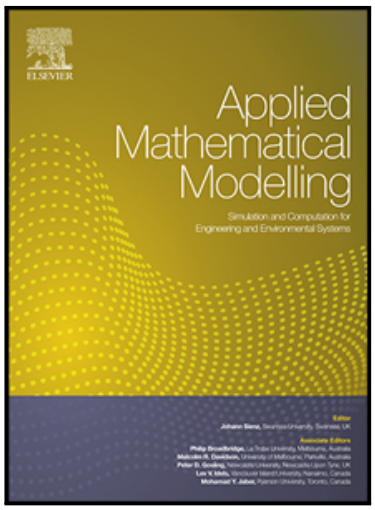
Accepted Manuscript



Quasi–static thermal analyses of layered compressible poroelastic materials with a finite depth or half-space

Lu Jun Wang , Zhi Yong Ai

PII: S0307-904X(18)30042-8
DOI: 10.1016/j.apm.2018.01.030
Reference: APM 12146

To appear in: *Applied Mathematical Modelling*

Received date: 30 June 2017
Revised date: 14 January 2018
Accepted date: 30 January 2018

Please cite this article as: Lu Jun Wang , Zhi Yong Ai , Quasi–static thermal analyses of layered compressible poroelastic materials with a finite depth or half-space, *Applied Mathematical Modelling* (2018), doi: 10.1016/j.apm.2018.01.030

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- The Laplace-Fourier transforms are applied to reduce partial differential equations to ordinary ones.
- An extended precise integration solution of multilayered materials due to a heat source is derived.
- The actual solution in the physical domain is further solved by inverting the Laplace-Fourier transforms.
- The effects of compressible constituents and layered characteristic on thermal consolidation are investigated.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/8051578

Download Persian Version:

https://daneshyari.com/article/8051578

Daneshyari.com