

# DETERMINING THE FRICTIONAL LOSSES IN A PIPING SYSTEM WITH SUDDEN CONTRACTION & EXPANSION

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## ABSTRACT

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Piping system as we all know plays a very important part in our lives every day. Without them, we won't have proper water supply and more difficult ways of obtaining them will have to be employed.

Besides their importance, we also face a problem of frictional losses when transmitting a fluid through it. This is mainly because of the contact between different materials (the fluid and the pipe surface), and the internal energy reduction of the fluid caused by the fluid itself.

The main objective of this project is to determine the frictional losses in a piping system with sudden expansion and contraction. Fluid of concern here will be water. The pipeline to demonstrate this is shown below.