


Event:
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#	Maria K. Koukou Chemical Engineer, PhD Assistant Professor TEI STEREAS ELLADAS	
Title:	Assistant Professor, Mechanical Engineering Department, Technological Education Institute of Sterea Ellada, Psachna, Evia	
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Presentation title:	Experimental Performance Evaluation of a Small-Scale ORC Power Unit Working with Low Temperature Energy Sources for Power Co-generation	
<p>The research focuses on the preliminary design of an Organic Rankine Cycle (ORC) apparatus giving technical specifications that comprise working fluid selection, sizing of heat exchangers and expanders and other auxiliary equipment. Based on the research findings, R134a as a working fluid is an optimal solution based on the balance of various factors studied e.g. required amount of heat, mass flow rate, market availability and cost. The installation was tested for solar and geothermal energy utilization, achieving these conditions using a boiler of appropriate power, giving the evaporator the required heat. The facility was tested for limited operating conditions. Measurements indicate that the system efficiency is low but in combination with other low temperature thermal energy utilization facilities it can support and significantly improve the rate of heat utilization.</p>		
CV:		
<p>Maria K. Koukou is Assistant Professor at the Mechanical Engineering Department of Technological Education Institute of Sterea Ellada in the field of industrial installations. She obtained Chemical Engineering degree in 1991 from the University of Patras and a PhD degree in Chemical Engineering in 1997 from the National Technical University of Athens (NTUA) in the field of installations analysis and design. Since 1992 she has participated in more than twenty European and Greek research projects in most of them having a leading research role. From 1992 to 2016 she practiced freelancing profession of Chemical Engineer by participating in a number of engineering implementation projects in the fields of energy, environment and industrial installations. Her research interests concern the analysis and design of installations and processes focusing on energy saving. In recent years, she is also involved in Renewable Energy Sources (RES) projects combined with thermal energy storage technologies to cover heating, cooling and domestic hot water needs in buildings and other facilities. Dr Koukou has published more than 70 scientific publications in international journals and conferences with a large number of citations (based on Scopus and Google scholar sources) and she is also author of a book on Renewable Energy Sources and 2 chapters in books. Up to date she has been a member of scientific and organization committees in 3 international conferences, and many workshops. She is also a member of the Technical Chamber of Greece and other professional and scientific bodies.</p>		