Radial Heat Conduction Through Hollow Cylinder

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Abstract

A hollow cylinder is created using Gmsh4.5. 6 software and meshing is done by using the same. Its inner radius is 15cm, while outer radius is 35cm. Inner and outer radius is subjected to constant temperature of 320K and 280K respectively. While initial temperature of geometry is taken as 300K. To simulate the 2-dimesional case "Top" and "Bottom" faces are taken as "empty" type. Since it is only diffusion in solid,so steady sate simulation is done by using "laplacianFoam" and analysis of temperature profile/variation within the material is done in radial direction

Geometry & Meshing: Geometry and meshing are done by using Gmsh4.5. 6 software

Inner Radius = 15cm
Outer Radius = 35cm
Thickness = 1cm