

THE MODERN METHOD OF PRODUCTION CONTROL - QUICK RESPONSE MANUFACTURING

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ABSTRACT

In the age of information technology, the mere possession of financial resources is no longer the most important factor in business success. Information is collected and processed in order to manage customers, products and services for the implementation of strategic plans. QRM is a method of improving the production control process. It belongs to quantitative methods, and the effects its implementation can be easily seen despite the fact that it is new and many little-known world markets.

Major part of the article was dedicated to describe and expose ways of implementing modern (the most recent) method of manufacturing management named Quick Response Manufacturing - QRM and POLCA. What is more, measurable advantages that can be achieved by a company which uses that method were pointed. QRM concept aims to continuously adjust operations to ensuing changes, both internal and external ones. The Quick Response Manufacturing concept assures substantial flexibility of response to signals from the market, a possibility of instant response to customers' needs.

During the last few years many of the US companies have implemented the QRM strategy, which has given astounding results. The typical results were shortening the lead time, lowering product costs, quality improvement of delivery realisation as well as better exploitation of materials and a decreased number of corrections. QRM has achieved these results owing to detailed management rules, production methods, analysis techniques and tools.

The POLCA system (Paired-Cell Overlapping Loops of Cards with Authorisation) is an idea of how to control the resources flow. It consists of elements of the 'pull' system (typical in JIT) and 'push' system (traditional manufacturing systems). MRP (Materials resource planning) is, in POLCA system, used only at higher levels and it is not applied in manufacturing cells, where the 'pull' system is used. Innovative content of QRM is the rule of combination of single manufacturing cells into pairs and creation of POLCA cards. In QRM these cards, in contrast with KANBAN cards in JIT, are not assigned to particular products, however they are assigned to pairs of manufacturing cells.

The key aspect of QRM is to solve the problem of time reduction between order and delivery. Some of the common approaches towards production management look like a set of incoherent definitions, whereas in QRM the whole set originates from the same topic.

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