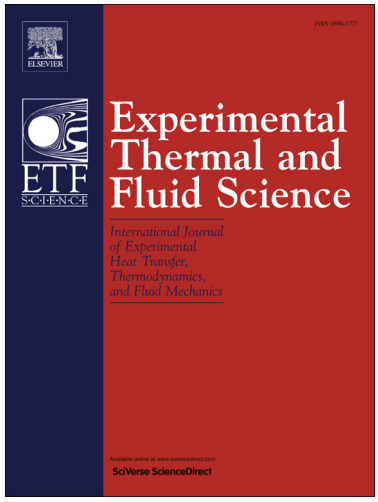

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The characteristics of premature and stable critical heat flux for downward flow boiling at low pressure in a narrow rectangular channel

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Abstract

Flow instability and critical heat flux (CHF) especially for downward flow of water in a vertical narrow rectangular channel heated from both sides were experimentally investigated. The gap, width, heated width, and heated length of the channel were 2.35, 40, 30, and 350 mm, respectively. The flow boiling was developed as the wall heat flux was increased for the imposed mass flux of 500 and 1,000 kg m-2 s-1 for high inlet subcooling (52 -74 K)