

## Accepted Manuscript

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Marcelo Leite Ribeiro, Dirk Vandepitte, Volnei Tita

PII: S0263-8223(15)00634-0

DOI: <http://dx.doi.org/10.1016/j.compstruct.2015.07.088>

Reference: COST 6669

To appear in: *Composite Structures*



Please cite this article as: Ribeiro, M.L., Vandepitte, D., Tita, V., Experimental analysis of transverse impact loading on composite cylinders, *Composite Structures* (2015), doi: <http://dx.doi.org/10.1016/j.compstruct.2015.07.088>

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# EXPERIMENTAL ANALYSIS OF TRANSVERSE IMPACT LOADING ON COMPOSITE CYLINDERS

Marcelo Leite Ribeiro<sup>1</sup>, Dirk Vandepitte<sup>2</sup> and Volnei Tita<sup>1\*</sup>

<sup>1</sup>*Department of Aeronautical Engineering, São Carlos School of Engineering, University of São Paulo, São Carlos, Brazil*

<sup>2</sup>*Department of Mechanical Engineering - PMA division, KU Leuven, Leuven, Belgium*

## Abstract

The present study consists on experimental analyses of composite cylinders made by filament winding process, which are under transverse impact loading. The results are shown and discussed considering the influence of the stacking sequence as well as the total thickness of the cylinders. Thus, the results are normalized regarding the stiffness of each cylinder, and there are discussions based on identified damages, different graphics (force, displacement and strain vs. time), energy balance between impactor and coupons, as well as elastic and dissipated energy ratios and response delays for different strain gauges positions on the cylinders. Finally, guidelines for designing composite cylinders are presented considering the aspects addressed by the experimental analyses.

Keywords: experimental analysis; filament wound cylinders; transverse impact loading; impact damage.

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\* Corresponding author: Phone +55 16 3373-8612; Fax +55 16 3373-9590.  
E-mail address: voltita@sc.usp.br (Volnei Tita)

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