

Metrology & Hallmark

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From the error curve to the measurand

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Abstract

Evaluation of measurement data in metrology is associated with term of measurement uncertainty. The measurement uncertainty is a parameter characterizing the dispersion of the quantity values being attributed to a measurand. The measurand is a quantity intended to be measured and is expressed as an output quantity in a measurement model. This quantity is treated as a set of possible values expressing a measurement result. Mathematically the measurand is a random variable calculated by the propagation of distributions through the measurement model. Usually, the measurement model is the form of measurement equation consists of many components. Any component is also a random variable with a prescribed probability distribution. One component is associated with a series of observations as a random effect, but another components are an systematic effect. Historically, the first of this components was associated with curve of error.

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