

RESEARCH PAPERS

筛板上液体横向流动时气泡的形成特性

秦炜, 徐世民

National Engineering Research Center for Distillation Technology, Tianjin University,  
Tianjin 300072, China

收稿日期 修回日期 网络版发布日期 接受日期

**摘要** An apparatus, designed to simulate bubbling of a sieve tray operated in froth regime, was employed. Bubble contact angles in and above the incipient weeping regime for an air-water-plexiglas system were investigated. The influence of both liquid cross-flow and gas up-flow upon bubble contact angles was examined. A model considering the influence of liquid cross-flow was developed to predict bubble size from a sieve hole in froth operation regime. The comparison shows that the bubble sizes predicted by the present model are consistent with our experimental values and the available published experimental data.

**关键词** [bubble size](#) [sieve tray](#) [contact angle](#)

分类号

**DOI:**

**Bubble Formation Characteristics from a Sieve Tray with Liquid Cross-flow**

QIN Wei, XU Shimin

National Engineering Research Center for Distillation Technology, Tianjin University,  
Tianjin 300072, China

Received Revised Online Accepted

**Abstract** An apparatus, designed to simulate bubbling of a sieve tray operated in froth regime, was employed. Bubble contact angles in and above the incipient weeping regime for an air-water-plexiglas system were investigated. The influence of both liquid cross-flow and gas up-flow upon bubble contact angles was examined. A model considering the influence of liquid cross-flow was developed to predict bubble size from a sieve hole in froth operation regime. The comparison shows that the bubble sizes predicted by the present model are consistent with our experimental values and the available published experimental data.

**Key words** [bubble size](#); [sieve tray](#); [contact angle](#)

通讯作者:

秦炜

作者个人主页: 秦炜; 徐世民

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF](#) (1084KB)

▶ [\[HTML全文\]](#) (0KB)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [加入引用管理器](#)

▶ [引用本文](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ [本刊中 包含“bubble size”的 相关文章](#)

▶ 本文作者相关文章

· [秦炜](#)

· [徐世民](#)