

A Methodology to Evaluate the Feasibility and Plan for Prolongation of
Replenishment Frequency for TOC
Supply Chain Replenishment Systems

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Abstract

TOC-SCRS is a replenishment method of the TOC supply chain solution. When implementing this TOC-SCRS in plants, some issues, such as the conflict between the replenishment time and the replenishment quantity ect., will be encountered. In this paper, the enhanced models for the TOC-SCRS under the con-straints of plant capacity are proposed to resolve these problems. A methodology is first proposed to evaluate the feasibility impact for prolongation of replenishment frequency in a plant. The transitional replenishment quantity model under the prolongation of the replenishment time for TOC-SCRS is then given. A simulated case is finally utilized to evaluate the application of the proposed models.

Keyword : Theory of Constraints (TOC) ; Supply Chain Management ; TOC Supply Chain Replenishment System (TOC-SCRS) ; Inventory Replenishment