

عنوان مقاله:

Study on Mixing Power Consumption in a Dual Rushton Stirred Tank

محل انتشار:

ششمین کنگره بین المللی مهندسی شیمی (سال: 1388)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

Power consumption of a mixing system is a key variable in chemical and bioprocess engineering; thus, determination of this variable is of interest of many processes. In this research laboratory investigation has been carried out on mixing power consumption of a single phase system in a fully baffled stirred tank reactor equipped with dual six-blade Rushton turbines. Results have been compared with data obtained from CFD simulation of experimental set-up and data available in technical literature. Using predicted experimental data an empirical correlation has been derived which presents a new relation in estimation of power consumption in stirred tanks with dual Rushton impellers. Moreover, a reasonable agreement between the experimental, simulation and technical literature results has been observed.

کلمات کلیدی:

Stirred tank, Dual Rushton Impellers, Power Consumption, Rotational Speed, CFD Simulation

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