Hitungan Diameter Pipa pada Sistem Penyediaan Air Minum sederhana

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Abstract	Drinking water sector is one of the public services which is connected tightly to poverty decrease. A small community water supply is more suitable if it uses a simple system which does not need sophisticated planning and construction. Nevertheless, hydraulicsÃ‚Â calculation should be always conducted accurately because it will influence water supply performance. In this case, pipe hydraulics needs more overview because system reliability depends on pipe capacity.This study discusses two methods of pipe diameter calculation at a simple drinking water supply system. For planning assistance, Directorate General Cipta Karya-Public Work Ministry issued Technical Guideline Book for Simple Drinking Water Construction in 2007. One of its chapters discusses about a method to find pipe diameter based on several tables available, but it is not given an explanation about basic theory of the tables so there is a doubt for planners. For the reason, comparison between the use of the tablesÃ‚Â (Juknis Method) and Darcy-Weisbach Formula to calculate pipe diameter will be discussed. Data from 5 villages in Kebumen Regency will be utilized to support analysis.The result of procedure for making comparison shows that there is no significant difference (less than 4%) between the result of calculation by Darcy-Weisbach Formula and Juknis Method with accurate interpolation. Both of the methods can be applied with its advantages and disadvantages. It is suggested that Darcy-Weisbach Formula is always implemented to re-check toward pipe diameter which is available in the market and will be used in the system.
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