METROLOGICAL ASPECTS OF QUALITY CONTROL SYSTEMS IN BATCH PRODUCTION

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Abstract

The article deals with a comparative analysis of metrological aspects of quality control in batch production in the framework of existing conceptual models of uncertainty and error. We detect a transformation in the estimation of reliability and quality of control following the introduction of the concept of uncertainty. We present specifics of conceptual models of uncertainty and error that differ not only in their axiomatic system but also in their normative metrological principles. We show how to solve a fuzzy problem of quality control in batch production in the context of error (uncertainty). We provide a decision rule for estimating conformity of the product undergoing inspection in both cases. We supply a quality evaluation of the pass/fail decision taken during product quality control. The article may be useful for specialists in the field of product quality control.

Keywords

Conceptual models of error and uncertainty, decision rule, fuzzy problems, type I and type II errors, batch production, conformity assessment, product quality control decision

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