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Six Sigma based Control Chart for the Number of Defectives

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Abstract

A control chart is a statistical device used for the study and control of repetitive process. W.A.Shewhart (1931) of bell Telephone laboratories suggested control charts based on the 3 sigma limits. Now the companies in developed and developing countries started applying Six Sigma initiatives in their manufacturing process, which results in lesser number of defects. The companies practicing Six Sigma initiatives is expected to produce 3.4 or less number of defects per million opportunities, a concept suggested by Motorola (1980). If the companies practicing Six Sigma initiatives use the control limits suggested by Shewhart, then no point fall outside the control limits because of the improvement in the quality of the process. In this paper an attempt is made to construct a Six Sigma based attribute control Chart for the number of defectives specially designed for the companies applying Six Sigma initiatives in their organization. Suitable table is also constructed and presented for the engineers to take quick decisions.

Keywords
Six Sigma Quality Level, Control Chart, Process control, Six Sigma.