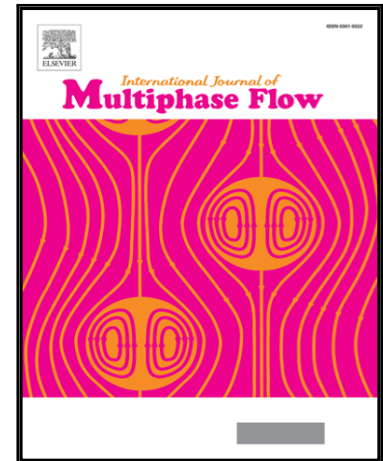


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Numerical simulation of subcooled and superheated jets under thermodynamic non-equilibrium

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Highlights

- FlashFOAM had been developed within the frame of OpenFOAM for simulating flashing jets
- It accounts for the inter-phase heat transfer with the Homogeneous Relaxation Model (HRM).
- A series of validation studies dedicated to long nozzles are reported.
- The code has demonstrated its capability to capture the flow characteristics and vapour generation in cryogenic liquid jets.
- The dependency of the geometry of the nozzles, pressure and subcooled degree on the vapour generation has been analysed.
- The validation study has demonstrated that FlashFOAM can be used to simulate flash boiling scenarios accurately and predict the properties of flash atomisation.

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