EFEKTIVITAS PENURUNAN KADAR LIMBAH CAIR INDUSTRI *COLD STORAGE* PT DUA PUTRA UTAMA MAKMUR TBK

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ABSTRAK

Industri *cold storage* merupakan industri penyimpanan beku produk yang dilakukan pada suhu antara - 18 °C sampai - 25 °C. Penyimpanan beku merupakan proses pengawetan dengan menurunkan suhu hingga dibawah titik beku air. Industri *cold storage* PT. Dua Putra Utama Makmur Tbk (PT. DPUM) yang terletak di Purworejo-Pati merupakan salah satu industri *cold storage* yang terdapat di daerah Jawa Tengah, Indonesia. Pengambilan dan pengujian sampel air limbah bertujuan untuk mengetahui kelayakan baku mutu air limbah, efisiensi penurunan kadar pH, BOD, COD, TSS, Sulfida, dan Amonia, serta mengetahui bagaimana proses pengolahan air limbah supaya air limbah yang dibuang tidak mencemari badan air penerima (sungai). Observasi dan wawancara juga dilakukan untuk mengetahui tahapan pengolahan air limbah. Pengambilan sampel menggunakan acuan SNI 6989.59:2008 tentang metoda pengambilan contoh air limbah. Pengujian sampel limbah ada beberapa yang dilaksanakan langsung dilokasi dan ada yang diujikan skala laboratorium. Hasil dari pengujian dari laboratorium mendapatkan nilai efisiensi penurunan kadar pH sebesar 25,078%, BOD sebesar 81,056%, COD sebesar 80,258%, TSS sebesar 77,986%, Sulfida sebesar 79,170%, dan Amonia (NH3) sebesar 80,003%. Instalasi Pengolahan Air Limbah pada PT DPUM menggunakan sitem pengolahan aerob dengan lumpur aktif. Nilai parameter uji berada dibawah baku mutu dengan acuan PERMEN LH No. 5 Tahun 2014 Tentang Baku Mutu Air Limbah Bagi Usaha dan atau Kegiatan Pengolahan Hasil Perikanan.

Kata kunci: *Cold Storage*, Limbah Industri, IPAL

EFFECTIVENESS OF REDUCING LEVELS OF COLD STORAGE INDUSTRIAL WASTE AT PT DUA PUTRA UTAMA MAKMUR TBK

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ABSTRACT

The cold storage industry is a product frozen storage industry that is carried out at temperatures between - 18 °C to - 25 °C. Frozen storage is a preservation process by lowering the temperature to below the freezing point of water. Cold storage industry PT. Dua Putra Utama Makmur Tbk (PT. DPUM) which is located in Purworejo-Pati is one of the cold storage industries in Central Java, Indonesia. Taking and testing waste water samples aims to determine the suitability of waste water quality standards, the efficiency of reducing levels of pH, BOD, COD, TSS, Sulfide and Ammonia, as well as knowing how the waste water treatment process is carried out so that the waste water that is disposed of does not pollute the receiving water body (river).). Observations and interviews were also carried out to determine the stages of wastewater processing. Sampling used the SNI 6989.59:2008 reference regarding waste water sampling methods. Some waste sample tests are carried out directly on site and some are tested on a laboratory scale. The results of laboratory testing showed an efficiency value for reducing pH levels of 25.078%, BOD of 81.056%, COD of 80.258%, TSS of 77.986%, Sulfide of 79.170%, and Ammonia (NH3) of 80.003%. The Waste Water Treatment Plant at PT DPUM uses an aerobic treatment system with activated sludge. The test parameter values are below the quality standards with reference to PERMEN LH No. 5 of 2014 concerning Waste Water Quality Standards for Fishery Product Processing Businesses and/or Activities.

Keywords: Cold Storage, Industrial Waste, WWTP