Mechanical properties of hybrid composites reinforced by carbon and basalt fibers

Guangyong Sun , Shaowei Tong , Dongdong Chen , Zhihui Gong , Qing Li

PII: S0020-7403(18)31497-8
DOI: https://doi.org/10.1016/j.ijmecsci.2018.08.007
Reference: MS 4465

To appear in: *International Journal of Mechanical Sciences*

Received date: 8 May 2018
Revised date: 6 July 2018
Accepted date: 10 August 2018

Please cite this article as: Guangyong Sun , Shaowei Tong , Dongdong Chen , Zhihui Gong , Qing Li , Mechanical properties of hybrid composites reinforced by carbon and basalt fibers, *International Journal of Mechanical Sciences* (2018), doi: https://doi.org/10.1016/j.ijmecsci.2018.08.007

Highlights:

- Hybrid effect was investigated through experimental, analytical and numerical methods.
- Effect of hybrid ratios and stacking sequences were investigated.
- A modified analytical model was applied to predict the flexural strength.
- SEM and digital photography technology was employed to apprehend the fracture mechanism.
- The distribution of bending stress across the thickness shows stronger correlation with stacking configurations.