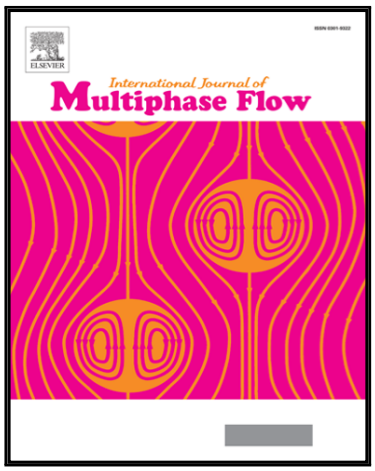

Experimental study of the effect of pressure and gas density on the transition from stratified to slug flow in a horizontal pipe

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Highlights

- The effect of pressure and gas density on stratified-slug transition was studied with gamma densitometer .
- The matching changes in average and time-variant liquid holdup help to identify flow pattern transition.
- The stratified-slug transition moves up in the flow pattern map with increase in pressure.
- Time-variant liquid height reveals the flow pattern transition mechanism when the pressure increases.