

# **An Attempt for Improving CUSUM Chart for Monitoring Process Variance**

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Control charts for monitoring of process variance are developed based on Shewhart, exponentially weighted moving average and cumulative sum (CUSUM) control charts for mean. In all these variance control charts, log transformation of the sample variance is used. The design procedure of this chart is complex and it is poorly understood by the industry. In this paper an attempt is made to develop CUSUM chart for monitoring standardized variance which is having several advantages over the existing charts such as sample number free design, use in the joint monitoring scheme of process mean and variance and fit to multivariate monitoring. In industrial application this chart can be used to monitor different variances in one display simultaneously.

**Keywords** Cumulative sum, In-control signal, Average run length, Control limits, Process variance, Shift in standard deviation