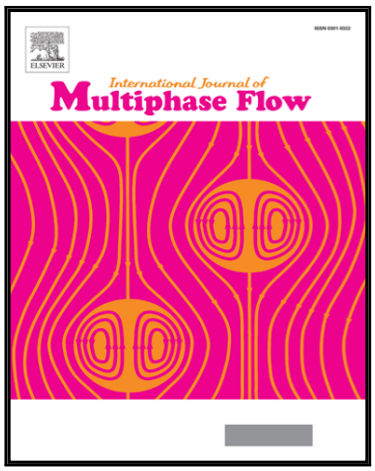

Measurements of gravity and gravity-capillary waves in horizontal gas-liquid pipe flow using PIV in both phases

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Highlights

- Velocities were measured in the vertical cross-section of gas-liquid pipe flow.
- The '3D small amplitude' wave pattern was categorised as gravity-capillary waves.
- The '2D large amplitude' wave pattern was categorised as gravity waves.
- The two wave patterns resulted in different velocity profiles in the liquid phase.
- Both wave patterns had a similar effect on the velocities in the gas phase.
- The measurements constitute a valuable dataset for closure model improvement.