MARKOV MODELS IN PROCESS CONTROL

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PREFACE

In high speed industrial processes, "the measurement, calculation and adjustment phases of the quality control function must take place at a speed comparable with the process being controlled". Use of control charts and other conventional devices in such processes therefore result in considerable inefficiency and wastage. In high speed processes, it is often more feasible to use a feed-back device which "senses" when variations in quality become unacceptably large with the help of observations made on the process, and makes a suitable adjustment in the level of some process parameter (usually process operating level). The present thesis is devoted to methods for investigating the long term effectiveness of some specific control devices of the above type against specific types of assignable variation. The control devices considered here can be automatised at an economic cost; they would control undesirable variation in product quality quite adequately in many situations.

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