

## Thermo-economic multi-objective optimization of Waste heat recovery Organic rankine cycle

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Organic Rankine cycle is one of solutions to generate electricity from low temperature heat sources. It has a variety of applications such as solar thermal power, geothermal power, industrial waste heat, and engine exhaust gases. WHR ORCs have been studied in a number of previous works : working fluid selection, comparative studies with transcritical cycles, thermodynamic case studies and power enhancement potential of a usage mixture working fluids, but a more comprehensive study is required an economic bases. It is important not only power output or cycle efficiency but also system size. This study conducts multi-objective thermo-economic optimization about WHR ORC application on offshore system using non-dominated sorting genetic algorithm(NSGA -2).