

(d) Further 48 hrs later...

$$\begin{aligned} \epsilon_1 &= 5.1 \times 10^{-3} && \text{for 72 Hours} \\ \epsilon_2 &= 4.8 \times 10^{-3} && \text{u 48 Hours} \end{aligned}$$

$$\begin{aligned} \delta &= (5.1 \times 10^{-3})(5 \times 10^9) \exp(-72^{\frac{1}{3}}) \\ &\quad + (4.8 \times 10^{-3})(5 \times 10^9) \exp(-48^{\frac{1}{3}}) \end{aligned}$$

$$= 4 \times 10^5 + 6.4 \times 10^5 \text{ Pa}$$

$$\delta = 10.4 \times 10^5 \text{ Pa} \approx 1.04 \text{ MPa}$$

$$F = \delta A = (1.04 \times 10^6)(7.85 \times 10^{-5})$$

$$F = 81.64 \text{ N}$$

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note we can work with  
 $\Delta \delta$  or  $\Delta \epsilon$ .