A study on the use of waste heat reserves for eco-industrial parks

채송화, 김상훈, 윤성근, 박선원*
한국과학기술원
(sunwon@kaist.ac.kr*)

In the petrochemical industries, reduction of energy consumption is important for improving profitability and sustainability. Recently due to the high oil price and environmental regulations, energy efficiency of the whole complex should be improved further. This paper presents a methodology to construct the efficient steam network of a complex. We created a research framework to collect and analyze data, supporting development of a steam network between companies in a petrochemical industrial complex. The method was developed in cooperation with a real petrochemical complex in Korea, where the proposed steam network could reduce the cost of energy consumption by nearly $ 7 million per year. The framework can be easily implemented in other situations.

Acknowledgement
This work was supported by Center for Ultramicrochemical Process Systems sponsored by KOSEF.