

Investigation into Varied Inspection Utilization for Mass Customization

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Abstract : An investigation into on-line inspection was performed where research is focused on the use of varied inspection (as opposed to 100% inspection) for mass customization (MC). Manufacturers need new methods for quality control in mass customization, and these methods need to address some of the old problems such as over-inspection and bottlenecking. Due to the risks of varied inspection, many manufacturers do not implement it and rather opt for sampling methods. However, there are many advantages of varied inspection and can have applications in mass customization. A control system incorporating fuzzy logic (FL) control is used to perform the variations in inspection usage in a simulated environment. The proposed system can have a key impact in appraisal costs reduction and possibly work-in-process reduction in high variety environments.

Keywords : appraisal costs, fuzzy logic, quality control, work-in-process

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