

## Modeling and optimization of a chemical reaction heat pump in Eco-Industrial Parks

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Global warming and energy crisis have proven that reduction of energy consumption and development of alternative energy are urgent issues. In addition, sharp rise of international crude oil price in recent years has made reuse skill of energy resource more important. In this context, Eco-Industrial Park has emerged as an effective network system connecting factories within an industrial park, exchanging their waste streams for better use.

We design and optimize the heat pump which increases or decreases the temperature of industrial waste heat according to the needs of the supplier or the consumer. It is expected to minimize the heat loss totally so that we will be able to get the effect of reduction of energy consumption as well as maximize usefulness in reuse of waste heat by adding the optimized heat pump to the network connecting all sites within the industrial park.

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