# Thin-walled ring under internal pressure

Suppose: A thin-walled circular ring with a length of b, an inner diameter of d = 200mm, and a wall thickness of mm is subjected to an internal pressure of p = 2MPa, as shown in the figure. Calculate the tensile stress on the radial section of the circular ring.

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## Hand calculation

### Split the thin-walled ring at the center

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### Hand calculation

According to the equilibrium equation:

Suppose: when , it can be considered that the normal stress on the radial section is uniformly distributed.