Accepted Manuscript

# On the receding contact between an inhomogeneously coated elastic layer and a homogeneous half-plane

Jie Yan, Changwen Mi

PII: S0167-6636(16)30487-2
DOI: 10.1016/j.mechmat.2017.05.007
Reference: MECMAT 2740

To appear in: *Mechanics of Materials*

Received date: 14 November 2016
Revised date: 13 February 2017
Accepted date: 24 May 2017

Please cite this article as: Jie Yan, Changwen Mi, On the receding contact between an inhomogeneously coated elastic layer and a homogeneous half-plane, *Mechanics of Materials* (2017), doi: 10.1016/j.mechmat.2017.05.007

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**

- Receding contact between a coated layer and a halfplane is semianalytically solved.
- A hard and thick coating can effectively reduce receding contact pressure.
- A soft halfplane substrate also helps to alleviate the receding contact pressure.
- Contact stress is inversely proportional to contact area at either contact surface.
- Large indentation loads result in both large contact pressures and contact area.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/5018444

Download Persian Version:

https://daneshyari.com/article/5018444

Daneshyari.com