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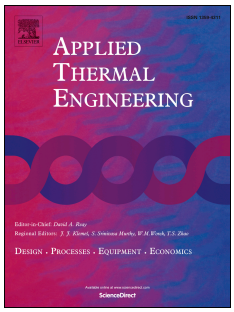

Fluid Flow and Convective Heat Transfer of Combined Swirling and Straight Impinging Jet Arrays

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Highlights

- The flow field and the heat transfer characteristics for a jet array has been investigated.
- The SST k-ω turbulence model can produce fairly accurate results.
- The dynamic analysis shows the flow patterns for the staggered spatial arrangement.
- The thermal analysis shows that heat transfer increase with blade angle for non-swirling jets.
- Flow patterns of multiple jets are well identified through oil film visualizations.

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