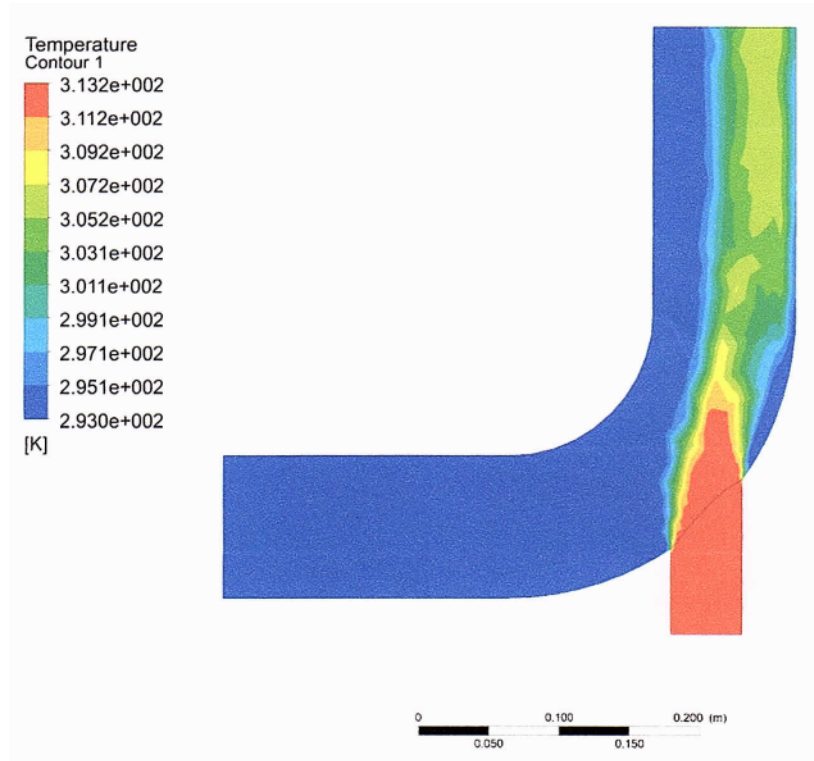
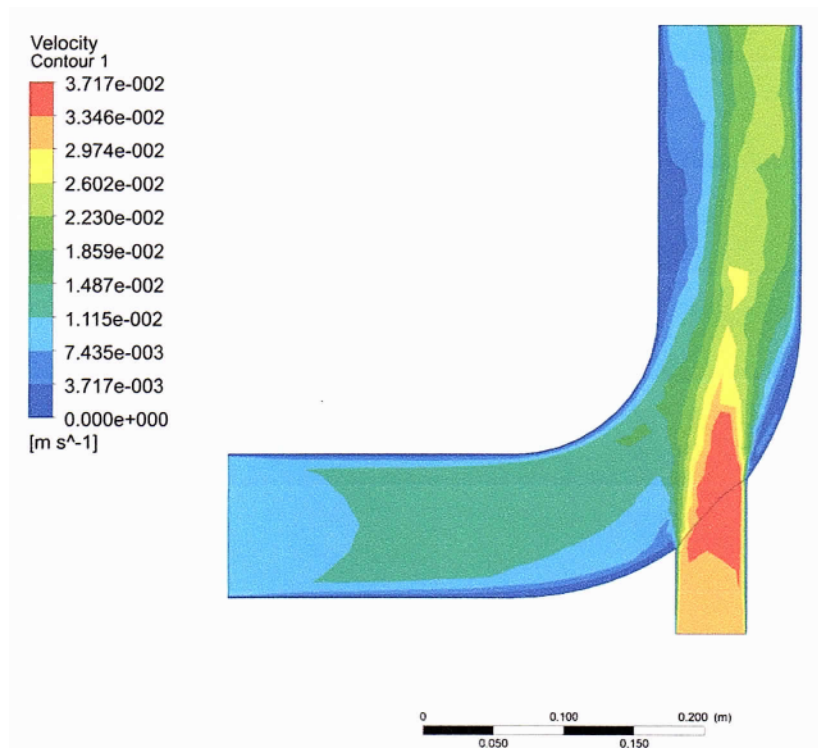


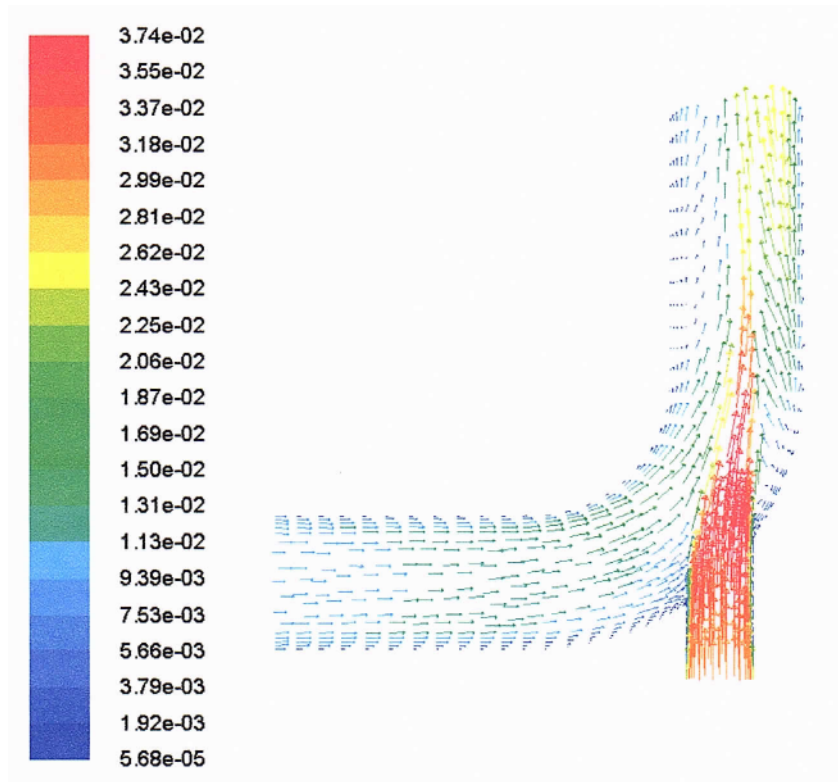
Task 1



Temperature contour plot

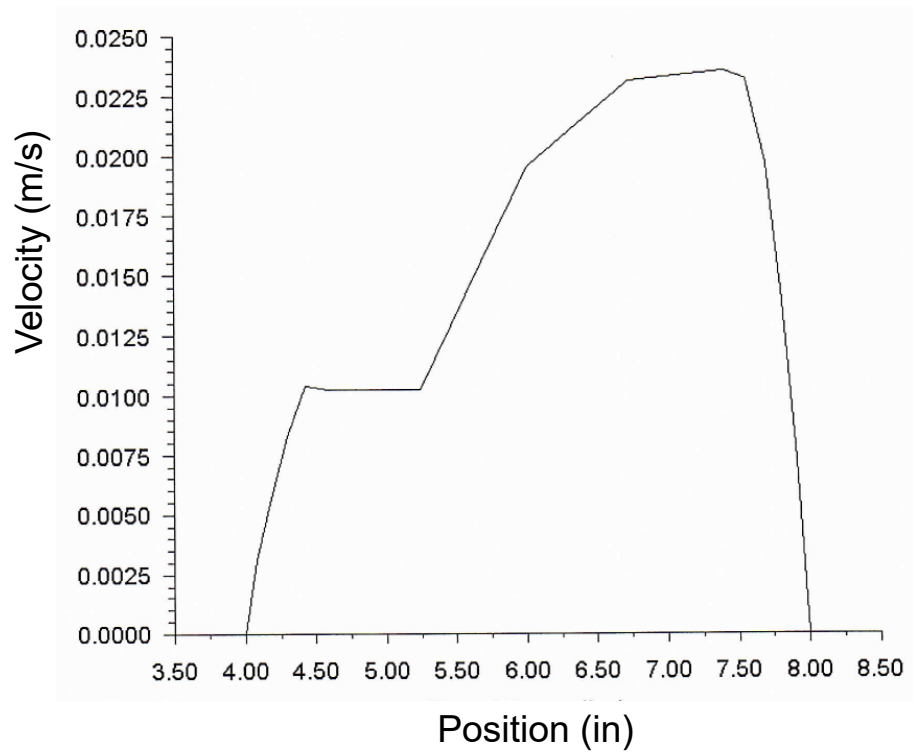


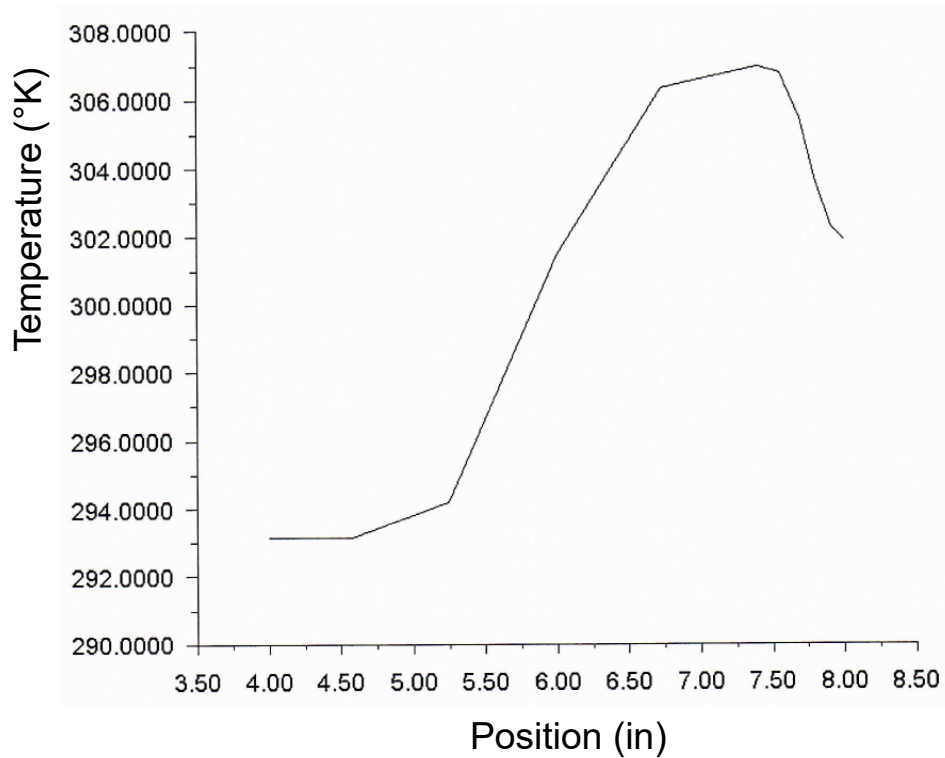
Velocity contour plot



Plot of velocity vectors

Task 2





### Task 3

If the calculation is done for the "half pipe", the typical values of H are, approximately:

Large inlet: 49279 J/s

Small inlet: 39481 J/s

Outlet: 88985 J/s

Those values should be doubled if the calculation is done for the "full pipe". The sum of the two numbers for the inlets is very close to that of the outlet. The small discrepancy was explained in class (in Lecture 8). In particular, there is a small amount of heat exchange by heat conduction at the boundary that we ignored.