Class 13 Highlights John-Morgan Manos

In class 13, we discussed what made Mohr circles actually circles in stress-space which is due to the relationship between normal stress, shear stress, and the principal stresses derived from the three principal equations. We also identified that from the equations for n_1, n_2, and n_3, we can create the 3 circles that comprise the Mohr's circle and showed that all states of stress must lie in on the edge of circles 1, 2, or 3, or be contained within circle 2, but outside of circles 1 and 3. In addition, we described the traction vector in the cartesian coordinate system and described its relation to the Mohr's circles in stress-space.

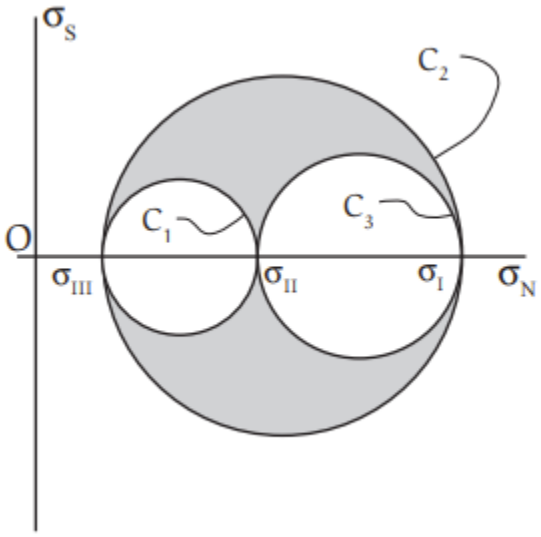

Figure 3.13 from the text[1] (page 75) for your convenience.

1: Mase, G. T., Smelser, R. E., & Mase, G. E. (2009). Continuum mechanics for engineers. Taylor & Francis Group.