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Numerical simulation of a square bubble column using Detached Eddy Simulation and Euler-Lagrange approach.

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Highlights

- Detached Eddy Simulation (DES) is capable to predict dynamics of gas-liquid flows
- DES matches well with LES performed with Vreman and Smagorinsky sub-grid scale models
- DES Spalart-Allmaras model overestimates main turbulent quantities
- DES-k-epsilon and DES-SST models are in very good agreement with experimental data
- Results of DES-k-epsilon are in better agreement with experiment compared to DES-SST

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