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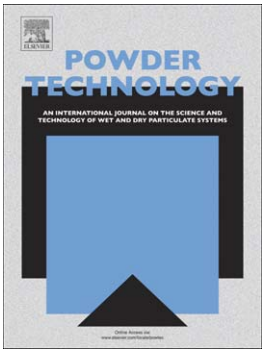

Influence of operation parameters on process stability in continuous fluidised bed layering with external product classification

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Influence of operation parameters on process stability in continuous fluidised bed layering with external product classification

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Abstract

Several studies—theoretical and experimental—show that continuous fluidised bed layering granulation with external classification can show instability in the form of self-sustained oscillations. Recent results show that the process stability does not only depend on product-related process parameters but also on the formation of functional zones in the fluidised bed chamber, especially the formation of a spray and drying zone. In this work a systematic evaluation of zone formation in different apparatus designs (e.g., top- and bottom-spray in cylindrical apparatuses) and its influence on process stability is performed, resulting in a stability regime map for the different apparatus designs and key operation parameters.

Keywords: layering, fluidised bed, process stability, external classification,

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