

Accepted Manuscript

Crushing analysis and crashworthiness optimization of tailor rolled tubes with variation of thickness and material properties

Rihuan Lu , Weizhao Gao , Xianlei Hu , Weihai Liu , Yiwen Li ,
Xianghua Liu

PII: S0020-7403(17)32298-1
DOI: [10.1016/j.ijmecsci.2017.12.020](https://doi.org/10.1016/j.ijmecsci.2017.12.020)
Reference: MS 4084



To appear in: *International Journal of Mechanical Sciences*

Received date: 17 August 2017
Revised date: 23 November 2017
Accepted date: 10 December 2017

Please cite this article as: Rihuan Lu , Weizhao Gao , Xianlei Hu , Weihai Liu , Yiwen Li , Xianghua Liu , Crushing analysis and crashworthiness optimization of tailor rolled tubes with variation of thickness and material properties, *International Journal of Mechanical Sciences* (2017), doi: [10.1016/j.ijmecsci.2017.12.020](https://doi.org/10.1016/j.ijmecsci.2017.12.020)

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

- Novel TRT tube produced through VGR technology was presented.
- The FE model of TRT crushing considering dynamic impact was established correctly.
- Multi-objective optimization technique was used to obtain the optimal geometric parameters of TRT.
- Optimal TRT has better energy absorption capability than traditional uniform tubes.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/7173888>

Download Persian Version:

<https://daneshyari.com/article/7173888>

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