



“Gheorghe Asachi” Technical University of Iasi, Romania



ENERGY USE, CONSERVATION AND EMISSIONS REDUCTIONS IN TAIWANESE COSMETICS INDUSTRY

Te-Li Su¹, Jenq-Daw Lee², Gui-Bing Hong^{3*}

¹*St. Mary's Junior College of Medicine Nursing and Management, Department of Cosmetic Application and Management,
Yi-Lan, Taiwan*

²*Industrial Technology Research Institute, Service Systems Technology Center, Hsinchu, Taiwan*

³*National Taipei University of Technology, Department of Chemical Engineering and Biotechnology, Taipei, Taiwan*

Abstract

This work performs an energy flow case study on the cosmetics industry in Taiwan. In addition, the energy-saving potential of these options is evaluated. It is found that the total potential energy saving amounts to around 2397.0 GJ. It represented a potential reduction of 179.8 tonnes in carbon dioxide emissions. This study establishes an energy flow analysis and energy-saving method for this case study, in addition to identifying potential energy-saving areas. The greatest energy-saving potential can result from improving equipment efficiency, which would potentially comprise around 92% of total energy conservation potential. This analysis serves as a benchmark for updating the cosmetics' products industry operation, and assisting energy users in performing energy management in order to enhance energy utilization efficiency.

Key words: cosmetics industry, energy conservation, Taiwan

Received: November, 2011; Revised final: July, 2012; Accepted: July, 2012

* Author to whom all correspondence should be addressed: e-mail: d8906002@mail.ntust.edu.tw; Phone: 886-39897396; Fax: 886-3-9899114