

Numerical Study for Spatial Optimization of DVG for Fin and Tube Heat Exchangers

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Abstract : This study attempts to find promising locations of upwash delta winglets for an inline finned tube heat exchanger. Later, location of winglets that delivers highest improvement in thermal performance is identified. Numerical results clearly showed that optimally located upwash delta winglets not only improved the thermal performance of fin area in tube wake and tubes, but also improved overall thermal performance of heat exchanger.

Keywords : apparent friction factor, delta winglet, fin and tube heat exchanger, longitudinal vortices

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