• From your book: 11.50, 11.51, 11.54 and supplements 1

1. (Supplement 1)

   (a) A cross section of a slit square tube of constant thickness $t$ is shown in Figure 1. Derive the distance $e$ from the corner of the cross section to the shear center $S$.

   (b) If load $P$ is not applied at $S$ but at point $A$, find the twisting moment about the $x$ axis (which is normal to the plane of the figure).

![Figure 1: A diagram for problem 1](image-url)