

Companies connection to energy efficiency

The enterprise has been granted the following certifications:

- Quality Management System certificate ELOT EN (ISO 9001:2008)
- Food Safety Management System certificate ELOT EN (ISO 22000:2005)
- Environmental Management System certificate ELOT EN (ISO 14001:2004)

Steam system

Delta Foods S.A, member of the Vivartia Group of companies, produces and distributes dairy products such as milk, yoghurt, cheeses and fresh fruit juices; Delta Foods S.A is the leader in the overall market in which it operates. The enterprise was founded in 1952. The company operates seven state-of-the-art production plants in Greece and abroad, 4 milk collection stations, a strong nationwide sales and distribution network and employs a total workforce of 1,400. Its main activity is the production of fresh milk (fresh milk), chocolate milk, permanent period milk, fresh juice drink and yogurt. Its production plant is located near the industrial zone of Thessaloniki in the Prefecture of Central Macedonia. The enterprise uses steam for Preheating milk, Pasteurization of milk, Clean-in-place (CIP), Sterilization in production (tanks, tubing, etc.) (SIP), Production of hot water for use.

Steam boiler information

Boiler's Size:

Steam Boiler 1: 9.0MWth, Steam Boiler 2: 9.0MWth,

Nominal steam capacity: Steam Boiler 1: 12.000 kg/h @10 bar,
Steam Boiler 2: 12.000 kg/h @ 10 bar,

Boiler's operation: Steam Boiler 1: ≈ 4700 hours/year
Steam Boiler 2 : ≈ 3600 hours/year

Kind of fuel: Natural Gas

Steam system problems identified

- ✓ The majority of the steam pipes checked are insulated but some areas of the pipe network are un-insulated.
- ✓ Thermography results show that a lot of the hot surfaces (steam boilers, economizers, hydraulic valves, flanges, economizers etc.) are un-insulated

Proposed energy saving measure(s), investments, and expected results (in figures)

- ✓ Insulate un-insulated steam distribution lines: Energy savings in fuel consumption: 35.630 kWh/years => Simple payback < 6 months,
- ✓ Insulate un-insulated hot surfaces (steam boiler, economizers, hydraulic valves, flanges etc.): Energy savings in fuel consumption: 61.980 kWh /year => Simple payback < 2 years.
- ✓ Install a retrofit de-aerator to the steam condensate tank: Energy savings in fuel consumption: ~150.000 kWh/year => Simple payback < 6 years



Greece

Production of dairy products

Total (estimated) Investment

~€ 37.450

Total (Estimated) Savings

0,247 GWh/yr

STEAM AUDIT – Greece, nr. 8

FACTSHEET

Implemented proposed energy saving measure(s), investments and results achieved (in figures)

The proposed measures are not yet implemented.

Achieved and/or expected Non Energy Benefits (NEBs) as result of implemented and/or proposed measures and investments involved

Expected NEBS as a result of proposed measures:

- ✓ Reduction in maintenance needs.
- ✓ Good Quality of steam
- ✓ Less CO2 or other GHG emissions
- ✓ Reduced water consumption
- ✓ Customer satisfaction
- ✓ Improvement public image
- ✓ Increased reliability in production
- ✓ Competitiveness increases
- ✓ Improved product quality