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System For Polymerization Of Olefin Hydrocarbons In Fluidized Bed Reactor



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- Chemicals and Materials
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TECHNOLOGY READINESS LEVEL (TRL)

- TRL 5

PATENT/ GRANTED NUMBER

- PI 2015700191

▶ TECHNOLOGY OVERVIEW

The present invention relates to an improved system for pilot-scale polymerization of olefin hydrocarbons promoted by a catalyst in a bed of polyolefin powder for studying optimization of a fluidized bed reactor (R-201) resembling the industrial units for producing various grades of polyolefin. The pilot-scale system can preferably be used in many aspects including predicting and validating a set of appropriate significant reactor operating parameters. The system also is free of contaminants and is supplied only with highly pure feed materials. Accordingly, the system which is a pilot-scale system comprises a fluidized bed reactor (R-201), a gas analyzing unit comprising a refinery gas analyzer, a moisture content detection unit comprising a hygrometer, a gas purification unit comprising gas purifiers and moisture removal column, a catalyst injection unit for dosing continuously an amount of catalyst into the fluidized bed reactor (R-201), and a monitoring and control unit comprising modules hosted by a computer and a set of mitigation members.

CONTACT US!

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