

# Download File PDF Solution Manual Advanced Strength And Applied Elasticity 2th Ed

#Jenny



Finally I get this ebook, thanks for all these I can get now!

#Rio



Cool! I'am really happy

#Markus Jensen



I did not think that this would work, my best friend showed me this website, and it does! I get my most wanted eBook

#Hun Tsu



wtf this great ebook for free?!

#Che Salsa



My friends are so mad that they do not know how I have all the high quality ebook which they do not!

#Diego Butler



so many fake sites. this is the first one which worked! Many thanks

Click here to Purchase full Solution Manual at <http://solutionmanuals.info>

**CHAPTER 3**

**SOLUTION (1.1)**

(1) We obtain  
 $\frac{\partial^2 \Phi}{\partial x^2} = -12px$ ,  $\frac{\partial^2 \Phi}{\partial y^2} = 0$ ,  $\frac{\partial^2 \Phi}{\partial z^2} = 6py$   
Thus,  $\nabla^2 \Phi = -12px + 2(6py) = 0$   
and the given stress field represents a possible solution.

(2)  $\frac{\partial^2 \Phi}{\partial x^2} = pxy^2 - 2px^2y$   
Integrating twice  
 $\Phi = \frac{px^3}{6} - \frac{pxy^3}{3} + f_1(x)y + f_2(y)$   
The above is substituted into  $\nabla^2 \Phi = 0$  to obtain  
 $\frac{d^2 f_1}{dx^2} + \frac{d^2 f_2}{dy^2} = 0$   
This is possible only if  
 $\frac{d^2 f_1}{dx^2} = 0$ ,  $\frac{d^2 f_2}{dy^2} = 0$   
We find then  
 $f_1 = c_1x^2 + c_2x + c_3$   
 $f_2 = c_4y^2 + c_5y + c_6$   
Therefore,  
 $\Phi = \frac{px^3}{6} - \frac{pxy^3}{3} + (c_1x^2 + c_2x + c_3)y + c_4y^2 + c_5y + c_6$

(3) Edge  $y=0$   
 $T_x = \int_0^t \sigma_{xx} dy = \int_0^t (2px^2 + c_1) dy = 2pxt + c_1t$   
 $T_y = \int_0^t \sigma_{xy} dy = \int_0^t 0 dy = 0$   
Edge  $y=h$   
 $T_x = \int_0^t (-\frac{1}{3}px^3 + px^2 + \frac{2}{3}px + c_1) dy$   
 $= -\frac{1}{3}px^3(h - 0) + px^2(h - 0) + \frac{2}{3}px(h - 0) + c_1(h - 0)$   
 $T_y = \int_0^t (px^2 - 2px^2) dy = 0$

**SOLUTION (1.2)**

Edge  $x = at$   
 $\tau_{xz} = 0$ :  $-\frac{1}{3}pa^3y^3 + c_1y^3 + \frac{1}{2}pa^2y^2 + c_2y = 0$   
 $\tau_{yz} = 0$ :  $-\frac{1}{3}pa^3y^3 + c_1y^3 + \frac{1}{2}pa^2y^2 + c_2y = 0$   
Adding:  $(-\frac{1}{3}pa^3 + 2c_1)y^3 + pa^2y^2 + 2c_2y = 0$

(CONT.)

[Download PDF version of :](#)  
**Solution Manual Advanced Strength And Applied Elasticity 2th Ed**