

Application of Mechanical Vapor Recompression to the Extractive Distillation

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Mechanical vapor recompression (MVR) is known as a state-of-art industrial system for binary distillation and is widely applied in the separation of close boiling components. This work presented a novel integrated design of azeotropic mixtures distillation process based on MVR. The extractive distillation of acetone-methanol binary system that forms a homogeneous minimum-boiling azeotrope was researched. Based on the simulation result, the total energy consumption of the proposed sequence is 62% less than the existing extractive distillation configuration. “The research was supported by the Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Education, Science and Technology (2012012532)”.