Minimizing Loss of Ethanol with Non-Condensable Gases in Distilleries

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Abstract

In a distillery where concentrated ethanol is manufactured, a large amount of ethanol vapour is lost during distillation. It was hypothesized that reduction of reflux at the final distillation column where non-condensable gases are vented reduces loss of ethanol vapour. This hypothesis was tested and verified using computer aided process simulation with application to a working distillery in Sri Lanka. It reduced the loss of ethanol vapour at a rate of 6.8 kg/h. The associated net financial saving was Rs. 400 000 per month.