

Bayesian Assessment for Some Process Capability Indices

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Abstract

Because of difficulty to obtain exact distributions of some estimators for process capability indices, in some occasions it is usually unable to obtain good interval estimates. In this paper, we derive the Bayesian procedure to evaluate the process capability with the credible intervals. Tables of various purposes are also developed for practical applications. In summary, this paper provides a practical Bayesian technique for some situations and which are quite useful for industrial applications.

Keywords: Process Capability Indices, Bayesian Approach, Credible Interval, Prior, Posterior.