

The Relation Between Cost and Yield Rate in a JIT Production System

Jia-Chi Tsou

National Central University

R.O.C.

Jen-Ming Chen

National Central University

R.O.C.

Abstract

In this paper we consider production economic and cost related yield rate in a JIT (Just in Time) system. Based on the traditional EPQ (Economic Production Quantity) model, we establish the relation between cost and yield rate. The geometric programming approach is applied in our model to solve this optimizing posynomials problem. A numerical example is carried out to verify the proposed model. Through this paper, we connect the cost and yield rate in a JIT production system. This study demonstrates the power and efficiency of the geometric programming approach for the particular type of EPQ problem.

Keywords: JIT, EPQ, Geometric Programming, Cost Related Yield Rate.