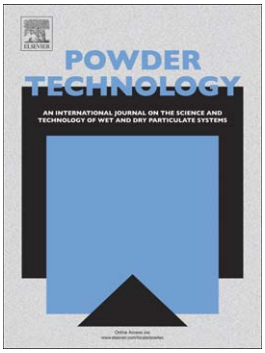

Using dilute spouting for fabrication of highly filled metal-polymer composite materials

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Using dilute spouting for fabrication of highly filled metal-polymer composite materials

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Keywords

Spouted bed, fine particles, dilute spouting, granulation, metal-polymer composites, electrical conductivity

Highlights

- Spouted bed is used for fabrication of highly-filled metal-polymer composites consisting of a polymer matrix and fine metallic particles
- Measurements of electrical resistivity confirm the capability of the apparatus for uniform coating of fine particles
- Percolation threshold measured by electrical resistivity correlates with the maximum of mechanical properties of the composites

Abstract

This contribution deals with a spouted bed process used for combining of particles and a polymer matrix in order to fabricate highly filled composite materials. The questions how a spouted bed can be used for processing of µm-sized particles and how the apparatus for this aim can looks like will be addressed, as well as the flow regime of fine particles will be