ANSYS AIM - Taylor-Couette Flow between Rotating Cylinders

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Taylor-Couette Flow between Rotating Cylinders

Created using ANSYS 18.1

Problem Specification

A viscous fluid is between two concentric cylinders of radii a and b, which are rotating at constant angular velocities. The diagram below shows these two cylinders and their respective angular velocities. In this problem, $a = 1[m]$ $b = 2a$ and $\omega_2 = 0\ [rad/s]$ but the velocity of the inner wall must be calculated to create the Taylor-Couette phenomenon. Find the velocity vectors that are characteristic of the Taylor-Couette flow.

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