عنوان مقاله:

Gas Absorption in a Non-Isothermal Venturi Scrubber

محل انتشار:

هشتمین کنگره ملی مهندسی شیمی ایران (سال: 1382)

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خلاصه مقاله:

A mathematical model consisting of differential equations for energy, momentum and material exchange is developed in order to examine the effects of heat and mass transfer on removal efficiency of gaseous pollutants in a non-isothermal Venturi scrubber. In this work simultaneous heat and mass transfer for droplets and gas phase are coupled with a 2 dimensional dispersion model for droplets and gaseous matters distribution. In order to approach a realistic model the liquid film flow on Venturi scrubber walls and droplet size distribution are considered too. The validity of the model was examined by comparing the results of model by plant data and experimental data reported in the literature. The predicted overall removal efficiency, carrier gas and droplets temperature histories are in good agreement with the experimental and plant data.

کلمات کلیدی:

"Venturi Scrubber", "Non-Isothermal", "Collection efficiency"

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