CONTROL LIMITS FOR VARIABLE FRACTION DEFECTIVE – P CHART

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ABSTRACT

In Industry one is faced with two kinds of problems (i) to check whether the process is confirming to standards laid down and (ii) to improve the level of standard and reduce variability, consistent with cost considerations. Shewart's control charts assume that the fraction defectives are a constant. But due to several uncontrolled factors, the fraction defective varies. Hence in this paper the fraction defective is allowed to vary stochastically and the system solution is obtained by solving stochastic differential equations. In this study, a design procedure of p-chart for variable fraction defective is presented and control limits are derived using stochastic differential equations.

KEYWORDS: P-Chart, UCL, LCL, Variable Fraction Defective, Stochastic Differential Equations