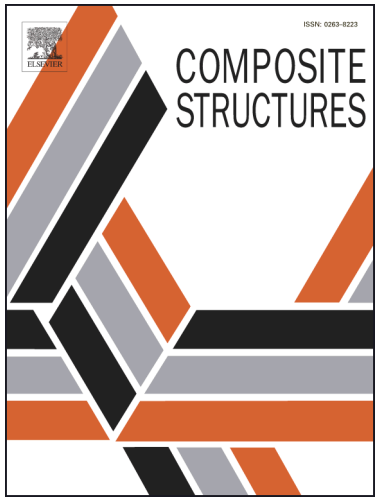

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PII: S0263-8223(16)30895-9
DOI: http://dx.doi.org/10.1016/j.compstruct.2016.11.069
Reference: COST 8030

To appear in: *Composite Structures*

Received Date: 14 June 2016
Revised Date: 21 October 2016
Accepted Date: 23 November 2016

Please cite this article as: Natsuki, T., Yoshizawa, K., Bao, L.M., Ni, Q.Q., Theoretical analysis of low-velocity impact response in two-layer laminated plates with an elastic medium layer, *Composite Structures* (2016), doi: http://dx.doi.org/10.1016/j.compstruct.2016.11.069

Theoretical analysis of low-velocity impact response in two-layer laminated plates with an elastic medium layer

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An analytical solution is proposed for the low velocity impact response of laminated plates with an elastic medium layer. In the theoretical model, the medium materials between laminated plates are considered to be a spring model with elastic constants. The influences of impactor parameters such as velocity and mass on the impact response are investigated based on the proposed model and a numerical simulation. The simulation result shows that the impact response of two-layer laminated plates is quite different when a medium layer is inserted into the laminated plates. Impact loads acting on the laminated plate significantly decrease due to deformation energy absorption by the elastic medium layer in laminated plates.

Keywods: Composite laminates, Impact response, Modeling, Numerical simulation

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