A Comparative Study on the Evaluation of Process Capability for Non-Normal Distributions

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Abstract

The main objectives of this dissertation is to propose a fourth generation index C_{psk} for the case where the target value T is not equal to the midpoint of the specification limits (i.e. asymmetric tolerances), and show that this index is more sensitive compared to the standard PCI's in detecting small shift of the process mean from target value.

In conclusion, in this dissertation, a new methods for estimating a measure of process capability for non-normally distributed variable data is proposed using the percentage nonconforming.