VISUALIZING TRANSIENT FLOW OVER A RIGHT CIRCULAR CYLINDER

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ABSTRACT

This simulation is to study the changes in flow properties over the surface of a cylindrical body when placed in a laminar flow. The main objective of this simulation is to collect the following data-

- ✓ Analyze variation of flow parameters (pressure and velocity).
- ✓ Analyze variation of force coefficients (C_d and C_l).
- ✓ Visualization of Karman Vortex Street.

Procedure-

- Creating a 3D mesh by Gmsh
- Set boundary/initial conditions (BC/IC)
- Mesh imported in to OpenFOAM
- Solver: pisoFoam
- Post-processing in Paraview and Gnuplot.

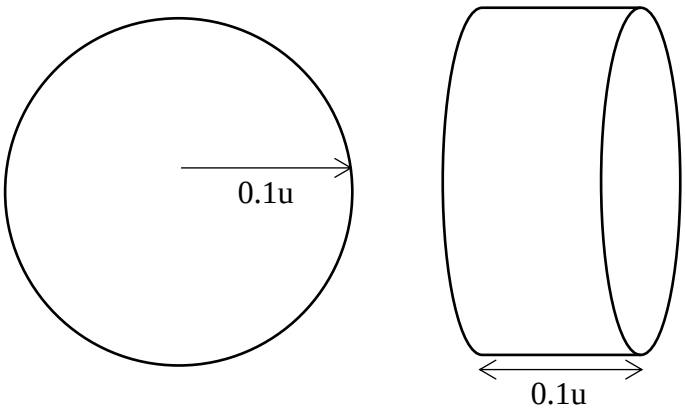

Fig.- Geometry of cylinder.