

Production of Zinc Sulfide Pigment from Zinc-Containing Wastes

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Abstract

This paper describes a new process for making zinc sulfide pigment from fiber industry waste. Technical-grade ZnO and high-quality ZnS were made in an environmentally clean manner, without any other waste product being produced. The equation and rate of ZnO dissolution ($0.114 \text{ L}^{3/4} \text{ mol}^{-3/4} \text{ min}^{-1}$), as well as an empirical equation for determining the rate of ZnS precipitation, were found. Calculated and experimental data were in good agreement (<15%).