# Practice:
# Tube under internal pressure

Let us consider a circular tube with height $h$, and internal radius $r$, and thickness $e$. The tube is imposed to internal pressure $p$ (see Fig. 1). Note that gravity and atmospheric pressure are neglected.

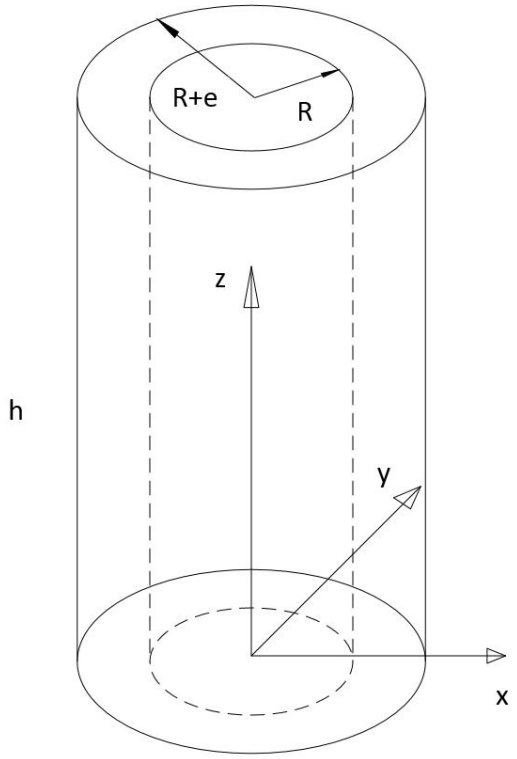


Figure 1: Circular tube under internal pressure

**Question 1:** Please verify that a static solution exist! Assume that $\underline{\underline{\sigma}}$ only depends on $r$ (the polar radius)

**Question 2:** 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 $\underline{\underline{\sigma}}(r)$?