

Exercise V-7

Given:

A deformed homogeneous body made of an isotropic linear elastic material ($E=2\text{GPa}$, and $\nu = 0.25$), has the displacement field:

$$u_1 = x_1 x_3$$

$$u_2 = -x_1 x_2$$

$$u_3 = x_1^2 - x_3^2$$

Questions:

a) Compute the components of the strain tensor.