

# **COMPUTATIONAL MODELING TO SIMULATE NEWTONIAN VISCOUS FLOW**

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## **ABSTRACT**

This paper's proposal is to show some significant results obtained by analyzing the effect of the boundary layer on the fluid behavior. An effective technique called "wall element technique" based on the finite element method (FEM), has been modified and adopted in a zone close to the solid wall to depict Newtonian viscous flow in a smooth straight channel and well compared with other conventional techniques for determination of confined developing turbulent flow with a one equation model used to model the turbulent viscosity.

**KEYWORDS:** Developing Turbulent Flow, FEM, Modified Wall Element Technique, Pressure Flow