

DISCUSSION

B. G. JOHNSON¹—My comments pertain to the stress-intensity ratio concept for predicting sustained load failure where the subcritical flaw growth mechanism might involve surface absorption and subsequent diffusion to the crack front. It has been postulated, for example, that surface-corrosion reactions remote from a crack can result in a crack grown by liberation of hydrogen which diffuses to the crack front. For such mechanisms, one might expect geometrical effects such as surface area

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and volume to affect correlation between test specimens and the actual part.

C. F. TIFFANY AND J. N. MASTERS (*authors*)—One of the most important areas of uncertainty in the application of the stress-intensity concept is the influence of environmental effects on subcritical flaw growth. In the case of hydrogen cracking we agree that specimen volume and surface area could be significant factors. This point is discussed in more detail in the panel discussion included in this symposium.²

² See p. 373.