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Taylor bubbles rising through flowing non-Newtonian inelastic fluids

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Highlights

- Validation of the CFD methodology with experimental in-house data was achieved.
- Influence of rheological nature of the liquid on slug flow hydrodynamics is analyzed.
- Shear-thinning promotes larger bubble wakes; shear-thickening does the opposite.
- The presence of a typical STF with mixed behavior in slug flow systems was simulated.
- The predominance of each rheological nature on the main flow regions is detailed.

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