

DISCUSSION

Authors: Andrew, Warmbrodt, Eason

Ranganath Shastri: It is wonderful that somebody has invested much effort in addressing the data quality issue - by reviewing carefully the data that have been reported. Once the review process has been completed and the *best* data are identified, what is the mechanism for communicating them to design engineers or others with a need to use them?

Stephen Andrew (author's response): Currently, the communication mechanism that we have used is to present the results of our work at conferences such as this and through publication of technical papers and technical reports.

Richard Newley: The recommendation is made to minimize horizontal residuals. This results in a line of steeper slope through the data. It would appear that if the majority of crack life is at the small crack length, then the steeper curve is not the most conservative. Is this considered when advising on the application of reanalyzed data.

Stephen Andrew (author's response): When data have scatter and a slope greater than two, minimizing horizontal residuals gives a better representation of data than minimizing vertical residuals. The recommendation to use horizontal residuals is based on this observation. Dr Newley is correct in pointing out that, if most crack growth occurs at low ΔK levels, the horizontal residuals (ΔK) are less conservative than the vertical residuals. However, our objective in this work was to present the most representative fit to the data, rather than a conservative curve in any particular crack growth regime. Once this representative curve is determined, the appropriate degree of conservatism can be obtained by applying a factor to the curve.