Atomization for Spray Drying: Unanswered Questions and Industrial Needs

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Abstract

This paper introduces the atomization community to the unique and unmet challenges of spray drying, with an emphasis on industrial needs to understand atomization of complex fluids. The fluids are typically concentrated, viscous, non-Newtonian, sometimes contain suspended solids, and typically run at flow rates exceeding a ton per hour; most atomization literature treats fuels and other low-viscosity liquids at substantially lower rates. Some specific needs are presented as a challenge to the academic community.

Key words: viscous, slurries, non-Newtonian, spray drying

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