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用AC法处理高锑低银类铅阳极泥 ——氯化浸出和干馏的扩大试验

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摘要: 为提高银的回收率和解决环境污染问题,用AC法进行了处理高锑低银类铅阳极泥流程中氯化浸出、干馏和蒸馏等过程的扩大试验;并用氯气再生的A[#]CA为氧化剂,循环氯化浸出,以实现“贵、贱”金属彻底分离.实验结果表明:贱金属锑、铜、铋、锡的浸出率大于98%,银入渣率大于97%;用聚四氟乙烯筒内衬干馏筒,用热风直接加热和用搪瓷冷凝管冷凝干馏气体,干馏装置运转正常;锑馏出率为84.09%,锑和银的回收率分别为98.55%及98.97%,并产出含Sb高达650 g/L的纯SbCl₃,杂质元素Cu, Bi, Sn, Fe, Pb与Sb的质量比为3.5×10⁻⁶-3.4×10⁻⁴的纯SbCl₃溶液,蒸馏脱砷后液As与Sb的质量比为1.3×10⁻⁴,适合于对锑进行深度加工.

关键字: 锑;银;浸出;干馏;阳极泥

AC process for treating lead electrolysis refining anodic slime bearing high antimony and lower silver: Enlarge experiments of chlorination-leaching and dry-distillation

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Abstract: In order to increase silver recovery rate and solve the environmental problem, the enlarged experiments of chlorination-leaching, dry-distillation and dearsenic-distillation in the AC process for treating lead electrolysis refining anodic slime bearing high antimony and lower silver are introduced. In the cycle leaching process an ideal result in separation of precious metals from general metal is achieved, the leached ratios of general metals are all more than 98%, and more than 97% of silver remains in the residue. The type and material of dry-distillation equipment is responsible, which is lined with a piece of polytetrafluoroethylene in the dry-distillation tube, being directly heated by hot air and the enamel cooler to cool dry-distillation gas. The results show that the distillation ratio of antimony is 84.09%, and recovery of antimony and silver is 98.55% and 98.97% respectively. A dry-distillation product-pure SbCl₃ solution containing Sb of 650 g/L is suitable for antimony fine process.

Key words:antimony; sliver; leaching; dry-distillation; anodic slime

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