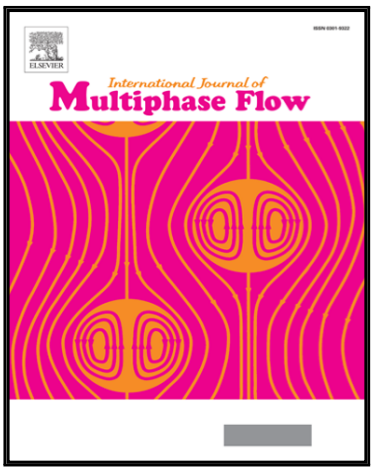

Numerical simulation of subcooled and superheated jets under thermodynamic non-equilibrium

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PII: S0301-9322(17)30583-9
DOI: 10.1016/j.ijmultiphaseflow.2018.01.014
Reference: IJMF 2722

To appear in: *International Journal of Multiphase Flow*

Received date: 7 August 2017
Revised date: 15 December 2017
Accepted date: 15 January 2018

Please cite this article as: Konstantinos Lyras , Siaka Dembele , David P. Schmidt , Jennifer X. Wen , Numerical simulation of subcooled and superheated jets under thermodynamic non-equilibrium, *International Journal of Multiphase Flow* (2018), doi: 10.1016/j.ijmultiphaseflow.2018.01.014

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.