

Recycling of Waterborne Paint Sludge



Overview:

Paint sludge is a by-product of overspray consisting of uncured paint polymers, valuable metal pigments, flotation agents and other organic solvents. It is currently processed at waste-to-energy plants and/or landfills.

The objective of this project was to investigate and develop an economical recycling method that produces a valuable product that changes the macro-managing of this industrial by-product.

This project considered how to exploit the moisture and organics present in addition to the metal oxides either to aid recovery of metal oxides/metals or as a secondary recovered material with value.

Due to complex nature of the material, characterization involved investigating how the metal component interacts with the inorganic components. Analysis of polymer resin chemistries and pigments gave important information on how to recover and possibly reuse as much of the paint sludge components.