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Theoretical and empirical thermal conductivity models of red mud filled polymer composites

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Highlights

- Thermal conductivity results of red mud/PP composites exhibit good performance.
- Existing models for thermal conductivity of red mud/PP composites are discussed.
- The experimental results showed good agreement with empirical models.
- The parameters are defined by utilizing curve fitting methods.

Abstract

The present paper deals with the prediction capability of theoretical and empirical models on thermal conductivity coefficient (TCC) of red mud /polypropylene composites. Red mud is known as an industrial waste material occurs during the production of alumina by Bayer's process. The characterization analyses of the red mud particulates have been carried out by