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Hydrodynamics of Newtonian and non-Newtonian liquids in internal-loop airlift reactors

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Highlights

Influences of driving force (ε_R-ε_D)and energy loss on liquid velocity were assessed.

Linear liquid velocity (V_{LR}) of non-Newtonian fluids was higher in 10 L SCA reactor.

Regional gas hold-ups and V_{LR} of Newtonian fluids were higher in 10 L DTA reactor.

Liquid velocity of Newtonian fluids was influenced by energy loss in the bottom.