ANSYS AIM - Heat Conduction in a Hollow Cylinder

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Heat Conduction in a Cylinder

Created using ANSYS AIM 18.1

Problem Specification

Consider the hollow cylinder pictured below with outer radius (ro=3.25in), inner radius (ri=1.75in) and length (l=10 ft). The temperature at the inner radius of the cylinder is 400 degrees Fahrenheit while the outside radius of the cylinder is 80 degrees Fahrenheit with a coefficient of heat transfer of 0.04 Btuh*ftF.

In this tutorial, we will utilize ANSYS AIM to find the temperature throughout the pipe, total heat flux and directional heat flux.

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