

عنوان مقاله:

Modelling and Simulation of HDPE polymerization Slurry Reactor Using Ziegler-Natta Catalyst: Kinetic Parameters Determination

محل انتشار:

پانزدهمین کنگره ملی مهندسی شیمی ایران (سال: 1393)

تعداد صفحات اصل مقاله: 5

نویسندگان:

Mohammad Bostanian - *Department of Oil, Gas and petrochemical Engineering, Persian Gulf University, Bushehr, Iran*

Ali Izadbakhsh - *Department of Oil, Gas and petrochemical Engineering, Persian Gulf University, Bushehr, Iran*

خلاصه مقاله:

In this study, kinetic of HDPE polymerization in slurry reactor over Ziegler-Natta Catalyst was modeled using the method of moment equations. The kinetic model includes reactions of activation, initiation, propagation, chain transfers and deactivation with the corresponding rate equations. Based on these rate equations, required assumptions and considering five active sites of Z-N catalyst, parameters of polymerization kinetic in two case studies of industrial HDPE were obtained through the suggested algorithm. Equations of zeroth to second moment for living and dead polymers, along with consumption rate of polymer chains, monomer, cocatalyst, and hydrogen. Modeling results showed good agreement with experimental molecular weight distribution of polymer in 2 case studies

کلمات کلیدی:

Slurry polymerization, Ziegler-Natta, Catalyst, Active sites, HDPE, Modelling

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/368228>

