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Original Articles

Production system with process quality control: modelling and application

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Abstract

Over the past decade, there has been a great deal of research dedicated to the study of quality and the economics of production. In this article, we develop a dynamic model which is based on the hypothesis of a traditional economic production quantity model. Taguchi's cost of poor quality is used to evaluate the cost of poor quality in the dynamic production system. A practical case from the automotive industry, which uses the Six-sigma DMAIC methodology, is discussed to verify the proposed model. This study shows

that the system reach a steady state in our model, the manufacturing rate

conservation of mass

Q Keyword

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