

Accepted Manuscript

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PII: S0263-8223(16)30900-X

DOI: <http://dx.doi.org/10.1016/j.compstruct.2016.09.082>

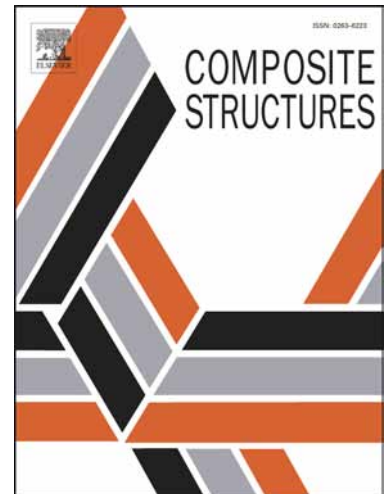
Reference: COST 7808

To appear in: *Composite Structures*

Received Date: 14 June 2016

Revised Date: 26 September 2016

Accepted Date: 26 September 2016



Please cite this article as: Yao, L., Sun, Y., Alderliesten, R.C., Benedictus, R., Zhao, M., Fibre bridging effect on the Paris relation for Mode I fatigue delamination growth in composites with consideration of interface configuration, *Composite Structures* (2016), doi: <http://dx.doi.org/10.1016/j.compstruct.2016.09.082>

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**Fibre bridging effect on the Paris relation for Mode I fatigue delamination
growth in composites with consideration of interface configuration**

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Abstract:

Fibre bridging can significantly enhance delamination resistance making the use of a single Paris resistance curve to determine fatigue crack growth insufficient. An empirical Paris-type relation has been developed in a previous study to take fibre bridging into account in fatigue delamination growth. This relation was developed by correlating the Paris constants C and n to the amount of fibre bridging. This paper provides a further investigation on the interface configuration effect on fatigue delamination growth, illustrating the significance of fibre bridging. The results demonstrated that more bridging fibres can be generated in a multidirectional interface, making both $\log(C)$ and n significantly depend on fibre bridging. Thus, the method proposed in the previous study is further extended to take into account of the interface configuration effect.

Keywords: Fatigue; Delamination; Fibre bridging; Interface configuration;

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