ANALYSIS OF STABILITY CONTROL SYSTEMS BIOGAS PLANTS

V.Ramsh, Ph.D.

Separated subdivision NUBiP of Ukraine "Berezhany Agrotechnical Institute"

The use of powerful biogas plants (BSU) can solve the problem of energy, environmental and agricultural chemistry and may be the basic foundation for the creation of clean energy.

Modern biogas plants are complex technological systems, subsystems having main and auxiliary equipment and microprocessor control systems and software. The software process is a set of information materials necessary for the normal functioning of the system used to conduct processes optimally. The security parameters of technological systems directly depend on the choice of laws regulating and adjusting the parameters of the control system, thereby determining its cost-effectiveness.

The purpose of research - to develop methods that will formalize the quantitative and qualitative features of technological systems and the creation of algorithmic and software framework for its management.

Materials and methods research. Technological systems are nonlinear objects control. To develop an automatic control system typically provides for linearization within the basic mode, and the optimizer mode set within the linearization error.

Results. The technique allows to formalize the quantitative and qualitative features of technological systems and create algorithmic and software base for their control.

If simple version control systems are not suitable due to the fact that the matrix S is not positively or negatively defined, and the use of reverse also unsuitable, it is necessary to choose a matrix c, which remained diagonal, provide stability through the use of different values of the elements.

When designing a control system for a particular object, you must create his full conditional model. By using this model to calculate the matrix R for different

modes of operation, determine the borders of the own numbers and consider options for harmonization of regulatory entity. Given roughly the same cost can be considered the best option that provides the greatest safety factor.