

Abstract

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The Application of Theory of Constraints in a Production Planning Process

For efficient, effective and economical operation in a manufacturing unit of an organization, it is essential to set up and implement a good planning process for the system in it. Production planning is an activity that is performed before the actual production process takes place. It involves determining the schedule of production, sequence of operations, economic batch quantities, and also the dispatching priorities for sequencing of jobs. During the manufacturing process, some constraints may rise affecting the throughput, inventory and the operating expenses of this process. This research concerns the implementation of theory of constraints (TOC) philosophy, which is used to identify, analyze and eliminate those constraints that restrict a firm's value adding process. Although initially a manufacturing method, TOC has now developed into a theory about management: a powerful systematic problem structuring and problem solving methodology which can be used to develop solutions with both intuitive power and analytical rigor. TOC is increasing being applied to situations outside the manufacturing context, including, distribution, marketing, project management, accounting, planning – in fact, any situation involving change to a system. The research will include a case study about ABB Company applying TOC in its planning process.