The equation is the same as previous problem. Only difference is, the elastic tensor D_{ijkl} is a function of η now.

$$\sigma_{ij,i} = 0$$

in which

$$\begin{aligned}
\sigma_{ij} &= D_{ijkl}\epsilon_{kl}^{ela} \\
&= \Big(\frac{\eta_{\gamma'} - \eta}{\eta_{\gamma'} - \eta_{\gamma}} D_{ijkl}^{\gamma} + \frac{\eta - \eta_{\gamma}}{\eta_{\gamma'} - \eta_{\gamma}} D_{ijkl}^{\gamma'}\Big)(\epsilon_{kl} - \epsilon_{kl}^{0}) \\
&= \Big(\frac{\eta_{\gamma'} - \eta}{\eta_{\gamma'} - \eta_{\gamma}} D_{ijkl}^{\gamma} + \frac{\eta - \eta_{\gamma}}{\eta_{\gamma'} - \eta_{\gamma}} D_{ijkl}^{\gamma'}\Big)\Big[\frac{1}{2}(\frac{\partial u_k}{\partial x_l} + \frac{\partial u_l}{\partial x_k}) - \eta\epsilon_{kl}^{00}\Big]
\end{aligned}$$

where

$\eta_{\gamma'}$ and η_{γ} are constant scalars(numbers). η is actually $\eta = \eta(\vec{r})$ a scalar field.

$D_{ijkl}^{\gamma'}$ and D_{ijkl}^{γ} are constant elastic tensors. ϵ_{kl}^{00} is constant strain tensor.