Pattern formation in the 2D and wide fluidized bed

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How the flow pattern in the system with the horizontally sufficient breadth consists, is not known.

In this study, experiment and numerical calculation in two-dimensional fluidized bed were carried out in order to understand how such horizontal flow distribution is decided.

It was confirmed that 3 flow patterns existed further than the experiment by the thickness of the particle bed.

And, the result of the numerical calculation by the discrete element method agreed almost with the estimate using the Darcy's law.