

Comparison between Hardy-Cross Method and Water Software to Solve a Pipe Networking Design Problem for a Small Town

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Abstract : Water has a great importance in life. In order to deliver water from resources to the users, many procedures should be taken by the water engineers. One of the main procedures to deliver water to the community is by designing pressurizer pipe networks for water. The main aim of this work is to calculate the water demand of a small town and then design a simple water network to distribute water resources among the town with the smallest losses. Literature has been mentioned to cover the main point related to water distribution. Moreover, the methodology has introduced two approaches to solve the research problem, one by the iterative method of Hardy-cross and the other by water software Pipe Flow. The results have introduced two main designs to satisfy the same research requirements. Finally, the researchers have concluded that the use of water software provides more abilities and options for water engineers.

Keywords : looping pipe networks, hardy cross networks accuracy, relative error of hardy cross method

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