Integrating Statistical Process Control, Engineering Process Control

And Taguchi'S Quality Engineering

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Summary

In this paper, a scheme is proposed to integrate statistical process control (SPC), engineering process control (EPC) and Taguchi's quality engineering (TQE). Then, two models are proposed to implement the proposed scheme. The models employ the concept of Taguchi's quadratic loss function to determine whether to take an EPC action by comparing the cost of the action and the cost of quality. A case study is used to compare these two models with the model in the literature where SPC and EPC have been integrated. The results have shown that the first model resulted in about a 25% saving and the second model resulted in even greater saving of about 30% for the case under consideration.

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