

عنوان مقاله:

Multi-objective Economic-Statistical Design of Cumulative Count of Conforming Control Chart

محل انتشار:

ماهنامه بین المللی مهندسی، دوره 27، شماره 10 (سال: 1393)

تعداد صفحات اصل مقاله: 10

نویسندگان:

a Sherbaf Moghaddam - *Industrial Engineering Department, Faculty of Engineering, Shahed University, Tehran, Iran*

a Amiri - *Industrial Engineering Department, Faculty of Engineering, Shahed University, Tehran, Iran*

m Bashiri - *Industrial Engineering Department, Faculty of Engineering, Shahed University, Tehran, Iran*

خلاصه مقاله:

Cumulative Count of Conforming (CCC) charts are utilized for monitoring the quality characteristics in high-quality processes. Executive cost of control charts is a motivation for researchers to design them with the lowest cost. Usually, in most researches, only one objective named cost function is minimized subject to statistical constraints, which is not effective method for economic-statistical design of control charts. In this paper, a multi-objective model for the economic-statistical design of the CCC control chart is developed. Then, multi-objective evolutionary algorithm (NSGA-II) for obtaining the Pareto optimal solution of the model is proposed. A numerical example is applied to illustrate the effectiveness of the proposed model. This model leads to lower cost and smaller probability of Type I and Type II errors, compared with economic model. In addition, a sensitivity analysis is done to investigate the effect of input parameters on the best solutions of the proposed mode

کلمات کلیدی:

Statistical Process Control Cumulative Count of Conforming Charts, High-Quality Processes Multi-Objective Economic-Statistical Design NSGA-II Algorithm

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/308886>

