

**OPTIMAL CONTROL OF STATIONARY  
STATE OF PRODUCTION INVENTORY MODEL**

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**Abstract:** In this paper, a continuous-time model of a production-inventory system with deteriorating items is considered. The Pontryagin minimum principle is used to determine the actual production rate, the inventory level, desired production rate and demand rate as optimal functions of time. Numerical simulation study which illustrates the sensitivity of the total cost function against the monetary and non-monetary parameters is presented.