

# Simulation of Flow over Fin and Heat Transfer through Fin in Forced Convection by Cyclic Boundary Condition

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## Synopsis

This case study project aims to study and simulate water flow over fin at constant wall Temperature subjected to forced convection using OpenFOAM – V2021. The geometry and mesh were defined using blockMeshDict file. A steady state, PIMPLE algorithm based solver chtMultiRegionFoam was used in the simulation. The analysis executed by TryfonC. Roumpedakis et al [1] using fluent was taken as reference.

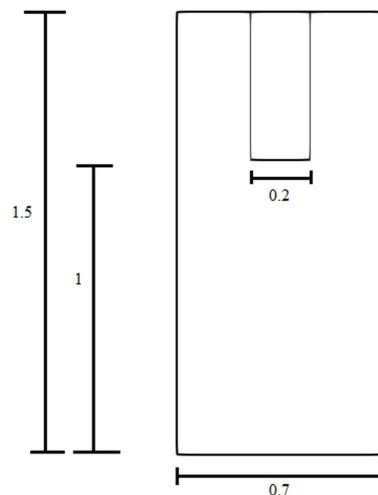


Fig.1

Dimensions of geometry are Length 0.7 m and Height 1.5 m, Water enters at velocity 5 m/s from Left side. Inlet and Outlet had given cyclic boundary condition.

## References

- [1] TryfonC. Roumpedakis et al. “Experimental Investigation and CFD Analysis of Heat Transfer in Single Phase Subcooler of a Small Scale Waste Heat Recovery ORC.” *Energy Procedia* 179(2017) 487-494