

ABSTRACT

Separation of Water and Acetic acid in the presence of Solvent called Isopropyl ether by Extraction process. In this process we take Water and Acetic acid as feed material and Isopropyl ether as a Solvent. So in Feed carrier there is a mixture of Water and Acetic acid and in Solvent steam Isopropyl ether is there. After that the mixing is occurred. Then the Feed steam is passed to Separator, where the Extract and Raffinate phases are get separated. Now we have to further purify the Raffinate product. So the Raffinate phase has to sent into Shortcut column, where the Top and Bottom product are get separated. In the Top product light phase product will obtained ie Water while in Bottom product heavy phase product is obtained ie Acetic acid.

The Energy steam also Recycle into the Shortcut column by passing the outlet steam back to the column with the help of Energy Recycle.

EXPLANATION OF FLOWSHEET

In the flowsheet diagram Feed steam content mixture of Acetic acid, Water and Isopropyl ether in the proportion of Acetic acid 25%, Water 70% and Isopropyl ether 5%. while that for Solvent containing Acetic acid 30% and Isopropyl ether 70%. then Mixer mix these two solution. After mixing in Mixer the feed steam is fed into Separator column where Extract and Raffinate get separated. Then we have to purify the Raffinate phase. So the concentraion of Raffinate phase is fed to the Shortcut column, where Top and Bottom product is separated after separation the Acetic acid get Extracted from the Bottom product.