

عنوان مقاله:

Manganese removal from industrial waste waters by adsorption in fixed bed column

محل انتشار:

چهاردهمین کنگره ملی مهندسی شیمی ایران (سال: 1391)

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نویسندگان:

n Abdzadeh - Department of Chemical Engineering, Mahshahr Branch, Islamic Azad University, Mahshahr, Iran

s.m Tabatabaee Ghomshe

خلاصه مقاله:

The granular activated carbon (GAC) was used as an adsorbent for its ability to remove manganese from industrial waste waters by column experiments. The ability of GAC to adsorb manganese in a fixed bed column was investigated as well. The effect of operating parameters such as flow rate and inlet manganese concentration on the sorption characteristics of GAC was investigated. The total adsorbed quantities, equilibrium uptakes and total removal percents of Mn related to the effluent volumes were determined by evaluating the breakthrough curves obtained at different flow rates and different inlet Mn concentrations for adsorbent. The data confirmed that the total amount of sorbed Mn and equilibrium Mn uptake decreased with increasing flow rate and increased with increasing inlet Mn concentration. The Adams–Bohart model was used to analyze the experimental data and the model parameters were evaluated

کلمات کلیدی:

Adams–Bohart model, adsorption, fixed bed column, granular activated carbon, manganese (Mn) removal, breakthrough curve

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