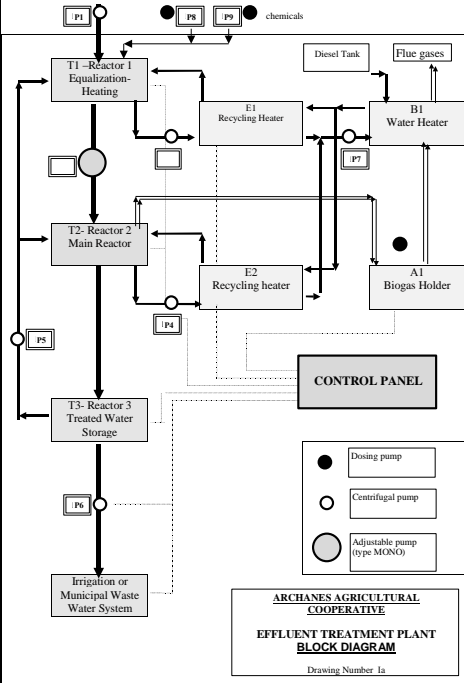



PROJECT PROFILE

Acronym Project #	Life-Archanes C-1999_08_WINE	Project Title	Pollution Reduction & Sustainable Management in the "Wine Producing Industry"					
Name of Legal Entity	Country	Project value [million €]	% Carried by EPSILON	No. of staff provided	Name of Client	Origin of Funding	Dates [start/end]	Name of partner(s) [if any]
EPSILON	GREECE	0,8	25	4	European Commission, & Archanes Development	European Commission, Life Programme	01.01.00 31.12.05	NTUA (GR), Leader Municipality Archanes (GR), EPSILON (GR)
Project Description						Type of Services		
 <p>Aim: The project provides an innovative detailed engineering design for a waste treatment process & disposal, related to a small and typical wine producing industry, targeted to meet the "zero-emissions" principle.</p> <p>Deliverables: Presentation of a detailed engineering design and report, for the building of an anaerobic digester to treat the waste from the wine industry, including design of blue prints and construction management material. The system is focused on the : (i) Organic polluting agents presented in the water used in the industrial processes, and (ii) Solid waste produced by the pressing, crushing & racking wine industry processes. In association with the National Technical University of Athens.</p> <p>Strategy: During the wine producing processes, water is the governing parameter and the main vehicle of pollution spreading. Therefore, the proposed strategy considered: (1) Reduction of water consumption during the industrial processes of pressing, racking, detartrating and filtration and a better water management, (2) Optimization of the wastewater treatment. The project: (i) Provides a detailed design to facilitating pollution reduction at the "source" of the wine producing industry; (ii) Contributes on achieving sustainability management of the "process" in the wine industry; (iii) Introduces sustainable technology for the "industry sector"; (iv) Contributes to energy savings related to the "industry operation" and waste minimization.</p> <p>Engineering: For the optimization of the wastewater treatment, a tertiary anaerobic treatment in situ was designed. This allows the degradation of the soluble organic matter contained in the polluted water. The degradation process results from the biomass whose growth is enhanced by the contribution of the oxygen. This biodegrading process produces a sludge, which is later separated by settlement, and</p>						<p>RTD Advancements</p> <ul style="list-style-type: none"> <input type="checkbox"/> Innovative design <input type="checkbox"/> PC support of a 300 person-months project <input type="checkbox"/> Project technology dissemination.  <p>Technology</p> <p>The reduction of water consumption during the industrial processes of pressing, racking, detartrating and filtration was based in a monitoring plan developed within the framework of a PC computer based technology that includes a computer network and software for the optimum management of the wastewater. The action for reduction of water consumption included: (i) Better management and recycling of the cooling waters, (ii) Better use of cleaning water, and (iii) Improve the performance of the industrial processes such as pressing and racking.</p> <p>Key words</p> <p>Anaerobic digester, Archanes, Effluent, Engineering, Environment, Greece, Crete, Management, NTUA, Pollution, Sustainable environment, Treatment, Wine industry. National Technical University of Athens; Archanes Agriculture Cooperative; Organisation for the Development of Temenos & Pediada; Municipality of Archanes.</p> <p>Reference</p> <p>Bonazountas, M. (2004). "Pollution Reduction & Sustainable Management in the Wine Producing Industry". European Commission, Contract No. C(1999)/1800/FINAL41. Final report, EC DG-ENV, Brussels.</p>		
<p>later valorized, using various procedures. The entire volume of the polluted water is treated into a digester equipped with aeration mixing devices furnishing the oxygen necessary for the development of an aerobic and anaerobic purifying micro fauna. Once the microorganisms have degraded most of the organic matter, the aerators are stopped. Then in the same tank, the sludge's settlement phase is carried out. The treated water in excess is evacuated into a sewage system. The residual sludge is normally disposed directly on agricultural lands. The anaerobic treatment plant consist of the elements: (1) Piping system for the collection of all polluted effluents, (2) Three-stage anaerobic treatment, (3) Storage and use of the biogas, (4) Final disposal in the sewage system of the community, (5) Water heater, (6) Control and operation room, and (7) Floor with fence and gate. The design of the typical installation in the Figure.</p>								

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