

## Assignment 2 : Set up a test case

This assignment involved creating a 2D mesh to simulate a steady, turbulent jet in an axisymmetric setup using software like gmsh. After setting up the configuration file, I ran the SU2 to get results. Finally, I extracted and analyzed results such as velocity and temperature distributions. This helped to understand how to use SU2, create a mesh and analyze output.

The configuration file have settings for a computational fluid dynamics (CFD) simulation, focusing on direct, adjoint, and linearized problem definitions. It begins with the specification of the solver as RANS and the turbulent model as SST. The simulation is axisymmetric and configured for a direct mathematical problem.

BOUNDARY CONDITION configuration details:

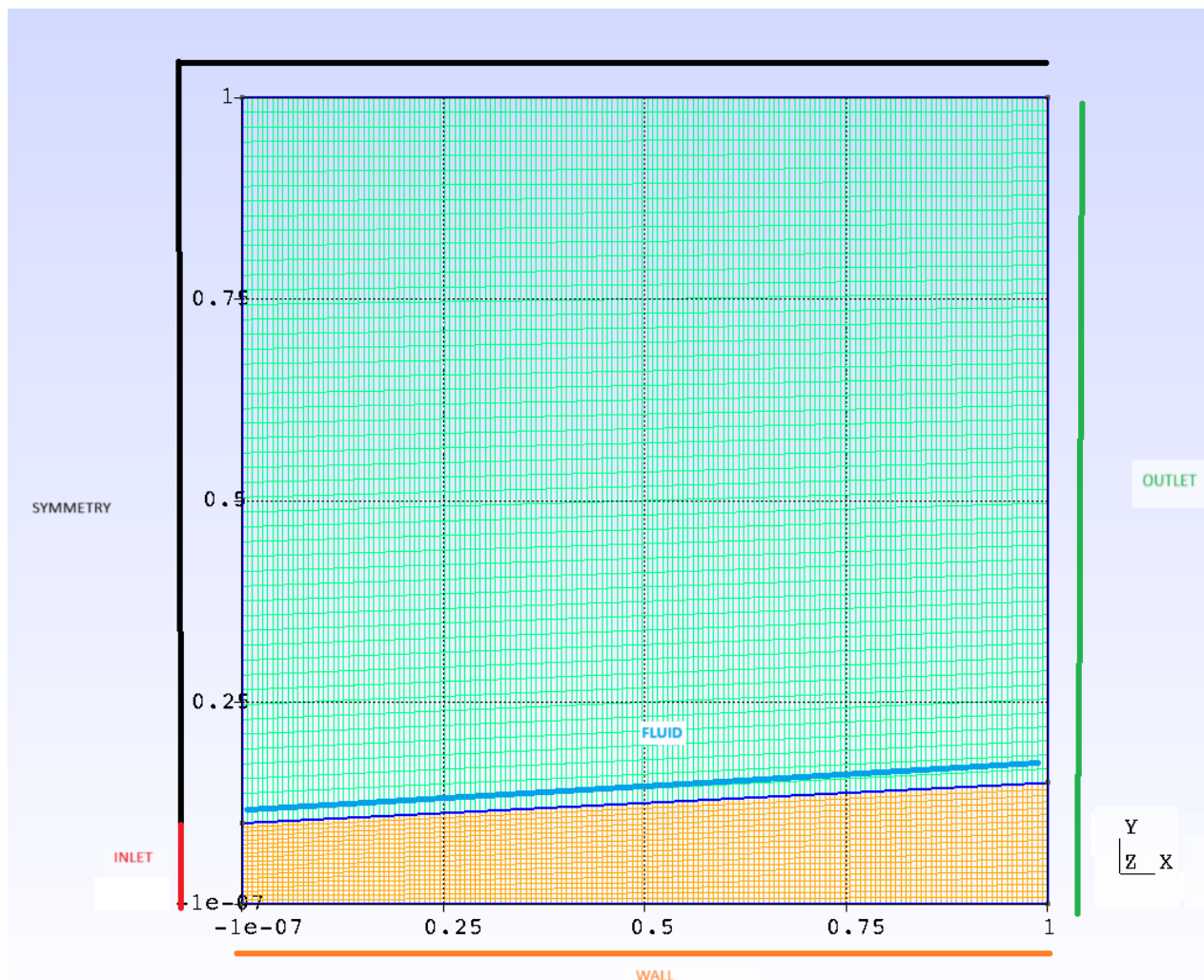
Inlet total temperature: 302.4K

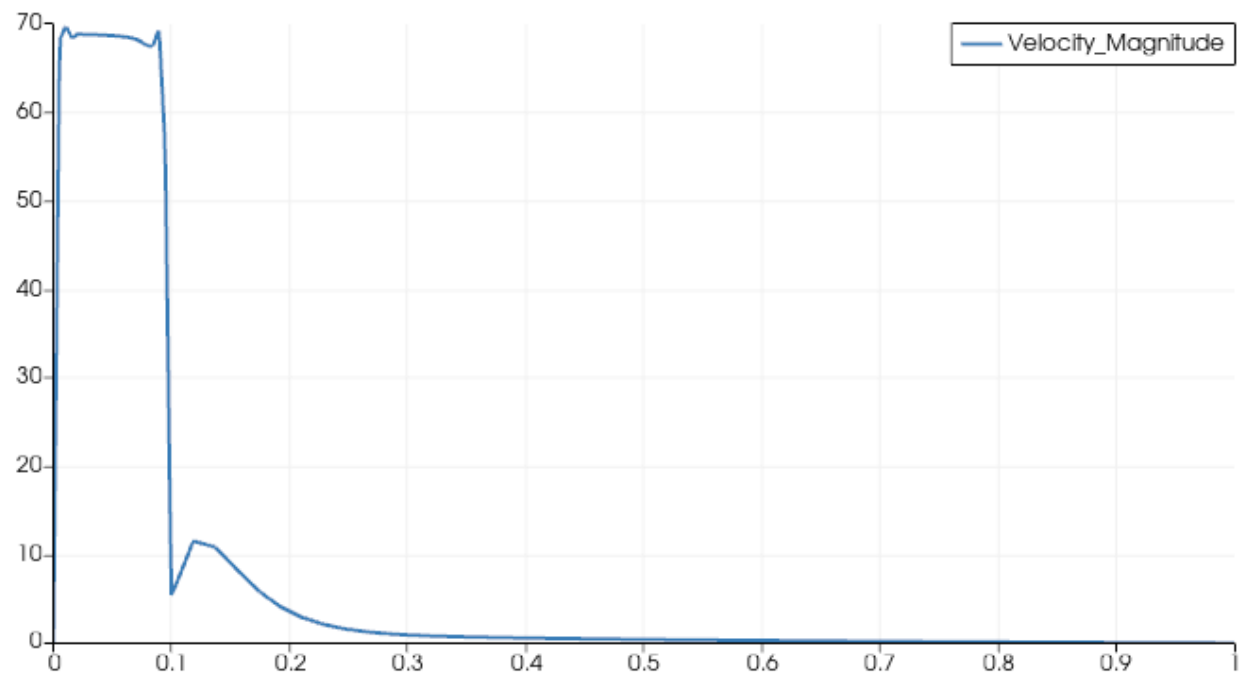
Inlet total pressure : 118309.784 N/m<sup>2</sup>

Inlet flow direction x : 100.0 m/s

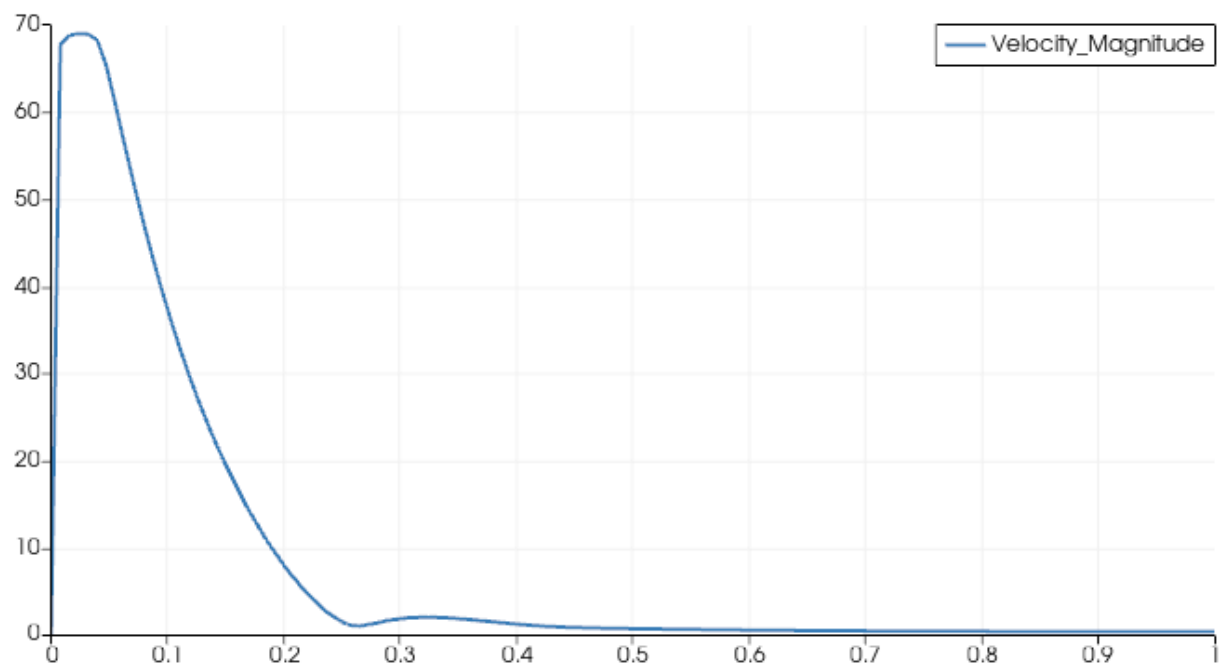
Outlet Back Pressure : 115056.0 N/m<sup>2</sup>

Mesh File:



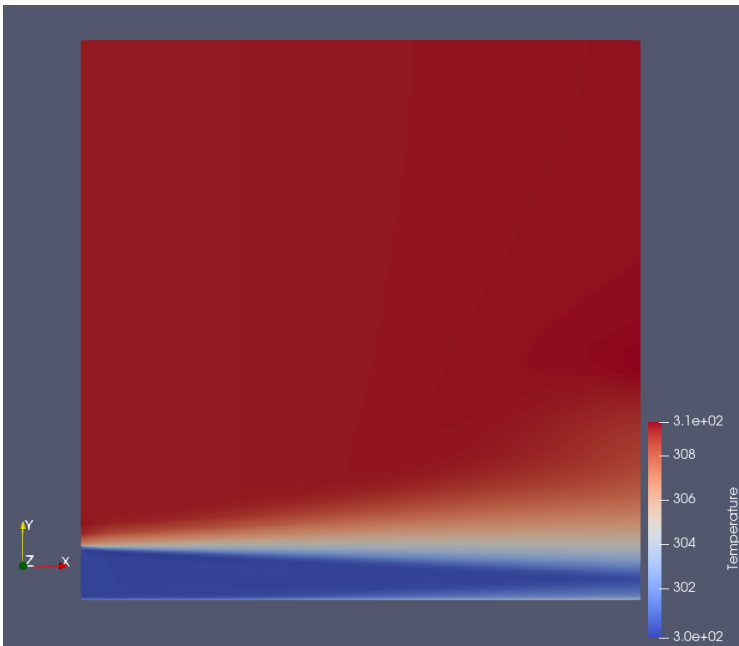


Velocity Magnitude at X=0

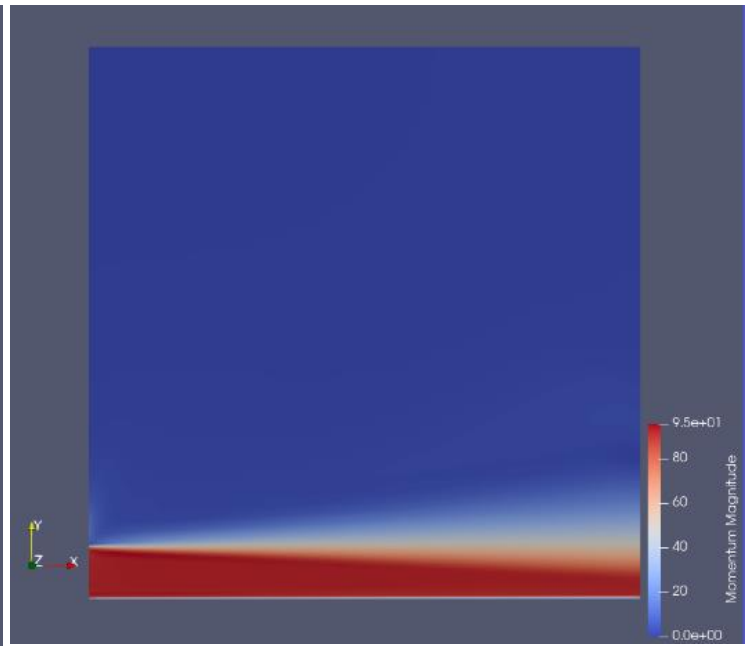


Velocity magnitude at X=1

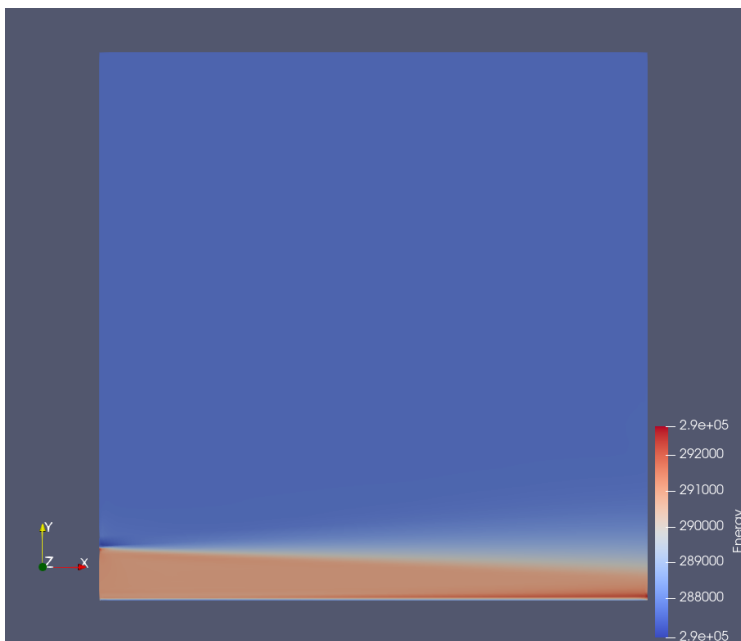
## OUTPUTS



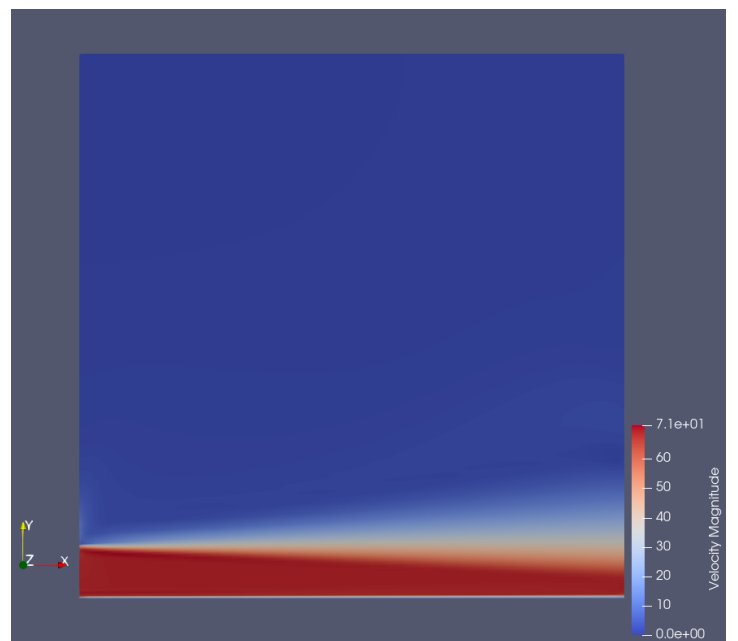
Temperature



Momentum magnitude



Energy



Velocity magnitude