

ADDENDUM: "Crack Tip Opening Displacement for Work-Hardening Materials,"
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In the original paper*, the equation

$$\delta = 2 \left[\frac{2}{\sqrt{3}} \sigma_Y \frac{1+\nu}{E} \frac{1+n}{n/(1+n)} \right]^{1+n} \frac{\sin^2 70 \cos^2 35 K^2}{\pi \sigma_Y^2 (1+n)} \quad (1)$$

was derived which describes the crack tip opening for a work hardening material. This theoretical result will now be compared with recent fractographical work [1].

Fig. 1 shows measured and calculated crack tip opening displacements. The measurements were done on silicone rubber replicas of specimens loaded to three different load levels (austenitic steel), and directly on the crack surface of two specimens loaded to different load levels and subsequently re-fatigued (ferritic pressure vessel steel) [1]. The calculations were done using (1). Both the experimental and predicted values are in good coincidence.

[1] J. Heerens, and K. Aeberli, Work in progress.

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