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## **Rankine cycle mobil laboratory of 500 kw for geothermal fields power testing**

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As is well known, predicting the steam generation power of a geothermal field and determining the type of Turbine-generator is a complicated task to determine the investment and power of the cycle. In this work we have developed a mobile power plant with a steam turbine of 500 kW (an open Rankine cycle), as a mobile remote unit to test the extraction performance in steam generated in the geothermal fields and thus prove aspects as: a) Capacity of Steam Generation (Ton/day), b) Predictive Generated Power (kW), c) Estimated life (years). Using operational variables such as pressure, flow, composition and geological data, in this work predictive models are proposed to characterize the thermoelectric generation of Geothermal fields. In addition to this work a thermoeconomic comparison of Organic Rankine Cycle (ORC) vs Rankine Cycle (RC) is made.

### **Biography**

Alejandro is B.S. degrees in Mechanical Engineering from the University of Guanajuato, Salamanca, Mexico, in 1992, and PhD in Mechanical Engineering from University of Zaragoza in 1997. He is presently an Faculty Professor of Mechanical Engineering at the University of Guanajuato, Mexico. His research interests include applied thermodynamics, advanced energy systems, gas turbine, combined cycles, biomass gasification, solar heating storage systems, and thermoeconomics. Have more than 29 years of experiance in power systems and fuel impact analysis.

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