

## ADDENDUM: THE STRESS FIELD FOR A BLUNT CRACK IN AN ANISOTROPIC MATERIAL\*

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The purpose of this addendum is to indicate an unusual result reported in the original Report of Current Research. By directly substituting  $z_1 = z_2 = a$  into (15) and using (11),  $\sigma_{yy}$  at the tip of the slender ellipse can be found as

$$\sigma_{yy} = \frac{K}{\sqrt{2\pi\rho}} \sqrt{2Im} \left( -\frac{1}{\mu_1} - \frac{1}{\mu_2} \right)$$

where  $K = p \sqrt{\pi a}$ ,  $\rho = b^2/a$ . Thus the rounding stress factor is read as

$$R = \sqrt{2Im} \left( \frac{1}{\mu_1} - \frac{1}{\mu_2} \right)$$

This value is different from the result reported earlier by using (20). This seems to indicate that the K-dominant region is so small that the asymptotical form of (20) can not be matched with  $1/\sqrt{z}$  as  $z \rightarrow \infty$ . In other words, (20) can only be applied in certain cases under specific conditions. For example, the crack tip region is an ellipse-like configuration but its size is so small that it is completely embedded in the K-dominant stress field of the crack. Nevertheless the exact reason is unclear at present and further investigation is required.

5 March 1995

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*\*International Journal of Fracture* 68 (1994)R41-R46