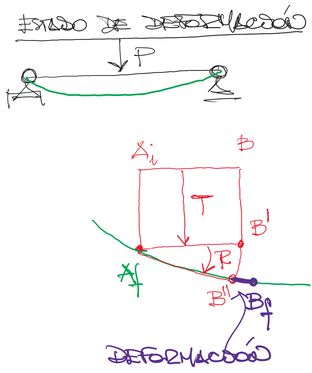
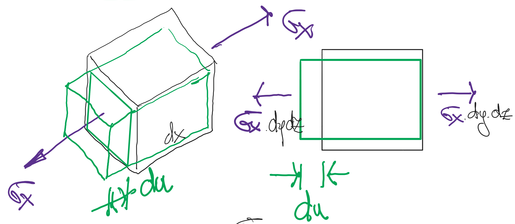
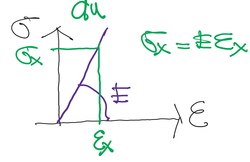




$$\mu = -\frac{\varepsilon_T}{\varepsilon_L}$$



$$\sigma_x = E\varepsilon_x$$

	X	Y	Z
ε_x	σ_x/E	$-\mu\sigma_x/E$	$-\mu\sigma_x/E$
ε_y	$-\mu\sigma_y/E$	σ_y/E	$-\mu\sigma_y/E$
ε_z	$-\mu\sigma_z/E$	$-\mu\sigma_z/E$	σ_z/E

$$\varepsilon_x = \frac{\sigma_x}{E} - \mu\frac{\sigma_y}{E} - \mu\frac{\sigma_z}{E}$$

$$\varepsilon_y = -\mu\frac{\sigma_x}{E} + \frac{\sigma_y}{E} - \mu\frac{\sigma_z}{E}$$

$$\varepsilon_z = -\mu\frac{\sigma_x}{E} - \mu\frac{\sigma_y}{E} + \frac{\sigma_z}{E}$$

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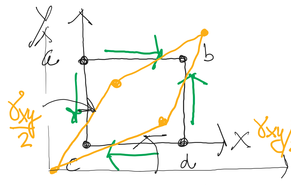
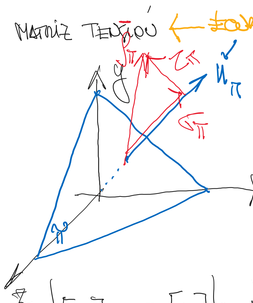


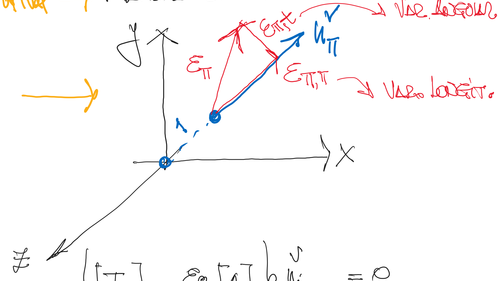
$$\gamma_{xy} = \frac{\tau_{xy}}{G}$$

$$\begin{Bmatrix} \varepsilon_x \\ \varepsilon_y \\ \varepsilon_z \\ \gamma_{xy} \\ \gamma_{yz} \\ \gamma_{zx} \end{Bmatrix} = \begin{bmatrix} 1/E & -\mu/E & -\mu/E & 0 & 0 & 0 \\ -\mu/E & 1/E & -\mu/E & 0 & 0 & 0 \\ -\mu/E & -\mu/E & 1/E & 0 & 0 & 0 \\ 0 & 0 & 0 & 1/G & 0 & 0 \\ 0 & 0 & 0 & 0 & 1/G & 0 \\ 0 & 0 & 0 & 0 & 0 & 1/G \end{bmatrix} \begin{Bmatrix} \sigma_x \\ \sigma_y \\ \sigma_z \\ \tau_{xy} \\ \tau_{yz} \\ \tau_{zx} \end{Bmatrix}$$

$$[T_T] = \begin{bmatrix} \sigma_x & \tau_{xy} & \tau_{xz} \\ \tau_{yx} & \sigma_y & \tau_{yz} \\ \tau_{zx} & \tau_{zy} & \sigma_z \end{bmatrix} \rightarrow T_D = \begin{bmatrix} \varepsilon_x & \gamma_{xy}/2 & \gamma_{xz}/2 \\ \gamma_{yx}/2 & \varepsilon_y & \gamma_{yz}/2 \\ \gamma_{zx}/2 & \gamma_{zy}/2 & \varepsilon_z \end{bmatrix}$$

MATRIZ TENSIÓN ← ECUACIONES CONSTITUTIVAS → MATRIZ DEFORMACIÓN





$$\left\{[T_T] - \sigma_i[1]\right\} \cdot \vec{u}_i = 0$$

AUTOVALORES $\sigma_1 ; \sigma_2 ; \sigma_3$ AUTOVECTORES $\vec{u}_1 ; \vec{u}_2 ; \vec{u}_3$

$$[T_{Tp}] = \begin{bmatrix} \sigma_1 & & \\ & \sigma_2 & \\ & & \sigma_3 \end{bmatrix}$$

$$\left\{[T_D] - \varepsilon_i[1]\right\} \cdot \vec{u}_i = 0$$

AUTOVALORES $\varepsilon_1 ; \varepsilon_2 ; \varepsilon_3$ AUTOVECTORES $\vec{u}_1 ; \vec{u}_2 ; \vec{u}_3$

$$[T_{Dp}] = \begin{bmatrix} \varepsilon_1 & & \\ & \varepsilon_2 & \\ & & \varepsilon_3 \end{bmatrix}$$

$$\varepsilon_1 = \frac{\sigma_1}{E} - \mu\frac{\sigma_2}{E} - \mu\frac{\sigma_3}{E}$$

$$\varepsilon_2 = -\mu\frac{\sigma_1}{E} + \frac{\sigma_2}{E} - \mu\frac{\sigma_3}{E}$$

$$\varepsilon_3 = -\mu\frac{\sigma_1}{E} - \mu\frac{\sigma_2}{E} + \frac{\sigma_3}{E}$$