Ekstraksi Timah dari Terak Timah = Recovery of Tin from Tin Slag

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Abstrak

Ekstratksi tin dari sumber sekunder terbukti menjadi alternatif yang atraktif melihat dari permintaan produksi timah yang terus bertumbuh. Terak timah, yang tergolong sumber sekunder, masih menyisakan timah oksida sekitar 1 sampai 3%. Literature studi menunjukkan, untuk melakukan leaching dari terak timah secara efektif, formasi silica gel harus di cegah, oleh karenanya asam oksalat dipilih. Empat parameter leaching, konsentrasi asam oksalat, waktu, temperature, dan rasio, dipilih untuk mengekstrak tin (sebagai target) beserta titanium, tantalum, dan niobium. Eksperimen menunjukan, bahwa parameter leaching paling optimum berada di 24 jam waktu leaching, pada 50?C dan 10% rasio cairan dan solid.
.....Recovering tin from secondary resource proves to be an attractive alternative tin resource to help satisfy the ever-growing tin demands. Tin slag, considered as a secondary resource, still consist of tin in the form of oxides approximately 1 – 3%. Studies found that in order to leach tin slag effectively the formation of silica gel has to be prevented, hence oxalic acid was chosen as the leaching reagent for the study. Four leaching parameters, oxalic acid concentration, leaching time, leaching temperature and solid liquid ratio, were tested through the experiment to extract tin as the primary metal, along with titanium, tantalum and niobium. The experiment concluded that the optimum leaching time is at 24 hours with a temperature of 50?C at 10% solid/liquid ratio.