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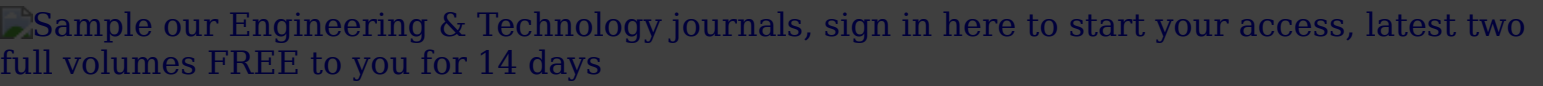
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Abstract

In this study, Multilayer Perceptron Artificial Neural Network (MLP-ANN) model and Least Square Support Vector Machine (LSSVM), were developed to predict the thermal performance and pressure loss of nanofluid flow through coils as non-straight pathways. There different coils with various curvature ratios and coil pitches were constructed and used. Stable TiO₂ (50 nm)/water was used as nanofluid. The results showed that the maximum thermal performance was achieved by applying the MLP-ANN model. The maximum pressure drop of the coils (7) were (291.35 to 300.00) Pa. The results of the pressure drop of the coils were compared with the results of the pressure drop of the MLP model of this study.

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