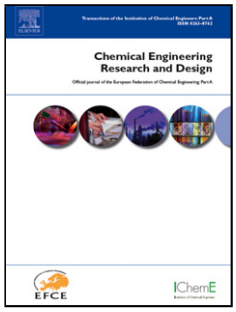

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INFLUENCE OF CONTACTOR GEOMETRY AND DRAFT TUBE CONFIGURATION ON THE CYCLE TIME DISTRIBUTION IN SAWDUST CONICAL SPOUTED BEDS

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Highlights

- The draft tubes provide a great versatility in the cycle times
- The open-side tube gives way to a great number of short cycles
- Contactor angle is the parameter of greater influence on the cycle time
- The longer average cycles times are recorded with the nonporous draft tube
- The open-sided tube provides stability and ensures high turbulence to beds

ABSTRACT

A study has been carried out on the influence the draft-tube configuration has on the solid circulation in conical spouted beds made up of sawdust. Knowledge on the performance of these fine particles of low density and irregular texture is required for the pyrolysis, gasification or combustion of this waste materials in conical spouted beds. Accordingly, particle cycle times have been monitored for contactors of different geometry (angle and gas inlet diameter) provided with draft-tubes of different configuration (nonporous and open-sided tubes). The study has been