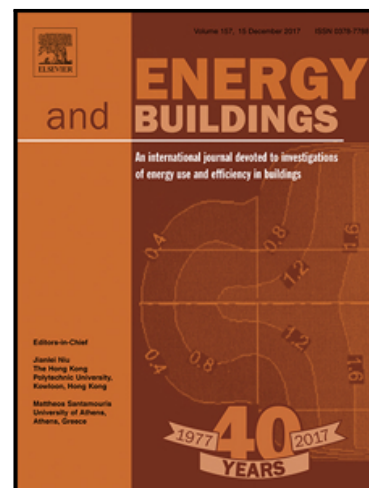


Accepted Manuscript

A Computationally Efficient Numerical Model for Heat Transfer Simulation of Deep Borehole Heat Exchangers

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PII: S0378-7788(17)33456-4
DOI: [10.1016/j.enbuild.2018.02.013](https://doi.org/10.1016/j.enbuild.2018.02.013)
Reference: ENB 8329



To appear in: *Energy & Buildings*

Received date: 17 October 2017
Revised date: 7 January 2018
Accepted date: 5 February 2018

Please cite this article as: Liang Fang , Nairen Diao , Zhukun Shao , Ke Zhu , Zhaohong Fang , A Computationally Efficient Numerical Model for Heat Transfer Simulation of Deep Borehole Heat Exchangers, *Energy & Buildings* (2018), doi: [10.1016/j.enbuild.2018.02.013](https://doi.org/10.1016/j.enbuild.2018.02.013)

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Highlights

- A finite difference model has been developed for thermal analysis of coaxial deep BHE.
- Based on FDM, an algorithm of alternant time step methodology has been employed.
- Performance of a virtual deep borehole heat exchanger is assessed with parameter analyses.
- High-resistance inner pipe helps in reducing heat losses and improving heat transfer capacity.
- The insulation between the upper section of borehole and the ground has minor influence

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