Contribution ID: **108** Type: **Poster Presentation**

Experimental Studies on Permeabilities of Thin Fibrous Materials

Wednesday, 1 June 2022 09:20 (1h 10m)

Knowledge of hydraulic properties is crucial for understanding and modeling fluid flow in thin porous media. In this work, we have developed a new simple custom-built apparatus to measure permeabilities of a single thin fibrous sheet in in-plane direction. The permeability was measured for two types of thin fibrous porous materials using either water or gas phase. For each thin fibrous layer, the measurements have been done for different fiber alignments with flow. The results have shown that the measured permeability values using gas phase were slightly larger than the ones obtained using water phase. The largest permeability value was found when the flow direction was paralleled to the orientations of most fibers.

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Time Block Preference

Time Block A (09:00-12:00 CET)

Participation

Online

Primary authors: ZHUANG, Luwen; HASSANIZADEH, S. Majid (Utrecht University)

Presenter: ZHUANG, Luwen

Session Classification: Poster

Track Classification: (MS16) Fluid Interactions with Thin Porous Media