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Comparative Analysis of Two Modeling Approaches for Optimizing Plate Heat Exchangers

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Abstract : In the present paper the design of plate heat exchangers is formulated as an optimization problem considering two mathematical modeling. The number of plates is the objective function to be minimized, considering implicitly some parameters configuration. Screening is the optimization method used to solve the problem. Thermal and hydraulic constraints are verified, not viable solutions are discarded and the method searches for the convergence to the optimum, case it exists. A case study is presented to test the applicability of the developed algorithm. Results show coherency with the literature.

Keywords : plate heat exchanger, optimization, modeling, simulation
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