

SEPARATION SCIENCE & ENGINEERING

薄膜蒸发器的分离效率

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摘要 The recovery of contaminants and useful substances from liquid wastes, the purification of production effluents and the separation of thermally instable mixtures are some of the multivarious applications of thin-film distillors in many processes of the chemical and allied industries and of the food industries. In a study carried out in pilot plants with distillation test systems there was found a good agreement between the experimental separation results and those obtained by computing with a theoretical model; the latter is based on the assumption of phase equilibrium between the vapour formed on an infinitely small element of area in a liquid film of any given concentric periphery of the vertically arranged evaporator. These tests were performed under various phase loads.

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Separation Efficiency of Thin-film Evaporators

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Abstract

The recovery of contaminants and useful substances from liquid wastes, the purification of production effluents and the separation of thermally instable mixtures are some of the multivarious applications of thin-film distillors in many processes of the chemical and allied industries and of the food industries. In a study carried out in pilot plants with distillation test systems there was found a good agreement between the experimental separation results and those obtained by computing with a theoretical model; the latter is based on the assumption of phase equilibrium between the vapour formed on an infinitely small element of area in a liquid film of any given concentric periphery of the vertically arranged evaporator. These tests were performed under various phase loads.

Key words [phase equilibrium](#) [thin-film distillation](#) [scaling up](#) [distillation energy](#)

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