

Enhanced Distillation Process for Waste Photoresist Solvents and Thinner Recovery

Yus Donald Chaniago, Andika Riezqa, , Wahid Ali, *

(mynlee@ynu.ac.kr*)

In semiconductor industry, thin flat transistor liquid crystal display (TFT-LCD) and IC manufacturing process generates waste solvents and photoresist thinner that are not treated appropriately, and are incinerated at high temperatures or processed as a high calorie fuels after photoresistor is removed. This inflicts high production cost and also inflicts to environment because of most of the valuable chemical discharged from the process has been incinerated at high temperature. In this work, alternative treatment process was proposed. Valuable chemical was recovered using sequential distillation system instead of burning them in high temperature incinerator that cause environmental problem. Several distillation sequences were established using operation condition constrains. To achieve further objective of energy improvement with high benefit because of lower energy efficiency of conventional distillation column, advanced distillation column is implemented.