

Synthesis and study of inorganic pigment properties on the basis of dead chrome catalyst

Yegorova S., Ziganshina M., Karandashov S., Onishchenko Y., Lamberov A.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Generation of unprocessed wastes of industrial production is the key part of multi-factor negative impact on environment. The technologies of catching and neutralization of discharges and wastes have been developed extremely slow, as a result of it, the level of utilization remains to be low (only half of them is reused in production). All these concern in full measure chemical industry and adjacent branches of production - coal industry, mining, metallurgy, energy. In particular, only in chemical industry it has been calculated about 800 names of wastes. Major part of wastes is deleterious and hazardous to biosphere, processing toxicity, chemical, biological activities, corrosiveness, inflammability and explosibility. On the other hand - industrial wastes contain valuable elements, in particular different metals, the reserves of them are exhaustible. Waste burial is unpractical from the point of view of stability of functioning of industrial complex on the whole. The industrial wastes are often multi-component mixtures of substances of heterogeneous chemical composition, having different physical and chemical properties. The processes of interaction between the components and the background objects and by-product assimilation bring a considerable uncertainty in chemical composition and material constitution of industrial wastes. The technologies of waste recycling to receive the products, specifically inorganic pigments, involve the complex of methods of processing with the use of different modifiers to obtain the needed complex of physical and chemical properties defining the functional characteristics of the target product.

Keywords

Ceramic processing, Dead catalyst, Pigment, Synthesis