

## Transient Eigenstrains Without Incremental Displacements in a Hyperelastic Body

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We consider a hyperelastic body in a static intermediate configuration, loaded by an additional distribution of transient eigenstrains, the latter being e.g. due to the electric field in a piezoelectric body, or due to the temperature in a thermoelastic body. We seek for distributions of eigenstrain, such that the incremental displacements vanish throughout the body. In the present paper, within the framework of the theory of small dynamic deformations superimposed upon a static strain, we derive solutions for eigenstrains that are applied at a sub-region of the body only.

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