EVALUASI DAN OPTIMALISASI JARINGAN SISTEM PENYEDIAAN AIR BERSIH SUB SITEM BRIBIN, KABUPATEN GUNUNGKIDUL

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ABSTRACT

Bribin Sub-system is one of the 13 (thirteen) sub-systems owned by the PDAM in Gunungkidul district. Bribin sub system has a very big potential water source, it is an underground river with average flow rate around 1000 liters / sec. But the clean water is not evenly distributed. Recently, existing 6478 units of house-connecting installeds in the Bribin sub system service area, but only 27% get water from PDAM. This is due to the lack of funding from PDAM to facilitate the entire service area so that clean water distribution is uneven. One of the solution to solve this is by injecting flow rate obtained from microhydro technology applicated in Bribin underground river. With this flow rate addition, an effective alternative transmission lines from the new source in to existing system surely needed. It is planned 2 alternatives transmission lines, the first one is connecting outlet pipe from Kaligoro Reservoir to junction 275 and the second one is connected to junction 274. From the analysis, the chosen alternative is the first alternative because it is proved able to distribute water more even. Nevertheless, its headloss in amount 9,054 m is bigger than the second alternatives and it also cost more in amount Rp.6.406.263.750,00.

***Keywords**: water supply systems, sub systems Bribin, microhydro technology*