

# Perbandingan performa self aeration flotation machine vs induced air flotation machine dengan efek penambahan variasi dosis SiBX terhadap recovery cu dan au pada north concentrator PT. X Papua = Comparison of self aeration vs induced air flotation machine with variation of SiBX dosage to cu and au recovery north concentrator PT. X Papua

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## Abstrak

Penelitian ini dilakukan untuk mengetahui perbandingan performa mesin flotasi self aerating vs induced air dengan efek penambahan variasi dosis SiBX terhadap recovery Cu dan Au, sehingga dapat dilakukan optimalisasi proses recovery Cu dan Au di PT. X Papua. Penelitian dilakukan dalam skala plant concentrator C1, digunakan tiga jenis variasi dosis SiBX, yaitu 5 g/t, 10 g/t, dan 15 g/t yang diterapkan pada kedua jenis mesin flotasi. Selanjutnya dilakukan pengujian assay mineral dan XRD. Hasil recovery Cu dan Au secara keseluruhan menunjukkan mesin flotasi self aerating mampu mengangkat Cu dan Au lebih efektif daripada mesin flotasi induced air pada semua fraksi ukuran mineral coarse, medium, dan fine. Recovery Cu dan Au dipengaruhi sifat hydrodynamic dari kedua jenis mesin. Efek penambahan variasi dosis SiBX kurang signifikan terhadap recovery Cu dan Au sehingga perlu dilakukan penelitian lebih lanjut.

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This research had been done to know the performance of self aerating vs induced air flotation machine with variation of SiBX dosage to Cu and Au recovery, so the recovery of Cu and Au at PT. X Papua can be optimized. Three variations of SiBX dosage 5 g T, 10 g T, and 15 g T are used for both flotation machines at flotation circuits. XRD and minerals assay were conducted and show self aerating flotation machine has a higher Cu and Au recovery than induced air flotation machine at all fraction size, coarse, medium, and fine. Hydrodynamic characterization influenced the result of Cu and Au recovery. It was evaluated that the effect of SiBX dosage addition could not be seen clearly, so it is necessary to do next level of research, in order to see the effect of SiBX addition to Cu and Au recovery.