

Abstract

Numerical Problem Solving for One-dimensional Unsteady Gas Flow on Pneumatic Transmission Line

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In this project, the use of numerical analysis of FDM for the flow inside pneumatic transmission line models will be divided based on assumptions that are often used in industrial applications. The project focuses on how to simplify transient one-dimensional compressible flow, while the aim is to find out whether the simple numerical discretization method and time-stepping can be said to be numerically stable. Collecting data will be summarized in graphical form that will show the behavior of each model that has its own parameters and boundary values.

Keyword: Pneumatic transmission line, conservation laws, simulation, modelling, Finite Difference Method.