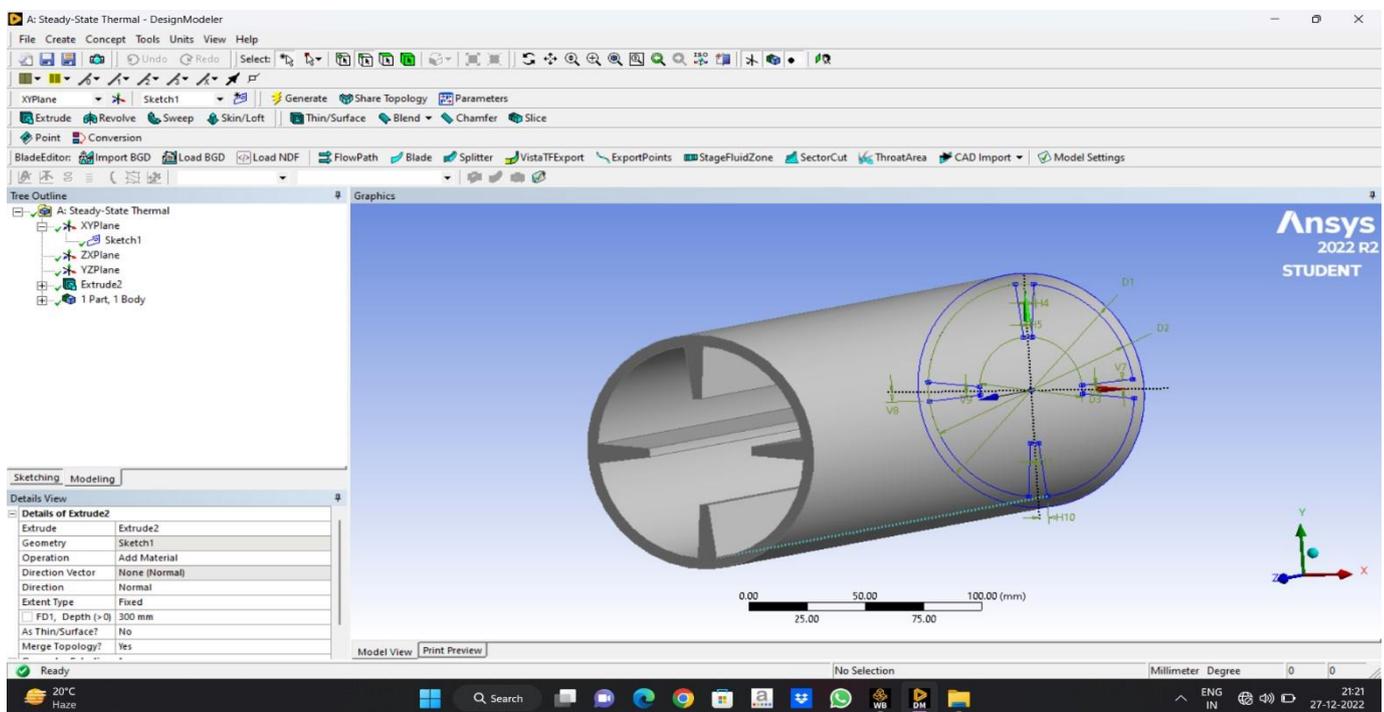# Department of Mechanical Engineering

REPORT OF SKILL BASED MINI PROJECT

Heat and Mass Transfer (120513)

Title of Project: THERMAL ANALYSIS OF HEAT PIPE **Introduction:**

In this project we did thermal analysis of heat pipe in ansys workbench and find temperature difference and total heat flux

Heat transfer pipe Model

Engineering data:

1.Material = copper alloy   2.Length of pipe = 300 mm   3.Poisson ratio = 0.34   4.Young's modulus = 110Gpa

5.Thermal expansion Coefficient = $1.8*10e-5/C$ 6.Thermal conductivity = 380W/moc

7.Film coefficient interior = 100W/(m2c)   8.Film coefficient exterior = 30W/(m2c)   9.Density = 8330 kg / m3
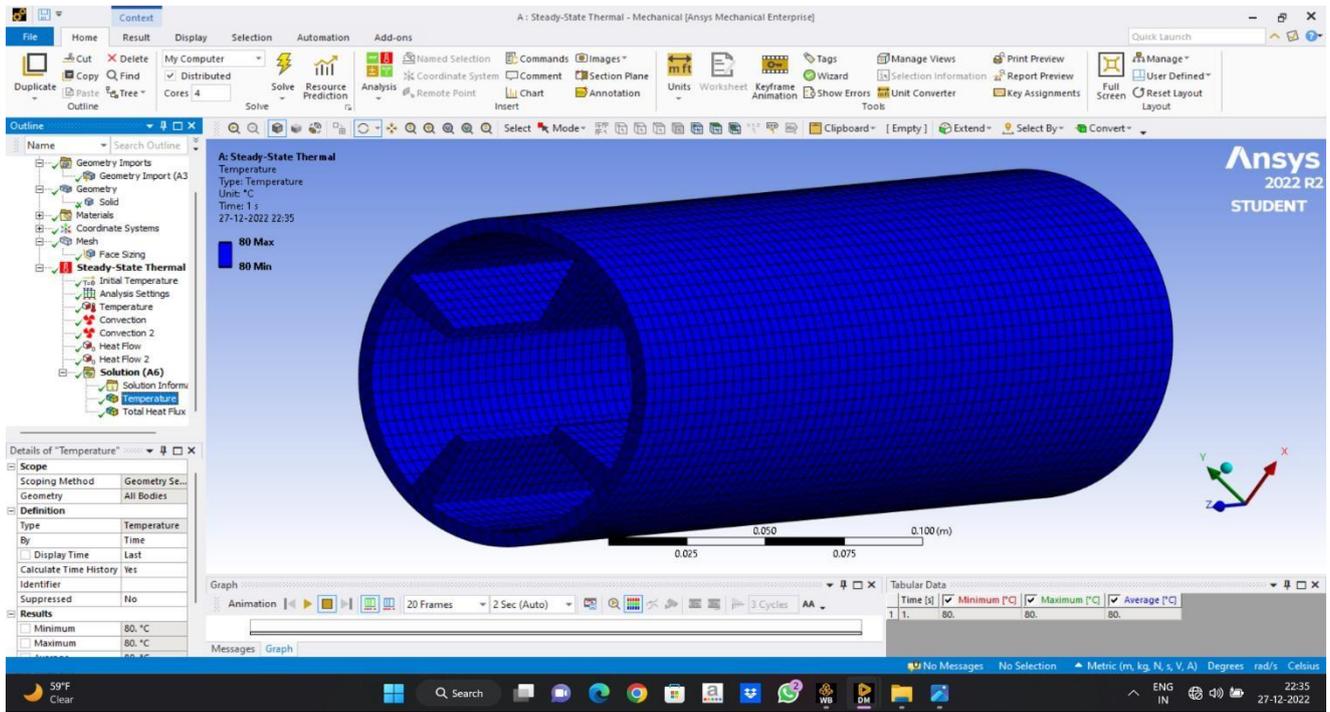
10.Specific heat = 385 j/oc/kg **Boundary condition :**
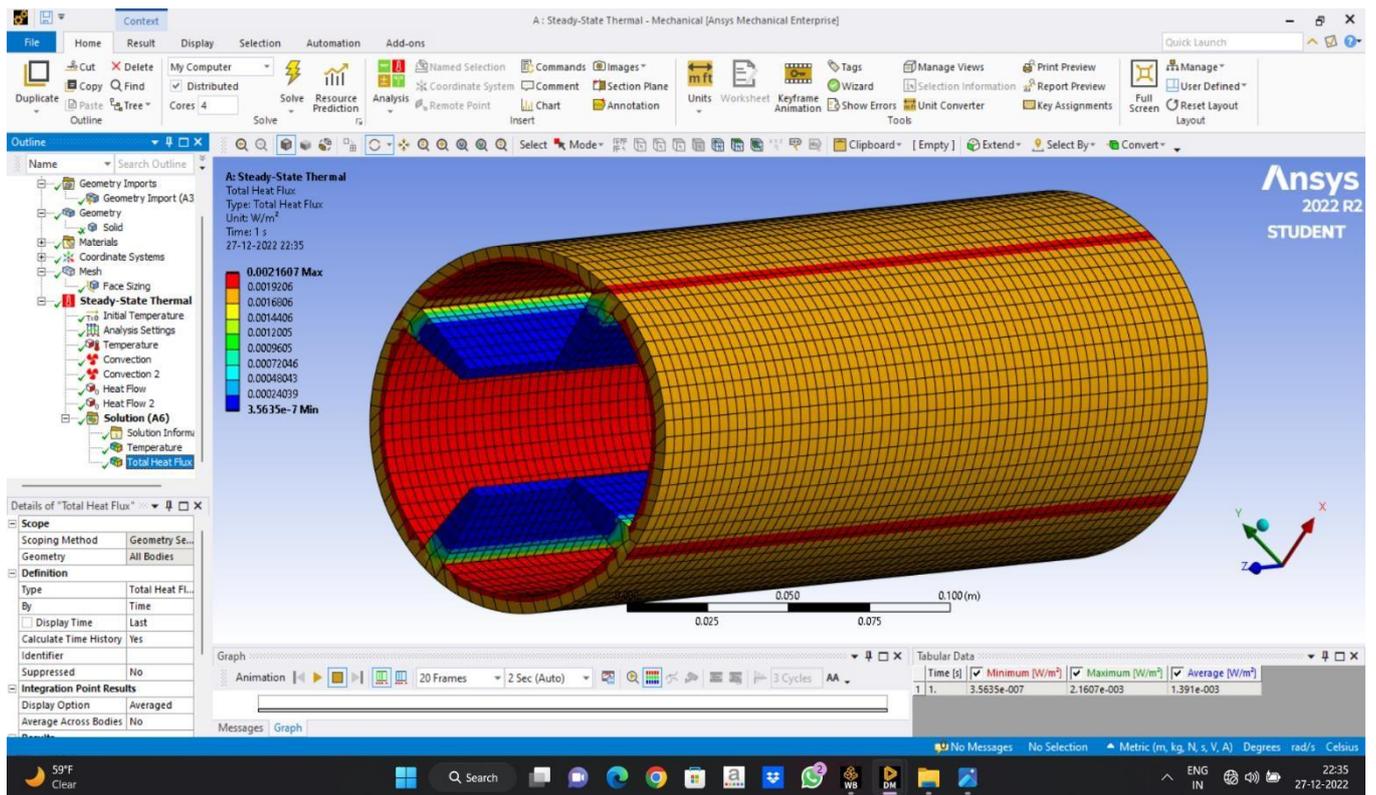
Both end insulated and fixed

Internal temperature = 80C

External temperature = 20C

Result:

temperature difference-

total heat flux-

SUBMITTED BY

TO

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0901ME213D05

CLASS: V^TH SEM MECHANICAL ENGINNERING

SUBMITTED

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