

Using a Catapult as a Minitab Capability Sixpack Training Aid

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Abstract

This poster talk will describe the use of a simple and easy to make catapult for performing a process capability study and will also describe and interpret a Minitab capability sixpack using data generated by the catapult. The intent of this poster talk is to both explain the Minitab capability sixpack and provide guidance in using making and using a simple catapult for use in courses on capability studies.

The key illustration on the poster will be the output of a Minitab capability sixpack study. The six elements of the sixpack will be explained in detail. These elements are the I chart depicting the statistical control limits of the data, a moving range chart with the control limits for the differences between consecutive values, a run chart depicting the last 25 observations, a histogram of the data overlaid with the overall and within subgroup variation, a normal probability plot for testing the normality of the data, and a capability plot with the capability metrics.

A description of the execution of the catapult study will be above the capability sixpack illustration. This will both describe the way in which the trial was performed and provide guidance so that attendees can use a catapult for generating capability study data for either industrial training seminars or academic classroom training.

The technical drawing for the catapult will be depicted beneath the capability sixpack illustration so that viewers can see how to build a catapult themselves. A copy of the instructions and drawings will also be made available as a PDF.