Simplified analytical model for adhesive-bonded tubular joints with isotropic and composite adherends subjected to tension

Sontipee Aimmanee, Preeda Hongpimolmas, Kitchanon Ruangjirakit

www.elsevier.com/locate/ijadhadh

PII: S0143-7496(18)30201-X
DOI: https://doi.org/10.1016/j.ijadhadh.2018.08.010
Reference: JAAD2256

To appear in: *International Journal of Adhesion and Adhesives*

Received date: 30 July 2018
Accepted date: 16 August 2018

Cite this article as: Sontipee Aimmanee, Preeda Hongpimolmas and Kitchanon Ruangjirakit, Simplified analytical model for adhesive-bonded tubular joints with isotropic and composite adherends subjected to tension, *International Journal of Adhesion and Adhesives,* https://doi.org/10.1016/j.ijadhadh.2018.08.010

Simplified analytical model for adhesive-bonded tubular joints with isotropic and composite adherends subjected to tension☆

Sontipee Aimmanee[a]*, **Preeda Hongpimolmas**[b], **Kitchanon Ruangjirakit**[c]

[a]Advanced Materials and Structures Laboratory (AMASS), Department of Mechanical Engineering, Faculty of Engineering, King Mongkut's University of Technology Thonburi, 126 Pracha Uthit Rd., Thung Khru, Bangkok, 10140, Thailand

[b]Advanced Materials and Structures Laboratory (AMASS), Department of Mechanical Engineering, Faculty of Engineering, King Mongkut's University of Technology Thonburi, 126 Pracha Uthit Rd., Thung Khru, Bangkok, 10140, Thailand

[c]Advanced Materials and Structures Laboratory (AMASS), Department of Mechanical Engineering, Faculty of Engineering, King Mongkut's University of Technology Thonburi, 126 Pracha Uthit Rd., Thung Khru, Bangkok, 10140, Thailand

*Corresponding author. sontipee.aim@kmutt.ac.th

ABSTRACT

Many studies have investigated adhesive tubular joints subjected to axial load. However, previous analytical studies were only limited to the joints with single-layer isotropic or orthotropic materials, and the corresponding mathematical models were highly complicated. Thus, the aim of this article is to develop a simplified but comprehensive model for studying adhesive-bonded tubular

☆ This paper is dedicated to the memory of Professor Dr. Michael W. Hyer, whose knowledge has instilled into the first author (SA) and the following generations of SA students.