Mathematical Modelling of the Process of Adsorption Concentration of Carbon Dioxide in the Life-Support System of the Conditional-Closed Volume

V.G. Matveikin, S.B. Putin, S.A. Skvortsov, S.S. Tolstoshein

Tambov State Technical University, Tambov;
OAO «Corporation Roskhimzashchita», Tambov

Key words and phrases: concentration carbonic acid; cyclic adsorptive process; mathematical modeling; parametric identification.

Abstract: The paper presents the mathematical model of adsorption concentration of carbon dioxide into life-support system of conditionally closed volume, which makes it possible to study the processes occurring in it for different states of the system; the model can be applied in the process control system. Specific features of the algorithm for calculating the equations of mathematical models are shown; the problem of parametric identification of unknown parameters is solved.
