

Possibility of Using Aluminum-Containing Slag from Metallurgical Industrial Production in Wastewater Treatment and Water Treatment

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Keywords: aluminum; secondary raw materials; metal-containing waste; synthesized coagulant; salt slags; waste recycling; flux.

Abstract: When creating environmentally friendly industrial facilities, it is necessary to consider criteria such as reducing environmental pollution from waste and conserving natural resources through the maximum possible reuse of waste within the enterprise's economic cycle. This article examines the possibility of recycling metal-containing waste from metallurgical production, analyzing methods for the secondary use of slag waste, and conducting research on the use of aluminum slag as a reagent for wastewater treatment and water treatment. The process for producing a synthesized coagulant is described. Experiments on its use in wastewater treatment technology at a dairy plant, as well as in water treatment using a trial coagulation method, are described. Optimal doses and the operating range of the synthesized coagulant are determined, confirming its maximum effectiveness in achieving water purification quality criteria.