Comments : Pr Said RHOUZLANE

In this paper, the authors investigate numerically, using EPANET code, the leaks in the water distribution network (WDN). The old part of Casablanca city (Morocco) is used as a case of study. The results obtained are compared with those of real simulation of artificial leaks caused by the opening and closing of hydrants. On the whole, the idea behind this study is interesting and promising. So, I support the paper for publication after a revision to improve its scientific content.

- Line 61 you have mentioned “Concerning the instrumentation, the network flow and pressure are monitored through flowmeter” the study area is it moduled, micro-moduled, how many critical points, measurement points ?? all this is not clear in your article

- line 63 « The average age is 40 years, increasing vulnerability and promoting leaks » you have to descreibe more scientifficaly. You have to write and talk to selection criteria: (you need to talk about the performance indicators for this area, MNF, ILP for example)
- Line 110 “Roughness coefficient of materials” Physical modeling of your network requires the roughness of the pipes. It should be noted that there is great uncertainty about the values considered. How did you minimize these uncertainties and their impact on the results given by EPANET.
- Line 119 , 120 you have mentioned “. Dynamic simulation is used to describe the operation of the network during a given period, while taking into account the variation in customers’ consumption over time.” Physical modeling of your network requires consumption at nodes. It is important to indicate how you estimated this parameter. It should be noted that there is great uncertainty about the nodal distribution of the study area.

  How did you develop your consumption patterns for dynamic modeling?

  - Line 135 you have mentioned that you have used the Matlab-software, For EPANET code, please find a better reference
- Line 240 you have mentioned “The model was calibrated without errors” What are the calibration data for your model? Discuss them clearly.
- line 241 the calibration results of pressure are presented, you need to complete with the flow calibration.