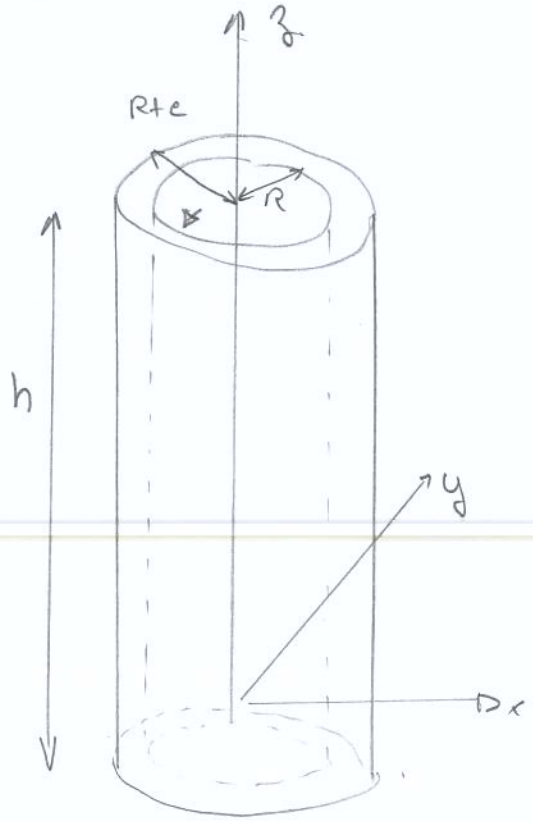
Practice on stresses

We consider a circular tube (h, R) thickness $= e$. It is submitted to an internal pressure p, gravity is neglected (as well as atmospheric pressure)



Q1) Verify that a static solution does exist?

We assume that $\underline{\underline{\sigma}}$ does only depend on r (the polar radius)

Q2) Find all the local equations satisfied by $\underline{\underline{\sigma}}(r)$ that define the static admissibility? Prove that $\sigma_{r\theta} = 0$ with the assumption $\underline{\underline{\sigma}}(r)$?