Videos: terminal settling experiments in water: path instabilities

https://researchdata.4tu.nl/

Dataset title: Videos - Path instabilities of a falling Spheres in a fluid at rest - An advanced experimental study at TU Delft

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Funder:

Waternet

Date created:

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Collection:

Dataset of dissertations

Description:

24 path trajectories of grains setting in water in an advanced TU Delft experimental setup.

More technical information can be found here:

http://resolver.tudelft.nl/uuid:cbaf6de1-dcf9-41ab-a5bc-3a4d364bfd45

Path Instabilities of a Rising or Falling Sphere in a Fluid at Rest - An Experimental Study

Author: Kaveripuram Ramasamy, Shravan Raaghav

And related videos: https://data.4tu.nl/repository/uuid:1b685d9e-4441-4a53-865c-86622ba49b25

Subject:

Hydraulic modelling of multiphase flow systems

Keywords:

hydraulic modelling

multiphase flow

liquid-solid fluidisation

drinking water treatment

circular sustainable processes

water softening

calcite pellets

terminal settling

path instabilities

Temporal coverage:

2020

Spatial coverage:

Amsterdam

Additional technical information

File: Set 1 - Calcium Pellets 1.4-1.7 mm.mp4

File: Set 1 - Glass beads - 1.5 mm.mp4

File: Set 1 - Glass beads - 2.0 mm.mp4

File: Set 1 - Glass beads - 2.5 mm.mp4

File: Set 1 - Glass beads - 3.0 mm.mp4

File: Set 1 - Glass beads - 3.5 mm.mp4

File: Set 1 - Glass beads - 4.0 mm.mp4

File: Set 1 - Rapid Filter Sand 1.0-2.0 mm.mp4

File: Set 1 - Steel shots 3.0 mm.mp4

File: Set 1 – Zirconium balls 2.0 mm.mp4

File: Set 2 - Calcite pellets 1-1.12 mm-case-1.mp4

File: Set 2 - Calcite pellets 1-1.12 mm-case-2.mp4

File: Set 2 - Calcite pellets 1-1.12 mm-case-3.mp4

File: Set 2 - Calcite pellets 1.12-1.25 mm-case-1.mp4

File: Set 2 - Calcite pellets 1.12-1.25 mm-case-2.mp4

File: Set 2 - Calcite pellets 1.12-1.25 mm-case-3.mp4

File: Set 2 - Calcite pellets 1.25-1.4 mm-case-1.mp4

File: Set 2 - Calcite pellets 1.25-1.4 mm-case-2.mp4

File: Set 2 - Calcite pellets 1.25-1.4 mm-case-3.mp4

File: Set 2 - Calcite pellets 1.4-1.7 m-case-2.mp4

File: Set 2 - Calcite pellets 1.4-1.7 mm-case-1.mp4

File: Set 2 - Calcite pellets 1.4-1.7 mm-case-3.mp4

File: Set 2 - Calcite pellets 1.7-2 mm-case-1.mp4

File: Set 2 - Calcite pellets 1.7-2 mm-case-2.mp4

File: Set 2 - Calcite pellets 1.7-2 mm-case-3.mp4

File: Set 2 - Calcite pellets 2-2.36 mm-case-1.mp4

File: Set 2 - Calcite pellets 2-2.36 mm-case-2.mp4

File: Set 2 - Calcite pellets 2-2.36 mm-case-3.mp4

File: Set 2 - Calcite pellets 2.36-2.8 mm-case-1.mp4

File: Set 2 - Calcite pellets 2.36-2.8 mm-case-2.mp4

File: Set 2 - Calcite pellets 2.36-2.8 mm-case-3.mp4

File: Set 2 - Calcite pellets 2.8+mm-case-1.mp4

File: Set 2 - Calcite pellets 2.8+mm-case-2.mp4

File: Set 2 - Calcite pellets 2.8+mm-case-3.mp4

File: Set 3 - Terminal settling 10mm glass bead.MP4

Project

This research is part of the project “Hydraulic modelling of liquid-solid fluidisation in drinking water treatment processes” carried out by Waternet, Delft University of Technology, and HU University of Applied Sciences Utrecht. Financial support came from Waternet Drinking Water Production Department. The videos were recorded at TU Delft, Mechanical, Maritime and Materials Engineering