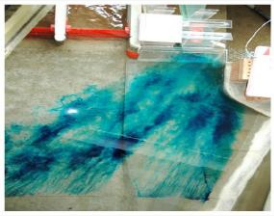

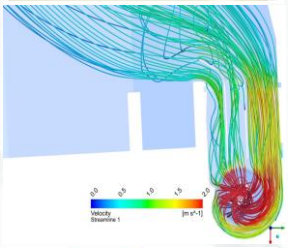

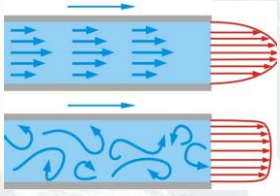

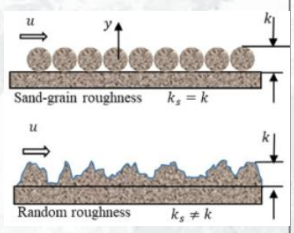

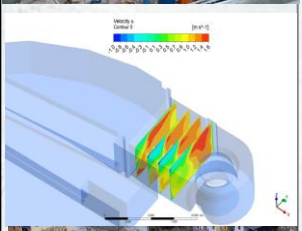

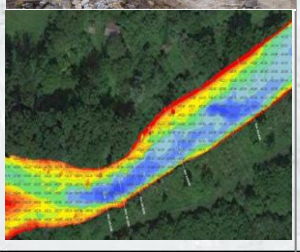

Master Project

Hydraulic Pipe Friction Calculation Program

MOTIVATION: The hydraulic loss in pressurized flows plays a crucial role in hydraulics and fluid mechanics. It describes the energy losses due to friction within a pipeline system, leading to pressure drops. These losses are particularly relevant in long pipelines as they influence the required pump head for pumping systems and the efficiency of transport pipelines.
The Moody Diagram allows for the simple determination of friction loss, thereby enabling efficient pipeline design. Despite modern computational methods, the Moody Diagram remains an indispensable tool, especially for quick calculations in practice. Its significant advantage lies in its clear representation of the relationship between the Reynolds number, relative roughness, and friction factor, which greatly simplifies the analysis of flow losses in technical applications.

Different friction loss parameters are used. The aim of the project is to gain a deep understanding of these parameters, their significance, and their application in practical scenarios.

Goal: Understanding hydraulic pipe friction and implementing it in a simple calculation tool.

Submission: Scientific paper and summary of findings from the literature study.

Start: Anytime

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