

Sugarcane molasses 를 이용한 바이오에탄올 생산공정에서 최적 열교환기망 설계 연구

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Reusing as many existing heat exchangers as possible is one of the most significant strategies in retrofitting of heat exchanger networks, which can reduce investment costs, environmental impact, and increase heat recovery in the process industry. In this study, a bioethanol production plant is proposed to increase the yield and decreasing thermal energy requirements. In this sense, a process integration for bioethanol plant has been performed. The process has been subjected to energy integration to minimize heating and cooling energies. A graphical Pinch Analysis method has been used to evaluate the energy performance of a literature design for the current process. It has been subsequently used to develop an optimum heat exchanger network for the process by matching process streams. The process design from graphical method has achieved the optimum results with respect to energy targets.

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