Review of Processing Technologies for Spent Zinc Batteries

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This paper deals with the possibility of spent portable batteries treatment with the aim of zinc recovery. Perspective of pyrometallurgical and hydrometallurgical process is described. Samples of zinc based portable batteries were submitted under the investigation. Aim of the work was to find the best conditions for zinc recovery. Experimental work focused on hydrometallurgical process was conducted. Results have shown 100 % zinc recovery under these conditions: leaching in medium 2 M $(NH_4)_2CO_3$, addition of 20 ml of NH_4OH as reductant, leaching temperature 20°C, within 10 minutes.

Keywords: spent zinc batteries, hydrometallurgy, leaching.

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