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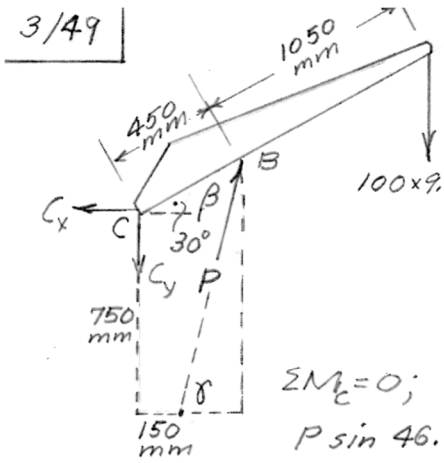

$P = p\frac{\pi d^2}{4}$, $p = \frac{4P}{\pi(0.080)^2}$

$\beta = \gamma - 30°$

$\gamma = \tan^{-1}\frac{750 + 450\sin 30°}{450\cos 30° - 150}$

$= \tan^{-1} 4.07 = 76.2°$

$\beta = 76.2 - 30 = 46.2°$

$\Sigma M_C = 0$;

$P\sin 46.2°(450) - 981(1500\cos 30°) = 0$

$P = 3924$ N, $p = \frac{4(3924)}{\pi(0.080)^2} = 780.7 \times 10^3$ N/m^2

or $p = 781$ kPa

$\Sigma F_x = 0$; $C_x - 3923\cos 76.2° = 0$

$C_x = 937$ N

$\Sigma F_y = 0$; $C_y + 981 - 3924\sin 76.2° = 0$, $C_y = 2830$ N

$C = \sqrt{(937)^2 + (2830)^2} = 2980$ N