ENTROPY METHOD IN THE MODELS INDUSTRIAL PROCESS CONTROL

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For the first time the importance of entropy method in control theory have Dzh.Fon Neumann. Entropy approach to modeling the processes discussed in detail B.N.Petrov, I.V.Prangishvili [1,2]. The entropy of the process associated with the distribution function of process parameters on the possible states. Distribution function of the items of work not explicitly linked to the parameters describing the state of the items of work in the technological processing [3].

At the same time, modern, traditional approaches to model building process, the foundation of which is laid in the works V.V.Shkurba, A.A.Pervozvanskij, N.P.Buslenko, based on the characteristics of the transfer of technology resources on the subject of labor, when it moves technological route. Therefore, the actual entropy is the further development of methods for constructing models of management process parameters based on model representations of the mechanism of interaction of objects of labor to process equipment and themselves [4].

The report, based on model representations of the nature of the interaction of the objects of labor and production equipment, given the statistical validity of the law of increasing entropy of the process. It is shown that the irreversibility of technological phenomena moving items of work on the technological route is in the interaction of objects of labor to process equipment and themselves.

Literature:

- 1.Петров Б.Н., Уланов Г.М., Гольденблат И.И., Ульянов С.В. Теории моделей в процессах управления. М.: Наука, 1978. 224 с.
- 2.Прангишвили И.В. Энтропийные и другие системные закономерности: вопросы управления сложными системами / И.В. Прангишвили; Ин-т проблем управления им. В.А. Трапезникова. М.: Наука, 2003. 428 с
- 3. Азаренков Н.А. О законе возрастания энтропии технологического процесса / Н.А. Азаренков, О.М. Пигнастый, В.Д. Ходусов // Доповіді національної академії наук України, 2012. N05— C.32-37.
- 4.Пигнастый О.М. Статистическая теория производственных систем. X.: изд. ХНУ им.Каразина, 2007. 388 с.