Abstract

One of the main tasks to be solved when developing an automatic control system is to identify the control object and obtain its mathematical characteristics. The nature and type of a mathematical model are determined by the goals and tasks used to solve it.

Most of the objects of production control almost always have the of inertia and non-linear static characteristics of the control channel. Recently, it is most often characterized by an S-shaped transition process. The linear part of such objects is usually provided as a second-order inertial link, with a transfer function of this form: $W(p) = \frac{k}{(T_1p+1)(T_2p+1)}$ (K-transmission coefficient, T-time constant). In the thesis, the transition function of a nonlinear object is given, its static characteristic is S-shaped.