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Closure to "Discussion: 'On the Reference Length and Mode Mixity for a Bimaterial Interface' " (2008, ASME J. Eng. Mater. Technol., 130, p. 045501)

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Closure to “Discussion: ‘On the Reference Length and Mode Mixity for a Bimaterial Interface’ ”

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The method proposed by Agrawal and Karlsson [1] is correct when assuming a symmetric interfacial fracture toughness curve. Based on the resolution (e.g., the scatter in the data) from the

experimental results, an antisymmetric interfacial fracture toughness curve cannot be assumed, as suggested by Mantic [2]. However, if one anticipates an antisymmetric curve, the methodology outline in the first comment by Mantic [2] may be appropriate. Additional experiments are needed to achieve such results, so the characteristics of the minimum of the curve can be established.

In the second comment by Mantic [2], it is suggested that the characteristic reference length, \hat{l}_c , “has a clear physical meaning.” However, it is not evident what that would be. For a characteristic reference length to have a clear physical meaning, it must be a parameter that can be determined without any (or with minimum) testing.

We would like to thank V. Mantic for the interest in our paper [1] and the insightful comments.

References

- [1] Agrawal, A., and Karlsson, A. M., 2007, “On the Reference Length and Mode Mixity for a Bimaterial Interface,” *ASME J. Eng. Mater. Technol.*, **129**, pp. 580–587.
- [2] Mantic, V., 2008, “Discussion: “On the Reference Length and Mode Mixity for a Bimaterial Interface” (Agrawal, A., and Karlsson, A. M., 2007, *ASME J. Eng. Mater. Technol.* 129, pp. 580–587),” *ASME J. Eng. Mater. Technol.*, **130**(4), p. 045501.