

# ФОРМИРОВАНИЯ МНОЖЕСТВА ОБЪЕКТОВ ПО ЗАДАННОМУ ANALYSIS OF THE MODELS OF TRANSITION PROCESSES CONTROLLED MANUFACTURING

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The effectiveness of the control system of production flow lines is determined by many factors, among which the choice of the model of controlled manufacturing processes and supervised algorithm take an important place. This selection is extensively determined by the structure of the life cycle of producible products, the dynamics of change of in time main parameters that characterize the state of the life cycle phase and the duration of its separate stages.

On the one hand the production line operates in a significant space of time at a transient rate; b) on the other hand time devoted to the search of the mode of production line's technological areas management is reduced, estimated minutes or even seconds [1, с. 139].

In connection with that the design of control systems of production lines for transition regimes in the past decade focuses on the use of brand new types of models of controlled production processes, as well as programs and management algorithms. Application of quasi-static model becomes widespread unacceptable.

Modern production requires reliable, not requiring a lot of processing power models that enable to describe the behavior of the parameters of the production lines for both quasi-static and transient for transients in order to solve appropriate management problems. Review [1] of recent publications showed that for describing the operation of production lines three basic types of models are involved: 1) a model of queuing theory (TQ-model) 2) a discrete-event model (DES-model) 3) models of fluid (Fluid-model). Each type of model has its advantages, but none of them fully fits for a full description of the production lines operating in transient transition mode.

One of approaches to building control systems of production lines in unsteady modes is the use of dispatching control theory (The supervisory control theory, SCT, Ramadge P., Wonham W., 1987) [2]. Currently, this theory based on the discrete event specification production lines, is used by many authors. At the same time, PDE-class models [3] based on partial differential equations, allow to obtain a sufficient degree of accuracy balance equations describing the rate of movement of objects of labor, for transition and steady-state, which makes it possible to build effective model control systems with modern production lines.

## **Literature:**

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