

传递现象

## 从浓度分布评价填料塔性能

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摘要

关键词 [蒸馏](#) [填料塔](#) [浓度分布](#) [不均匀流动](#)

分类号

## EVALUATION OF PACKED TOWER PERFORMANCE BY ANALYZING DISTILLATION COMPOSITION PROFILE

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### Abstract

The performance of sheet metal structured packing Mellapak 350Y in a pilot-scale high-pressure column(0.15 m I.D.) was investigated at 700—1900 kPa. The packing height was 2.0 m. Isobutane and *n*-butane was used as test mixture. The imperfect flow phenomena in column, such as maldistribution, wall flow, end effect and backmixing could be revealed by testing the composition profile along the packing. A concave or convex composition profile curve might be a result of maldistribution, and  $f_{\max}$ , which was the maximum value of liquid maldistribution friction could be used to judge the sensitivity to maldistribution of a proposed packed bed. Through comparing the separation efficiency at the top section of packing with that at the bottom section would disclose the existence of wall flow and end effect in the column. Moreover, the extent of gas and liquid backmixing in packing could be estimated if the composition profile along the whole column could be obtained.

**Key words** [distillation](#) [packed tower](#) [composition profiles](#) [imperfect flow](#)

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