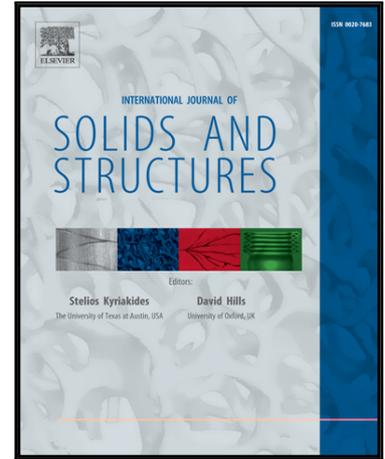


Accepted Manuscript

Three-dimensional, non-isothermal phase-field modeling of thermally and stress-induced martensitic transformations in shape memory alloys

Shushan Cui , Jianfeng Wan , Xunwei Zuo , Nailu Chen ,
Jihua Zhang , Yonghua Rong

PII: S0020-7683(17)30001-X
DOI: [10.1016/j.ijsolstr.2017.01.001](https://doi.org/10.1016/j.ijsolstr.2017.01.001)
Reference: SAS 9415



To appear in: *International Journal of Solids and Structures*

Received date: 13 March 2016
Revised date: 27 October 2016
Accepted date: 2 January 2017

Please cite this article as: Shushan Cui , Jianfeng Wan , Xunwei Zuo , Nailu Chen , Jihua Zhang , Yonghua Rong , Three-dimensional, non-isothermal phase-field modeling of thermally and stress-induced martensitic transformations in shape memory alloys, *International Journal of Solids and Structures* (2017), doi: [10.1016/j.ijsolstr.2017.01.001](https://doi.org/10.1016/j.ijsolstr.2017.01.001)

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

- Thermoelastic equilibrium between twinned martensite and austenite was obtained by phase-field simulation.
- The superelastic behavior was observed at different temperatures associated with stress-induced martensitic transformation.
- Evolution of temperature field during martensitic transformations due to latent heat effect was studied by the non-isothermal model.
- The internal stress field associated with martensitic transformation was revealed.

Download English Version:

<https://daneshyari.com/en/article/4922596>

Download Persian Version:

<https://daneshyari.com/article/4922596>

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