ENBIS 2021 Spring Meeting



Contribution ID: 81

Type: not specified

High-purity processes GLR control charts for composite change-point scenarios

Tuesday, 18 May 2021 10:40 (20 minutes)

Generalized Likelihood Ratio (GLR)-based control charts for monitoring count processes have been proposed considering a variety of underlying dis- tributions and they are known to outperform the traditional control charts in effectively detecting a wide range of parameters'shifts, while being relatively easy to design. In this study, generalized likelihood ratio tests for monitoring high-purity processes with composite null and alternative hypotheses for geo- metric and exponential distributions are designed and their performances are evaluated via simulations. Moreover, composite change-point scenarios relevant for testing more practical and realistic out-of-control scenarios in the chemical industry are considered, extending the traditional cases in which means shifts or linear trends are detected to more complex scenarios.

Primary author:RIZZO, Caterina (Dow Inc.)Presenter:RIZZO, Caterina (Dow Inc.)Session Classification:Process modelling

Track Classification: Data Science in Process Industries