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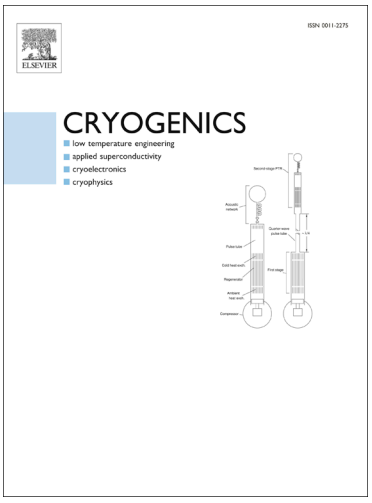

Research paper

The influence of chemical composition of LNG on the supercritical heat transfer in an intermediate fluid vaporizer

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The influence of chemical composition of LNG on the supercritical heat transfer in an intermediate fluid vaporizer

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Highlights

1. 3D CFD simulation of supercritical LNG heat transfer in an IFV.
2. Reasonable accuracy of DPM for supercritical LNG heat transfer in a tube bundle.
3. Noticeable effect of LNG composition on thermal performance of the vaporizer.

Abstract:

A three-dimensional transient computational fluid dynamics (CFD) model has been established for the simulations of supercritical heat transfer of real liquefied natural gas (LNG) mixture in a single tube and a tube bundle of an intermediate fluid vaporizer (IFV). The influence of chemical composition of LNG on the thermal performance has been analyzed. The results have also been compared with those