

## Penggunaan kembali air limbah dan partisipasi karyawan untuk keberlanjutan produksi cat = Waste water reused and employee participation for sustainability of paint production / Sri Wrinarti

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### Abstrak

[<b>ABSTRAK</b><br>

Produksi cat menghasilkan limbah Bahan Berbahaya dan Beracun. Jumlah limbah pabrik cat, sebagian besar berasal dari air pencucian peralatan pabrik. Saat ini PT. XYZ, sebuah industri cat, belum menggunakan kembali air limbahnya untuk mencuci peralatan pabriknya, belum mengetahui biaya penggunaan air olahan untuk proses pencucian alat dan belum mengetahui peranan karyawannya untuk menurunkan jumlah limbahnya. Penelitian dilakukan untuk menentukan konsentrasi optimal bakterisida dengan parameter jumlah bakteri, pH, kekeruhan dan TSS di air olahan (air limbah ditambah bakterisida), menentukan biaya penggunaan air olahan, dan menganalisis persepsi karyawan tentang peranan mereka untuk menurunkan jumlah limbahnya. Penentuan konsentrasi optimal bakterisida dilakukan pada 4 sampel selama 9 hari, penentuan biaya penggunaan air olahan telah di hitung dan untuk menganalisis persepsi peranan karyawan dilakukan survei terhadap 93 responden. Penelitian ini menghasilkan 3 kesimpulan. Kesimpulan pertama adalah konsentrasi optimal bakterisida terdapat pada sampel air olahan yang mengandung Acticide MBS 0,4%. Kesimpulan kedua adalah biaya penggunaan air olahan belum menguntungkan secara ekonomi pada saat ini. Kesimpulan ke 3 adalah nilai persepsi karyawan tentang peranan mereka untuk menurunkan jumlah limbah adalah 4,93 dari 6 skala.

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Paint production generates hazardous and toxic waste. The amount of paint waste, mostly came from the wash water from plant equipments. Currently, P T. X YZ, the paint industry, has not reused the waste water for cleaning plant equipments, not known the cost of using treated water for cleaning plant equipments and not known the role of their employees to reduce the amount of waste. This study was conducted to determine the optimum concentration of bactericide with parameter such as number of bacteria, pH, turbidity, and TSS (Total Suspended Solid) in the treated water (waste water added bactericide) for reuse in the cleaning process of plant equipment, to analyze the cost of using treated water, and to analyze the role of employees in reducing the amount of waste. The determination of optimum concentration of bactericide done on 4 samples for 9 days, the cost of using treated water has been calculated, and the role of employees had been analyzed via survey with 93 respondents. There are 3 conclusions of this research. The first is the optimum concentration was found in the sample of treated water containing 0.4% Acticide MBS. The second is the cost of using treated water is not economical provitable at this time. The third is the value of the role of respondents to reduce the amount of waste is 4.93 in six scales.;

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