

Study on yield improvement of the commercial aldol condensation reactor using process simulation and design of experiment

의신범*, 이양주¹, 권혁칠, 최경재
한화석유화학 중앙연구소; ¹한화석유화학 여수공장
(chris070kr@hotmail.com*)

Aldol condensation reactor is for aldol condensation reaction of normal-butyl aldehyde for the synthesis of 2-ethyl hexenal in the 2-ethyl hexanol process. This study is on getting higher yield and lower side reaction products using a process simulation and design of experiment in the commercial plant. For this, we analyze the process operation data for seven years to make a choice of the key operation variables and simulate the process to prevent a trouble for carrying out the experiment and to predict the level of the experiment variables. As the result of such these studies and works, the yield of aldol condensation reactor was higher through the change of operation conditions.