عنوان مقاله:

Mathematical Modeling Of Fluidized-Bed Reacto rs Application For The Reduction Of Iron Ores

محل انتشار:

ششمین کنگره بین المللی مهندسی شیمی (سال: 1388)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

Mathematical modeling of fluidized–bed reactors for the reduction of iron ore by gas containing H2 has been carried out. Two-phase bubbling bed model has been used to estimate the interaction between gas bubbles and dense phase in the bed. Particle size distribution, elutriation of fine particles, continuous reactor operation and the first-order reversible kinetics for the chemical reaction are assumed. The reduction behaviour of iron is described by the grain model. A program was developed in MATLAB software for solving the governing equations at different temperaturesand pressures. Model predictions have been compared with Srinivasan and Staffansson 's work [1] in which shrinking core model has been used. There was a good agreement between these two different modelings.

کلمات کلیدی:

mathematical modeling, fluidized bed reactor, reduction of iron ore