Thermography measurements of heat transfer distributions for an array of impinging jets – Comparison with numerical results

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Abstract

This paper deals with the cooling of a plate using an array of round gas jets. The study is devoted to a particular configuration in which spent air is ejected through holes placed between the nozzles. The heat transfer coefficient distribution on the plate has been measured using infrared thermography. The effects of jet Reynolds number and nozzle to plate distance have been investigated. The measured values are compared to numerical simulation results obtained by standard CFD simulation tools.

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