

DEVELOPMENT AND RESEARCH OF THE METHOD OF STATIC SYSTEMS IDENTIFICATION BY HYSTERESIS

Many systems used in practice include various sources of energy dissipation (nodes with external and internal friction, ferromagnets, ferroelectric capacitors, and others), switching devices and nonlinear elements with an ambiguous static characteristic. For such systems, called hysteresis systems, with an arbitrary law of variation of the input coordinate $X(t)$, the motion of the representing point will have a complex hysteresis nature, when a finite or infinite set of values of the output coordinate Y corresponds to one value of X .

Hysteresis systems are called static systems in the range $|X| < X_0$, where X_0 is a certain threshold value of speed, at exceeding which the speed affects the course of the hysteresis curves, if the shape and slope of the branches of the hysteresis loops do not depend on the value in the indicated range of speeds; at that, at the turning points at which the sign changes to the opposite sign, an acute-angled shape of the loop (tips) with a break of the first kind is observed.

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