

Accepted Manuscript

The interface behavior of a thin piezoelectric film bonded to a graded substrate

Peijian Chen , Shaohua Chen , Wang Guo , Feng Gao

PII: S0167-6636(17)30663-4
DOI: <https://doi.org/10.1016/j.mechmat.2018.08.009>
Reference: MECMAT 2917



To appear in: *Mechanics of Materials*

Received date: 24 September 2017
Revised date: 6 June 2018
Accepted date: 17 August 2018

Please cite this article as: Peijian Chen , Shaohua Chen , Wang Guo , Feng Gao , The interface behavior of a thin piezoelectric film bonded to a graded substrate, *Mechanics of Materials* (2018), doi: <https://doi.org/10.1016/j.mechmat.2018.08.009>

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

- A theoretical model of a thin piezoelectric film bonded to a graded substrate under an in-plane electrical loading is established.
- Two kinds of interface behavior is analyzed, one is the perfect interface and the other is the imperfect interface.
- The interface stress field is significantly influenced by the inhomogeneity parameter of the graded substrate, the effective Young's modulus and the geometrical parameters of the piezoelectric film.

Download English Version:

<https://daneshyari.com/en/article/10146771>

Download Persian Version:

<https://daneshyari.com/article/10146771>

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