

A study on CFD as design tool for DME reactor

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Computational fluid dynamics (CFD) serves as a tool in a more realistic way in order to both describe a detailed flow and quantify residence time, mixing rate, scaling effect, and overall chemical conversion in the catalytic fixed beds of low tube-to-particle diameter ration (N). By using CFD with these features, we will make the simulation model in the fixed beds of DME reactor and compare with real experimental data. Therefore, we could get the more profound understanding about the velocity profiles and temperature contours, which can be applied for other cases in DME reactor.