

Improved Distillation Process for Waste Photoresist Solvents and Thinner Recovery

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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. Therefore, it is important for TFT-LCD manufactures to reduce the production-related costs and protect the environment against industrial waste. 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. To achieve further objective of energy improvement with high benefit because of lower energy efficiency of conventional distillation column, advanced distillation column is implemented. This study was supported by the R&D Center for Valuable Recycling(Global-Top Environmental Technology Development Program) funded by the Ministry of Environment.(Project No.:11-A13-OD)