

Interactive comment on “Evaluation of the criticality of cracks in ice shelves using finite element simulations” by C. Plate et al.

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In looking further into the subject, I read the famous paper by Rice (1968) where he derives the J-integral. At the end of his introduction he states:

"The J integral is identical in form to a static component of the "energy-momentum tensor" introduced by Eshelby to characterize generalized forces on dislocations and point defects in elastic fields."

This confirms the fact that the methodology used in the paper under discussion is closely tied to the alternative methodology for evaluation of stress intensity factors. The paper under discussion goes so far as to compute the Eshelby tensor everywhere (not just along a path integral, as is done in the J-integral).

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Interactive comment on The Cryosphere Discuss., 6, 469, 2012.