

عنوان مقاله:

Recovery of high pure alumina from aluminum hazardous waste using facile and inexpensive method

محل انتشار:

چهارمین کنفرانس بین المللی آلومینیوم ایران ۱۴۰۶ (سال: ۱۳۹۵)

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خلاصه مقاله:

To avoid environmental problems and to recovery the aluminium, a processing method was developed and aluminium was recovered as an added value product such as alumina from hazardous aluminium solid waste (HAW) as raw material. Different methods were performed to get high purity of alumina in an inexpensive way in order to being useful for industrial scales. All methods refer to a process at relatively low temperature, in more stages: acid or base leaching, purification, precipitation and calcination. At the end of this process aluminium was extracted, first as Al^{3+} soluble ions and final as alumina product. The composition of the aluminium dross and alumina powder was measured by using Energy-dispersive X-ray spectroscopy (EDX). The method presented in this work allows the use of hazardous aluminium solid waste as raw material to recover an important fraction from (soluble aluminium content as an added value product, alumina, with high grade purity ۹۹.۵%).

کلمات کلیدی:

Alumina, Hazardous Aluminium Solid Waste, Acid Leaching

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