

## ABSTRAK

Air limbah domestik menjadi permasalahan lingkungan yang signifikan di berbagai sektor, termasuk di sektor perhotelan. Hotel X merupakan hotel dengan tipe bisnis berbintang 4. Instalasi Pengolahan Air Limbah (IPAL) di Hotel X menggunakan jenis IPAL Sewage Treatment Plant (STP) yang hanya bersumber dari limbah kamar mandi, dan hasil pengolahan limbah tidak akan dibuang ke sungai melainkan akan digunakan kembali untuk Flushing toilet dan mengairi tanaman.

Penelitian ini menunjukkan bahwa pengolahan air limbah di Hotel X tidak efisien, dengan nilai efisiensi untuk parameter di bulan Juli 2023 untuk pH memiliki nilai 2%, BOD memiliki nilai 28,86%, COD memiliki nilai 26,6%, TSS memiliki nilai 13,30%, Klorida memiliki nilai 5,38%. Bulan Agustus 2023 efisiensi parameter pH memiliki nilai 2%, BOD memiliki nilai 24,39%, COD memiliki nilai 48,30%, TSS memiliki nilai 8,51%, Klorida memiliki nilai 5,38%. Pengujian di uji menggunakan standar baku mutu Peraturan Pemerintah Nomor 22 Tahun 2021 kelas 4 untuk Flushing Toilet dan mengairi tanaman.

Kata kunci: Alur Pengolahan IPAL Domestik, Efisiensi IPAL Domestik, Hotel Bintang 4, Pengolahan Air Limbah Domestik , Uji Inlet dan Outlet Air Limbah Domestik.

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Domestic wastewater has become a significant environmental issue across various sectors, including the hotel industry. Hotel X is a 4-star business hotel. The wastewater treatment plant (WWTP) at Hotel X uses a Sewage Treatment Plant (STP) system that only processes wastewater from bathrooms, and the treated wastewater is not discharged into rivers but is reused for toilet flushing and irrigation. This study shows that the wastewater treatment at Hotel X is inefficient, with the efficiency rates for July 2023 parameters as follows: pH at 2%, BOD at 28.86%, COD at 26.6%, TSS at 13.30%, and Chloride at 5.38%. In August 2023, the efficiency rates were as follows: pH at 2%, BOD at 24.39%, COD at 48.30%, TSS at 8.51%, and Chloride at 5.38%. The tests were conducted based on the Class 4 quality standards from Government Regulation No. 22 of 2021, for use in toilet flushing and irrigation.

Keyword: Domestic Wastewater Treatment Flow, Domestic WWTP Efficiency, 4-Star Hotel,  
Domestic Wastewater Treatment, Inlet and Outlet Testing of Domestic Wastewater.