

Accepted Manuscript

The closed form solutions for axisymmetric modeling of thermal stress due to repetitive pulse laser heating

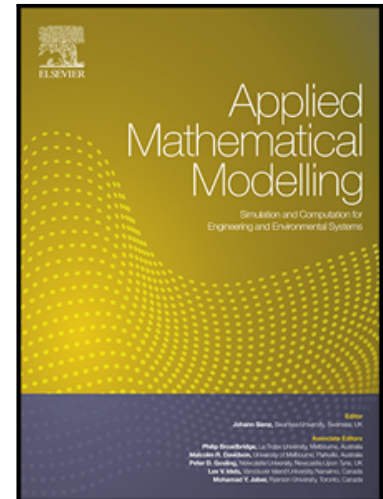
Guibo Chen , Juan Bi

PII: S0307-904X(18)30087-8
DOI: [10.1016/j.apm.2018.02.016](https://doi.org/10.1016/j.apm.2018.02.016)
Reference: APM 12180

To appear in: *Applied Mathematical Modelling*

Received date: 25 February 2017
Revised date: 7 February 2018
Accepted date: 13 February 2018

Please cite this article as: Guibo Chen , Juan Bi , The closed form solutions for axisymmetric modeling of thermal stress due to repetitive pulse laser heating, *Applied Mathematical Modelling* (2018), doi: [10.1016/j.apm.2018.02.016](https://doi.org/10.1016/j.apm.2018.02.016)



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.

Highlights

- Novel closed form solutions for axisymmetric modeling of thermal stress induced by repetitive pulse laser heating are obtained.
- Thermal stress distributions for different radial and axial locations of material are modeled and analyzed.
- Mechanisms of energy gain and stress generation for different laser irradiation regions are analyzed.
- Effects of duty cycles on thermal stress distributions are investigated.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/8051814>

Download Persian Version:

<https://daneshyari.com/article/8051814>

[Daneshyari.com](https://daneshyari.com)