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ESTUDIO DE LA RECUPERACIÓN DE ORO EN CIRCUITOS INTEGRADOS DE COMPUTADORAS PROVENIENTE DE RESIDUOS ELECTRÓNICOS DE LA CIUDAD DE CÓRDOBA

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RESUMEN

Los Residuos de Aparatos Eléctricos y Electrónicos (RAEE) constituyen una fracción emergente de los Residuos Sólidos Urbanos. La presencia de materiales recuperables los convierte en una fuente secundaria de recursos a considerar tanto por el factor económico como así también para contribuir a la reducción de la contaminación ambiental. En este trabajo se plantea un proceso a escala piloto para recuperación de oro de circuitos integrados contenidos en computadoras. Se analizaron muestras de memorias, microprocesadores y circuitos auxiliares recolectados en el Programa de Reciclado de Computadoras dependiente de la FCEFyN - UNC. Se efectuó una combinación de tratamiento mecánico e hidrometalurgico de muestras de distinta antigüedad. Se analizó el contenido de oro de las muestras como así también su variación en relación al peso del dispositivo y al año de fabricación de los mismos. Los resultados obtenidos muestran una alta recuperación de oro a través del proceso planteado lo que posibilitaría su escalado a nivel industrial.

ABSTRACT

Waste Electrical and Electronic Equipment (WEEE) constitute an emerging fraction of Municipal Solid Waste. The presence in these waste of recoverable materials makes it a secondary source of resources to be consider both as economic factors as well as to contribute to reduction of environmental pollution This paper presents a pilot scale process for gold recovery of integrated circuits in computers content. Samples of memories, microprocessors and auxiliary circuits collected in the computer recycling program under the School of Exact, Physical and Natural Sciences of the National University of Córdoba. A combination of mechanical and hydrometallurgical treatment of samples of different ages was made. Gold content and their relationship to the variation in weight of the device as well as the year of manufacture were analyzed. The results show high recovery of gold through the proposed process which would allow an industry-wide scale.

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