

Droplet Entrainment and Deposition in Horizontal Stratified Two-Phase Flow

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Abstract : In this study, the droplet behavior of under horizontal stratified flow regime for air and water flow in horizontal pipe experiments from a 0.24 m, 0.095 m, and 0.0486 m size diameter pipe are examined. The effects of gravity, pipe diameter, and turbulent diffusion on droplet deposition are considered. Models for droplet entrainment and deposition are proposed that considers developing length. Validation for experimental data dedicated from the REGARD, CEA and Williams, University of Illinois, experiment were performed using SPACE (Safety and Performance Analysis Code for Nuclear Power Plants).

Keywords : droplet, entrainment, deposition, horizontal

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