

Nozzle-to-Surface Distances Effect on Heat Transfer of Two-Phase Impinging Jets

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Abstract : Heat transfer of two-phase impinging jet on a flat plate surface are experimentally investigated. The effects of the nozzle-to-surface distance and volumetric quality on the Nusselt number are considered. The results show that the normalized stagnation Nusselt number drastically increase with decreasing the nozzle-to-surface distance due to the jet deflection effect. Based on the experimental results, new correlations for the stagnation Nusselt number are developed as a function of the nozzle-to-surface distance.

Keywords : jet impingement, water jet, air assisted, circular jet

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