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ERRATA: THE GENERALIZED PARTIAL CORRESPONDENCE PRINCIPLE IN LINEAR VISCOELASTICITY*

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The proof of the intermediate result (4.11) was flawed. A simple demonstration of this equation is given here. Consider

$$F(t') = \frac{1}{l_e}\int_{-\infty}^{t'} dt'' l(t' - t'')D(t'')$$

where

$$l(t) = l_0\delta(t) + l_1(t)$$

under two alternative histories: (1) where a sudden decrease of contact area from $a(t')$ to $a(t)$ occurs at time t' and is maintained until t; and (2) where the contact area follows its actual history. We have

$$F(t') = D_1(t') = \frac{l_0}{l_e}D_a(t') + S(t') \tag{1}$$

$$F(t') = D_2(t') = \frac{l_0}{l_e}D(t') + S(t') \tag{2}$$

where

$$S(t') = \frac{l}{l_e}\int_{-\infty}^{t'} dt'' l_1(t' - t'')D(t'')$$

where $D_a(t')$ is the indentation after the decrease in contact area. On the basis of a physical argument, we have that $D(t') \geq D_a(t')$ so that $D_1(t') \leq D_2(t')$. However from (4.12) in the paper, $D_1(t') = D_e(t') = D_e(t)$. The desired result follows. Equation (4.21) may be deduced in the same way.

The conclusions of the paper remain unaffected.

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