

Identification of boiling nucleation sites by non-orthogonal empirical functions (NEF) analysis of thermographic data

J. von Hardenberg , T. Kono, D.B.R.Kenning, P.E. McSharry, L.A.Smith

International Journal of Heat and Fluid Flow, 25 (2), 298-304, 2004

Abstract

The new method of analysis by non-orthogonal empirical functions (NEFs) is applied to experimental data for the spatio-temporal variations in wall temperature during nucleate boiling. It is shown that the method can successfully identify the positions and patterns of activity at individual members of a large group of nucleation sites. Statistical methods are developed for comparing data of this sort with numerical simulations.