consultants with expertise in energy efficiency.

One of the participating companies is **US Technologies,** located in Tultitlan, State of Mexico. This company regenerates various types of oil for reuse.

Description of the improvement

The greatest energy consumption in the regeneration of oils is related to the evaporation of water, which constitutes the main contaminant. The energy that is used to separate the water from the oil is released into the environment in the form of steam. About 90% of the plant's fuel consumption is used to dehydrate oil.

The improvement plan was identified as a direct result of the energy audit conducted for the pilot project and basically involved recovering the energy lost to the atmosphere in the form of steam on order to satisfy the heat needs of the oil dehydration processes, as shown in the following figure.



PRONASGEn

The Mexican National Commission for the Efficient Use of Energy (CONUEE) and the German Metrology Institute (PTB) make the aforementioned project available to small and medium enterprises (SMEs) in order for them to implement an energy management system (EnMS) according to ISO 50001, by strengthening the skills of technical staff within each company.

For more information on the pilot project, contact Lissette Mendoza Barrón, Tel. 3000 1000 ext. 1318, lissette.mendoza@conuee.gob.mx or Susanne Wendt, susanne.wendt@ptb.de

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

Savings achieved, results and additional benefits

Key indicators	
Total fuel saving	84%
Annual economic saving	MXN $ 82 759
Annual energy saving	2 364 562 kWh
Investment needed	MXN $ 150 000
Payback period	1.8 years

This case study illustrates the potential for energy efficiency when the waste heat generated is put to good use, after being identified through a systematic analysis.

PRONASGEn

The Mexican National Commission for the Efficient Use of Energy (CONUEE) and the German Metrology Institute (PTB) make the aforementioned project available to small and medium enterprises (SMEs) in order for them to implement an energy management system (EnMS) according to ISO 50001, by strengthening the skills of technical staff within each company.

For more information on the pilot project, contact Lissette Mendoza Barrón, Tel. 3000 1000 ext. 1318, lissette.mendoza@conuee.gob.mx or Susanne Wendt, susanne.wendt@ptb.de