ABSTRAK

Sistem distribusi air bersih merupakan bagian utama dari penyediaan air bersih dalam suatu pembangunan pada perumahan, sistem penyediaaan air bersih pada perumahan meliputi sistem penyediaan air bersih, instalasi air bersih, Analisa perhitungan kebutuhan air bersih yang meliputi mengetahui perkiraan jumlah penghuni, mengetahui kebutuhan pemakaian air bersih dalam sehari. Pada laporan ini membahas tentang analisis perhitungan air bersih rumah dinas bank mandiri dengan menggunakan *software Microsoft excel*. Sistem perancangan pipa air bersih yang meliputi dimensi pipa air bersih, megetahui debit aliran, kerugian gesek pada pipa, mengetahui kerugian tekanan, dan perhitungan kebutuhan kapasitas pompa. Hasil analisis penghuni rumah dinas bank mandiri menunjukan perkiraan penghuni yang ditaksir sebanyak 11 orang. Sumber air bersasal dari air tanah (*deep well*) dengan laju aliran rata-rata 0,130 m^3/hari, kebutuhan air bersih sebesar 1,3 m^3/hari. Diameter pipa 50mm membutuhkan kapasitas pompa dengan laju aliran air 4 lpm, dibutuhkan daya pompa 0,10 HP dengan input daya sebesar 0,08 kw.

Kata kunci : *System* distribusi air bersih, *plumbing*, Perumahan, Perancangan,Air bersih,

CALCULATION ANALYSIS OF CLEAN WATER DISTRIBUTION IN THE 110 M^2 BROAD EXTENSIVE HOUSE BUILDING

ABSTRACT

Clean water distribution system is the main part of the supply of clean water in a housing development, clean water supply system in housing includes a clean water supply system, clean water installation, Analysis of the calculation of clean water needs which includes knowing the estimated number of occupants, knowing the need for clean water usage in a day. In this report discusses the analysis of the calculation of clean water at an independent bank official residence using Microsoft Excel software. Clean water pipe design system which includes dimensions of clean water pipes, knowing the flowrate, friction loss in the pipe, knowing the pressure loss, and calculating the pump capacity requirements. The results of the analysis of the occupants of the bank Mandiri official residence shows the estimated occupants estimated as many as 11 people. Sources of water originating from ground water (deep well) with an average flow rate of 0.130 m3 / day, clean water needs of 1.3 m3 / day. 50mm pipe diameter requires pump capacity with a water flow rate of 4 lpm, a pump power of 0.10 HP is required with a power input of 0.08 kw.

***Keywords**: clean water distribution system, plumbing, housing, design, clean water, pumps, pipes, water needs*