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Abstract
In 1994, Chen and Chung presented the problem of determining the optimum process mean for a product with one-sided specification limit under the 100% inspection. However, they didn't consider the quality loss within the specification limit. In this study, the author proposes the modified Chen and Chung's model with quadratic quality loss function for determining the optimum process mean.
In 1996, Pulak and Al-Sultan presented the problem of determining the optimum process mean for a product with one-sided specification limit under the rectifying inspection plan. However, they didn't consider the quality loss within the specification limit. The inspection is perfect and the nonconforming items of the accepted lot aren't eliminated or replaced by the conforming ones in their model. In this study, the author proposes the modified Pulak and Al-Sultan's model with quadratic quality loss function and inspection error for determining the optimum process mean.
Finally, the author integrates the modified Pulak and Al-Sultan's model and Cardenas-Barron's production lot model with shortage for determining the economic manufacturing quantity, shortage and optimum process mean.
Keywords: Rectifying Inspection Plan, Economic Manufacturing Quantity, Quadratic Quality Loss function, Process Mean, Inspection Error.
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