State estimation of a dehydration process by interval analysis

Collazos, Carlos A.; Collazos, César A; Sánchez, Carlos; Mariño, Pedro; Montaño, Domingo A; Ruiz, Iván; Meléndez Pertuz, Farid Alexander

Abstract

This article presents a general methodology of state estimation by interval analysis in a dynamic system modeled by difference equations. The methodology is applied to a pineapple osmotic dehydration process, in order to predict the behavior of the process within a range of allowed perturbation. The paper presents simulations and validations.

keywords

Interval analysis, Osmotic dehydratation, Physics model, State estimation