



## An Experiment Study of Power Generation from Low Grade Heat Using Organic Rankine Cycle

Watcharakamon Poonrit<sup>1</sup>, Kriengkrai Assawamartbunlue<sup>1,\*</sup>

<sup>1</sup> Department of Mechanical Engineering, Kasetsart University,  
50 Ngamwongwan road, Ladyao, Chatuchuk, Bangkok, 10900, Thailand

\* Corresponding Author: fengkka@ku.ac.th

**Abstract.** This paper studied performances of a power generation system using an Organic Rankine Cycle (ORC). A prototype of the 1 kW ORC system was constructed using R141b as working fluid. Low-grade heat was used as the energy source of the system. Two parameters were investigated which are inlet pressure and inlet temperature of the working fluid entering the expander. It was found that the inlet pressure and the inlet temperature entering expander affected on the system performance. The prototype system could produce the maximum electrical power output of 0.789 kW at the expander inlet pressure of 12.1 bar and inlet temperature of 133°C.