Pengendalian limbah cair dalam produksi karet remah: studi kasus sebuah pabrik karet remah di Palembang = Liquid waste control in crumb rubber production (A case study of a crumb rubber factory in Palembang)

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Abstrak

ABSTRAK
Permasalahan yang dihadapi oleh pabrik karet remah di Kotamadya Palembang sekarang ini ialah kadar beberapa parameter limbah cair seperti HOD dan COD masih melampaui baku mutu limbah cair. Limbah yang melampaui ambang batas ini dikhawatirkan akan menambah tingkat pencemaran sungai Musi. Untuk mengurangi tingkat pencemaran ini, perlu dilakukan pengendalian terlebih dahulu sebelum limbah tersebut dibuang ke badan air.

Penelitian ini bertujuan menguji bagaimana pengaruh pengendalian limbah cair terhadap kualitas limbah dan biaya produksi karet remah. Penelitian yang dilakukan secara keseluruhan merupakan penelitian deskriptif yang ditunjang oleh penelitian eksperimental. Lokasi penelitian adalah salah satu pabrik karet remah di Kotamadya Palembang. Percobaan dilakukan dengan tiga perlakuan yaitu perlakuan aerasi tanpa penambahan zat kimia dan perlakuan aerasi dengan penambahan zat kimia serta perlakuan kontrol. Hasil percobaan diukur setelah waktu 24 jam, 48 jam dan 72 jam.

Hasil penelitian dan uji statistik dengan analisa variansi (ANAVA) menunjukkan bahwa kadar limbah cair karet remah (BOD, COD dan SS) dapat diturunkan dibawah baku mutu limbah cair. Faktor perlakuan, waktu dan interaksi antara perlakuan dengan waktu, berpengaruh terhadap kadar limbah cair karet remah.

Berdasarkan hasil percobaan, diperkirakan biaya pengendalian tanpa zat kimia sebesar Rp. 73,5 juta dan pengendalian dengan penambahan zat kimia sebesar Rp.124 juta. biaya pengendalian ini akan menambah beban biaya produksi sebesar Rp.4,1 per kg karet (tampa zat kimia) dan Rp.6,9 per kg karet (dengan zat kimia), sehingga laba perusahaan akan berkurang sebesar 29,7 % (tanpa zat kimia) dan 49,9 % (dengan zat kimia).

Daf tar Kepustakaan 34 (1953 - 1990)
<hr><i>ABSTRACT
The problem that is faced by all of crumb rubber factory in Palembang today is the content of .some parameter of liquid waste like BOD and COD are still exceed the standard of effluent. The effluent that exceed the limit is concerned because it will increase the rate of pollution in Musi's river. To reduce the rate of pollution, the waste must be controlled before they are disposed to the river.

The goal of this research is to examine the influence of controlling to the quality of waste and production cost. The whole research is a descriptive research that has been supported by experimental research. The

research took place at a crumb rubber factory in Palembang. The experiment was done with 3 kind of treatments. First, aeration treatment without chemical substances adding second, aeration treatment with chemical substances adding and third, controlling treatment. The results were measured after 24 hours, 48 hours and 72 hours.

The results and statistical test with analysis of variance (ANOVA), howed that liquid waste of crumb rubber content could become lower than the standard of effluent. The treatment factor} time and its interaction influenced to content of liquid waste of crumb rubber.

The controlling cost was estimated based on these result of experiment , which is for controlling without chemical substances needed 73,5 -million rupiahs and with chemical substances needed 124 million rupiahs. This controlling cost would raise the production cost Rp.4,1 /kg rubber (without chemical substances) and Rp. 6,9 /kg rubber (with chemical substances), therefore the company's profit would be reduced 29,7 % (without chemical substance) and 49,9 % (with chemical substances).

References 34 (1953 - 1990)</i>