ABSTRAK

Nama : Shinta Ayu Afriani
Program Studi : Teknik Lingkungan
Judul : "*Perencanaan Instalasi Plambing Air Bersih, Air Limbah, dan Ven di Gedung Dekanat Universitas Islam Bandung dengan Konsep Konservasi Air"*
Pembimbing I : Kancitra Pharmawati S.T., M.T.
Pembimbing II : Anindito Nurprabowo, S.T.

Isi Absrtrak : Perencanaan sebuah gedung harus memperhatikan aspek sanitasi pengguna gedung yaitu memastikan kesedian air bersih, penyaluran air limbah dan ven, yang termasuk dalam perancangan sistem instalasi plambing seperti pada pembangunan Dekanat Unisba. Perencanaan ini menerapkan konsep konservasi air sebagaimana disebutkan dalam Peraturan Wali Kota Bandung No. 1023 Tahun 2016 tentang Bangunan Hijau. Konservasi yang diterapkan meliputi rainwater harvesting untuk cadangan air primer saat kemarau, sumur resapan, pemasangan alat plambing hemat air, pemanfaatan limbah greywater untuk kebutuhan flushing WC sebagai air sekunder . Penentuan luas efektif untuk mengetahui populasi gedung mengacu pada Data Arsitek Neufert 2002 sedangkan kebutuhan air bersih pengguna gedung mengacu pada SNI 7065-2005 serta perhitungan dimensi pipa pada air bersih, air limbah serta ven mengacu pada SNI 8153-2015. Total populasi adalah 610 jiwa dengan kebutuhan air sebesar 27,34 m3/hari. Kapasitas groundwater tank primer 34,5 m3 dan roof tank primer 6,25 m3 dengan daya pompa sebesar 1,44 Kwatt. Diameter pipa horizontal dan vertikal pada air bersih primer dan sekunder, air limbah greywater, blackwater dan ven berturut-turut adalah 20-63 mm, 50-100 mm, 53-110 mm, 48-100 mm, dan usaha konservasi air sebesar 10.48 L/hari

Kata Kunci : Air Bersih, Air Limbah , Konservasi Air , Gedung Dekanat Unisba, Plambing.

ABSTRACT

Name : Shinta Ayu Afriani

Study Program : *Environmental Engineering*

Title : *"Plumbing Installation System of Water, Wastewater and Vent, in Dean Building of the Islamic University of Bandung with the Concept of Water Conservation"*

Preceptor I : Kancitra Pharmawati S.T., M.T. ;

Preceptor II : Anindito Nurprabowo, S.T.

Abstract contents : *Plumbing installation in buildings is needed to meet the water needs of building users. The Development Dean of Unisba applies the concept of water conservation as stated in the Regulation of the Mayor of Bandung No. 1023 of 2016 concerning Green Buildings. The plumbing installation design that is planned includes planning for the distribution of clean water, wastewater, and vent. The method used is the effective area approach to determine the population of the building which refers to the 2002 Neufert Architect Data, besides that the need for clean water is known based on the water usage of the building users as seen based on SNI 7065-2005 and for pipe dimensions in clean water, wastewater, and vent referring to SNI 8153-2015 so that the population is known to be 610 with a water requirement of 27.34 m3 / day. The planned primary groundwater tank capacity is 34.5 m3 and the primary roof tank is 6.25 m3 with a pump power of 1.44 Katt. Determination of horizontal and vertical pipe diameters in primary and secondary clean water, greywater, blackwater, and vent wastewater is 20-63 mm, 50-100 mm, 53-110 mm, 48-100 mm, respectively. The conservation that is applied includes rainwater harvesting for primary water reserves during the dry season, and infiltration wells, installation of water-efficient plumbing tools, utilization of greywater waste for flushing toilets and urinals and meters so that conservation efforts are 10.48 L / day.*

Keywords: Clean Water, Wastewater, Water Conservation, Unisba Dean Building, Plumbing.