Performance of control charts of individual measures in the presence of asymmetry.

Daniel Valentins de Lima[1], Anderson Castro Soares de Oliveira[2], José Nilton da Cruz[3]

Abstract: Statistical Quality Control is an essential tool both in business and in academic research, being implemented in several companies and also being object of study in numerous academic researches. The present article aims to analyse recent proposal for correction of asymmetry in control charts for individual measures (I-MR Chart), since this model assumes that there ir normality in the data, which is often not the case, making the model not suitable for data that does not follow normality. Therefore, alternative methods were necessary to keep industrial processes under control even if data were not normal. The methodology used presented satisfactory results when compared to the traditional Shewhart method, with a decrease in false alarms and an improvement in the data index under control in the process.

Keywords: Quality control; Shewhart; Skewness correction; Non-normality.

[1] Departamento de Estatística — UFMT. e-mail: *dvalentins@outlook.com*
[2] Departamento de Estatística — UFMT. e-mail: *andersoncso@gmail.com*
[3] Departamento de Estatística — UFMT. e-mail: *niltonn.cruz@gmail.com*.