Numerical Study of Flow around Flat Tube between Parallel Walls

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Abstract : Flow around a flat tube is studied numerically. Reynolds number is defined base on equivalent circular tube and it is varied in range of 100 to 300. Equations are solved by using finite volume method and results are presented in form of drag and lift coefficient. Results show that drag coefficient of flat tube is up to 66% lower than circular tube with equivalent diameter. In addition, by increasing l/D from 1 to 2, the drag coefficient of flat tube is decreased about 14-27%.
Keywords : laminar flow, flat-tube, drag coefficient, cross-flow, heat exchanger
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