Adsorption Dynamic characteristics and simulations of H_2/AR mixture gases on activated carbon

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This study performed adsorption dynamic characteristics and simulations of H_2/AR mixture gases on activated carbon. The adsorption dynamic characteristics were studied at various flow rates, 11 LPM to 19 LPM and at various adsorption pressures, 8 to 11 atm. To optimize adsorption bed, ADSIM (Aspen tech. Co.), a famous commercial adsorption simulator, was used. Adsorption dynamic characteristics and simulations were studied for H_2/AR binary system on nonisothermal and nonadiabatic condition. Mathematical model was applied Linear Driving Force (LDF) model and Loading Ratio Correlation (LRC) adsorption isotherm model considered to compare between simulated and experimental data.