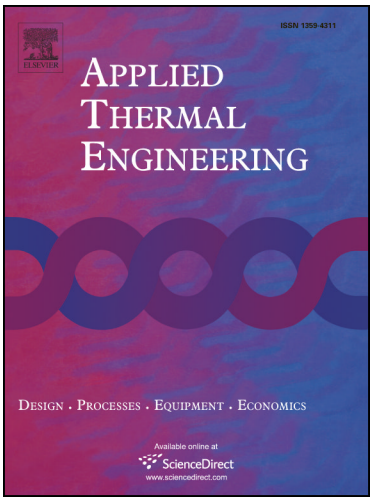

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PII: S1359-4311(18)33962-0
DOI: https://doi.org/10.1016/j.applthermaleng.2018.08.103
Reference: ATE 12606

To appear in: *Applied Thermal Engineering*

Received Date: 26 June 2018
Revised Date: 29 August 2018
Accepted Date: 29 August 2018

Please cite this article as: W. Lin, Q. Wang, X. Fang, X. Gao, Z. Zhang, Experimental and numerical investigation on the novel latent heat exchanger with paraffin/expanded graphite composite, *Applied Thermal Engineering* (2018), doi: https://doi.org/10.1016/j.applthermaleng.2018.08.103

Experimental and numerical investigation on the novel latent heat exchanger with paraffin/expanded graphite composite

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Abstract

In this paper, a novel latent heat exchanger with two flow channels was investigated experimentally and numerically. The phase change material was filled in the annular tube, while the working fluid flow in the shell and tube side runner. The design of multi flow channels allow it apply into energy storage system with different working fluid. The paraffin/expanded graphite composite with phase changing temperature around 50℃ was filled in the annular tubes. Heating and discharging tests have been performed in different flow rate. The numerical model was built and validated with