

Abstract Submitted
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Mass flow rate of granular material flowing from tilted bins JAIME

KLAPP, Instituto Nacional de Investigaciones Nucleares and ABACUS Departamento de Matematicas, Cinvestav IPN, ABRAHAM MEDINA, SEPI ESIME Azcapotzalco, IPN and ABACUS Departamento de Matematicas, Cinvestav IPN, AYAX HERNANDO TORRES VICTORIA, Universidad Politecnica del Valle de Mexico, SALOMON PERALTA LOPEZ, Mexican Petroleum Institute — We report experiments performed to describe the behavior of the experimental mass flow rate of cohesionless granular material, $M'_{\beta expt}$, through circular orifices of diameter D made on sidewalls of tilted bins. In such experiments, the influence of the wall thickness of the bin, w , and the tilt angle respect to the vertical, β , were also regarded. The experimental measurements, using beach sand and granulated sugar, yield a linear correlation among $M'_{\beta expt}$ and a theoretical piecewise correlation of the mass flow rate, M'_β , which is valid for the overall range of values of β . Numerical simulation will be also a discussed.

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