

Abstract Submitted
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Granular flow in a two-dimensional silo in the clogging regime

KIWING TO¹, Institute of Physics, Academia Sinica — Clogging is an annoying phenomenon that takes place when materials flow through a bottle neck, e.g. grains flowing out of a silo with small outlet. To initiate flow after clogging, one has to break the arch that stops the flow at the outlet. This can be done by oscillating the outlet of the silo. Here we present experimental data of the flow rate of mono-disperse metal spheres through a two-dimensional silo with outlet size slightly larger than the diameter of the beads. When the outlet is oscillating at amplitude a and angular frequency ω , we find that the flow rate Q at different a and ω can be collapsed to a single curve $Q(v)$ when plotted against the speed of oscillation $v = a\omega$.

¹128 Academia Road Sec. 2, Taipei, Taiwan 11529 Republic of China

Kiwing To
Institute of Physics, Academia Sinica

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