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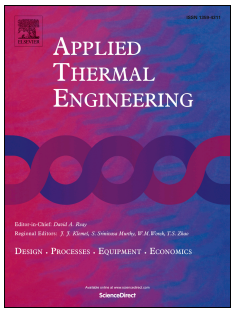

An Experimental Study of Flow Boiling Heat Transfer from Porous Foam Structures in a Channel

I. Pranoto, K.C. Leong

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Research Highlights

- “Pocofoam” 61% porosity foam enhanced the cooling performance by up to 2.5 times.
- The coolant mass flux had affected significantly the cooling performance.
- The evaporator gap had significant effect on the flow boiling heat transfer.
- Flow boiling heat transfer coefficient of 16.5 $kW/m^2 \cdot K$ was achieved in this study.
- “Laminar” and “turbulent” bubble regimes were observed in this study.