Sample Size Determination for the Estimate of

Process Capability Indices

Chin-Chuan Wu

Tamkang University

R.O.C.

Hsin-Lin Kuo

Chung-Yu Institute of Technology

R.O.C.

Abstract

Process capability indices such as C_p, C_{pk}, and C_{pm} are extensively used in manufacturing industries to assess processes and evaluate purchasing decisions. The aim of this paper is to estimate the approximate sample size required to reach the desired confidence bound with a specified confidence level for the inferring C_p, C_{pk}, and C_{pm}.

Keywords: Process Capability Indices, Lower Confidence Bound, Approximate Sample Size.