Application of self-heat recuperation technology azeotropic distillation for DMC synthesis process

박건희, 한종훈*
서울대학교
(chhan@snu.ac.kr*)

Azeotropic separation system is necessary in DMC synthesis process because methanol-DMC form a homogeneous azeotrope. Conventional azeotropic distillation techniques are so energy-consuming that it is needed by application heat recovery technology. This study applies the self-heat recuperation technology this separation system and analyzes the energy consumption. Simulation studies based on a feed mixture of Methanol(85.85 mol%) and DMC(14.15mol%) show that application of this technology can reduce energy requirement in comparison with benchmark azeotropic distillation systems. This research was supported by institute of Chemical processes in Seoul National University, Energy efficiency & Resources Programs"of the Korea Institute of Energy Technology Evaluation and Planning (KETEP) grant funded by the Korea government Ministry of knowledge Economy(No.20122010200071), Energy Efficiency & Resources Development Program(2010201020006D-12-2-100) of the Korea Institute of Energy Technology Evaluation and Planning (KETEP) grant funded by the Ministry of Knowledge Economy(MKE).