Projet d'élément finis (LMECA1120) 2015: Rapport

Simon Boigelot - Edward Nicol
72251300 - 27101300

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Equations :

$$\frac{E-E\nu}{(1+\nu)(1-2\nu)}\frac{\partial^2 u}{\partial x^2}+\frac{E}{2(1+\nu)}\left(\frac{\partial^2 u}{\partial y^2}+\frac{\partial^2 u}{\partial z^2}\right)+\frac{E}{2(1+\nu)(1-2\nu)}\left(\frac{\partial^2 v}{\partial x\partial y}+\frac{\partial^2 w}{\partial x\partial z}\right)=0$$

$$\frac{E-E\nu}{(1+\nu)(1-2\nu)}\frac{\partial^2 v}{\partial y^2}+\frac{E}{2(1+\nu)}\left(\frac{\partial^2 v}{\partial x^2}+\frac{\partial^2 v}{\partial z^2}\right)+\frac{E}{2(1+\nu)(1-2\nu)}\left(\frac{\partial^2 u}{\partial x\partial y}+\frac{\partial^2 w}{\partial y\partial z}\right)=0$$

$$\frac{E-E\nu}{(1+\nu)(1-2\nu)}\frac{\partial^2 w}{\partial z^2}+\frac{E}{2(1+\nu)}\left(\frac{\partial^2 w}{\partial x^2}+\frac{\partial^2 w}{\partial y^2}\right)+\frac{E}{2(1+\nu)(1-2\nu)}\left(\frac{\partial^2 u}{\partial x\partial z}+\frac{\partial^2 v}{\partial y\partial z}\right)=0$$