

Hello dear all

Consider the following wave motion equation:

$$\frac{\partial}{\partial x} \left[ (\lambda + 2\lambda) \frac{\partial u}{\partial x} - \beta \tau \right] - \rho \frac{\partial^2 u}{\partial t^2} = 0$$

When:

$$\sigma_x = (\lambda + 2\lambda) \frac{\partial u}{\partial x} - \beta \tau$$

We can do the weak formulation in two form:

$$1) \int \left[ -\frac{\partial w}{\partial x} \left[ (\lambda + 2\lambda) \frac{\partial u}{\partial x} - \beta \tau \right] - w \rho \frac{\partial^2 u}{\partial t^2} \right] dx + \left[ (\lambda + 2\lambda) \frac{\partial u}{\partial x} - \beta \tau \right] = 0$$

$$2) \int \left[ -\frac{\partial w}{\partial x} (\lambda + 2\lambda) \frac{\partial u}{\partial x} - w \beta \frac{\partial \tau}{\partial x} - w \rho \frac{\partial^2 u}{\partial t^2} \right] dx + \left[ (\lambda + 2\lambda) \frac{\partial u}{\partial x} \right] = 0$$

It's my pleasure that a dear tell me which one is correct??