Design of Environmental Processes Research Unit

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Research activities

- Wastewater treatment technologies with emphasis on premature removal of solids.
- Water reclamation and reuse
- Applications of Anammox process, for the removal of ammonia from wastewater
- Effect of heavy metals on micro-organisms behavior
- Municipal Solid Waste management, with emphasis on energy production
- Integrated water resources management

Lab Infrastructure

- Three bioreactors with automatic control (PLC) and recording of experimental parameters on a PC.
- Disinfection device for wastewater in a continuous flow, using UV radiation
- Spectrophotometer for determination of concentrations of chemicals.
- Oven for determining COD.
- Portable instrument for simultaneous determination of pH and dissolved oxygen.
- Luminescence measuring device (for determination of ATP).
- Experimental large scale pilot plant of wastewater treatment.
- Pilot heat pump device (second thermodynamic cycle).
- Pilot Stirling device

Research projects

- Investigation of the Anammox process in pretreated municipal wastewater, funded by: Micro Media Filtration, Inc, California, USA, (2009-2010)
- Investigating the reusability of water in Parikia, Paros, funded by: Municipal Water and Sewerage Company of Paros, (2009-2011)
- Investigating the reusability of water in Kamari, Thira, funded by: Municipal Water and Sewerage Company of Thira (2009-2011)
- Anaerobic Ammonia Oxidation in Municipal Wastewater, funded by: Research Committee of TUC (2011-2012)
- Investigating the reusability of water in Skiathos, funded by: Municipal Water and Sewerage Company of Skiathos (2011-2013)
- Integrated Water resources management, self-funded