

Errors in Chapter 3:

Pg 129

Relations relating shear strains to normal stresses (equations 5, 6, and 7) are incorrect.

Corrected equations:

$$\gamma_{xz} = \frac{\eta_{xx,xy}}{E_{xx}} \sigma_{xx} \quad \gamma_{xz} = \frac{\eta_{xx,xz}}{E_{xx}} \sigma_{xx} \quad \gamma_{yz} = \frac{\eta_{xx,yz}}{E_{xx}} \sigma_{xx} \quad (5)$$

$$\gamma_{xy} = \frac{\eta_{yy,xy}}{E_{yy}} \sigma_{yy} \quad \gamma_{xz} = \frac{\eta_{yy,xz}}{E_{yy}} \sigma_{yy} \quad \gamma_{yz} = \frac{\eta_{yy,yz}}{E_{yy}} \sigma_{yy} \quad (6)$$

$$\gamma_{xy} = \frac{\eta_{zz,xy}}{E_{zz}} \sigma_{zz} \quad \gamma_{xz} = \frac{\eta_{zz,xz}}{E_{zz}} \sigma_{zz} \quad \gamma_{yz} = \frac{\eta_{zz,yz}}{E_{zz}} \sigma_{zz} \quad (7)$$

Pg 150

A sentence that appears three lines from the top of the page should read:

"Similarly, the strain at failure is denoted ε_{11}^{fT} or ε_{11}^{fC} ."

(As printed, ε_{22}^{fC} appears rather than ε_{11}^{fC} .)

Pg. 153

A row of information is missing in Table 3. The last row in the table should be as follows:

Thickness	0.125 mm (0.005 in)	0.125 mm (0.005 in)	0.125 mm (0.005 in)
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Pg 161, Homework Problem 1:

The problem statement is in error, and needed information is missing. The problem should read:

1. An anisotropic material is known to have the following elastic properties:

$E_{xx} = 100 \text{ GPa}$	$E_{yy} = 200 \text{ GPa}$	$E_{zz} = 75 \text{ GPa}$
$\nu_{xy} = 0.20$	$\nu_{xz} = -0.25$	$\nu_{yz} = 0.60$
$\nu_{yx} = 0.40$	$\nu_{zx} = -0.1875$	$\nu_{zy} = 0.225$
$G_{xy} = 60 \text{ GPa}$	$G_{xz} = 75 \text{ GPa}$	$G_{yz} = 50 \text{ GPa}$
$\eta_{xx,xy} = -0.30$	$\eta_{xx,xz} = 0.25$	$\eta_{xx,yz} = 0.30$
$\eta_{yy,xy} = 0.60$	$\eta_{yy,xz} = 0.75$	$\eta_{yy,yz} = 0.20$
$\eta_{zz,xy} = -0.20$	$\eta_{zz,xz} = -0.05$	$\eta_{zz,yz} = -0.15$
$\eta_{xy,xx} = -0.18$	$\eta_{xy,yy} = 0.18$	$\eta_{xy,zz} = -0.16$
$\eta_{xz,xx} = 0.19$	$\eta_{xz,yy} = 0.28$	$\eta_{xz,zz} = -0.05$
$\eta_{yz,xx} = 0.15$	$\eta_{yz,yy} = 0.05$	$\eta_{yz,zz} = -0.10$

$$\mu_{xy,xz} = -0.10$$

$$\mu_{xy,yz} = -0.05$$

$$\mu_{xz,yz} = 0.10$$

$$\mu_{xz,xy} = -0.12$$

$$\mu_{yz,xy} = -0.042$$

$$\mu_{yz,xz} = 0.067$$

Pg 162, Homework Problem 2:

Needed information is missing. The problem statement should read:

$$E_{11} = 100 \text{ GPa}$$

$$E_{22} = 200 \text{ GPa}$$

$$E_{33} = 75 \text{ GPa}$$

$$\nu_{12} = 0.20$$

$$\nu_{13} = -0.25$$

$$\nu_{23} = 0.60$$

$$\nu_{21} = 0.40$$

$$\nu_{31} = -0.19$$

$$\nu_{32} = 0.22$$

$$G_{12} = 60 \text{ GPa}$$

$$G_{13} = 75 \text{ GPa}$$

$$G_{23} = 50 \text{ GPa}$$

Pg 164, Homework Problem 4, part (c):

Part (c) cannot be solved as stated. A re-wording of part (c) is:

"(c) In Chapter 4 it will be seen that $\nu_{21} = \nu_{12}(E_{22} / E_{11})$. Determine ν_{21} for this composite material system. "