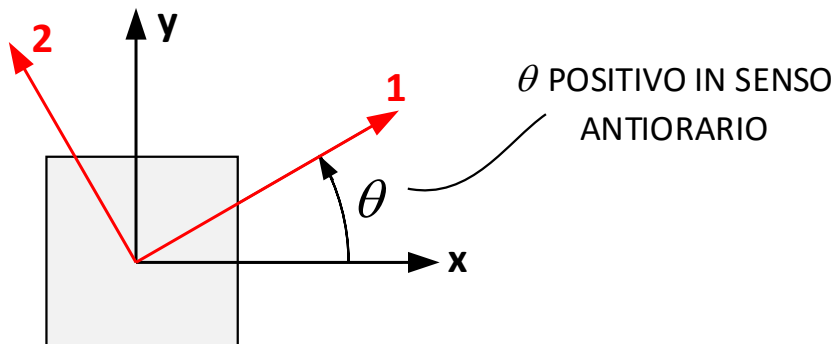


VETTORI DEGLI SFORZI $\{\sigma\}$ E DELLE DEFORMAZIONI $\{\varepsilon\}$

CAMBIAMENTO DI RIFERIMENTO



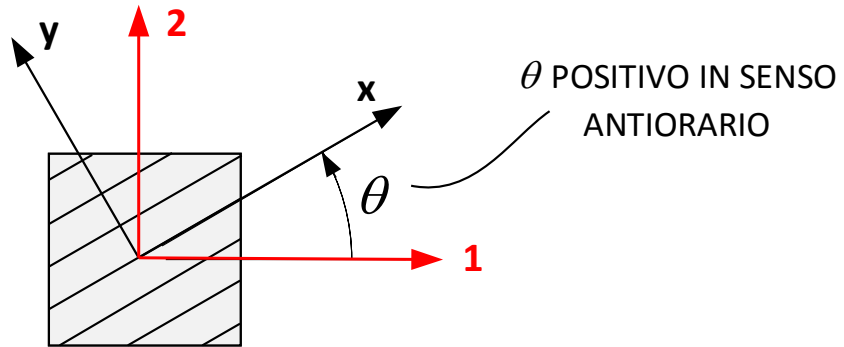
$$m = \cos(\theta)$$
$$n = \sin(\theta)$$

$$\{\sigma\}_{12} = [T_\sigma] \cdot \{\sigma\}_{xy} \Rightarrow \begin{Bmatrix} \sigma_1 \\ \sigma_2 \\ \sigma_6 \end{Bmatrix} = \begin{bmatrix} m^2 & n^2 & 2mn \\ n^2 & m^2 & -2mn \\ -mn & mn & m^2 - n^2 \end{bmatrix} \begin{Bmatrix} \sigma_x \\ \sigma_y \\ \sigma_s \end{Bmatrix}$$

$$\{\varepsilon\}_{12} = [T_\varepsilon] \cdot \{\varepsilon\}_{xy} \Rightarrow \begin{Bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_6 \end{Bmatrix} = \begin{bmatrix} m^2 & n^2 & mn \\ n^2 & m^2 & -mn \\ -2mn & 2mn & m^2 - n^2 \end{bmatrix} \begin{Bmatrix} \varepsilon_x \\ \varepsilon_y \\ \varepsilon_s \end{Bmatrix}$$

MATRICI DI RIGIDEZZA [Q] E DI CEDEVOLEZZA [S]

CAMBIAMENTO DI RIFERIMENTO DAL SISTEMA LOCALE (DI ORTOTROPIA) x-y AL SISTEMA GLOBALE 1-2



$$m = \cos(\theta)$$

$$n = \sin(\theta)$$

	Q_{xx}	Q_{yy}	Q_{xy}	Q_{ss}
Q_{11}	m^4	n^4	$2m^2n^2$	$4m^2n^2$
Q_{22}	n^4	m^4	$2m^2n^2$	$4m^2n^2$
Q_{12}	m^2n^2	m^2n^2	m^4+n^4	$-4m^2n^2$
Q_{66}	m^2n^2	m^2n^2	$-2m^2n^2$	$(m^2-n^2)^2$
Q_{16}	m^3n	$-mn^3$	mn^3-m^3n	$2(mn^3-m^3n)$
Q_{26}	mn^3	$-m^3n$	m^3n-mn^3	$2(m^3n-mn^3)$

	S_{xx}	S_{yy}	S_{xy}	S_{ss}
S_{11}	m^4	n^4	$2m^2n^2$	m^2n^2
S_{22}	n^4	m^4	$2m^2n^2$	m^2n^2
S_{12}	m^2n^2	m^2n^2	m^4+n^4	$-m^2n^2$
S_{66}	$4m^2n^2$	$4m^2n^2$	$-8m^2n^2$	$(m^2-n^2)^2$
S_{16}	$2m^3n$	$-2mn^3$	$2(mn^3-m^3n)$	mn^3-m^3n
S_{26}	$2mn^3$	$-2m^3n$	$2(m^3n-mn^3)$	m^3n-mn^3