

## **Automatic control of heat power plant in changing operation modes**

**State registration** –0110U002291

**Head** - Kovrigo Yuriy M.

### **Results**

Automatic control systems heat power processes which function in changing modes are object of research. New methods of creation, algorithms and structures of control systems which are created with usage of a principle of changing of structure, parameter optimization, search algorithms, operative correction of control actions, and also algorithms which allow to consider existing restrictions on controlling and controlled signals are a development.

Project is directed on overcoming of lacks of the heat power processes control systems connected to nonlinearity, the considerable delay, a considerable quantity of coordinate and parametric desaturations the part of which cannot be supervised, incomplete structural and parametric definiteness. In case of application of typical automation decisions powerengineering the enterprises sustain essential economic losses through ineffective usage of the equipment.

The main results: new structural decisions for control systems heat power processes which provide high quality of functioning of heat power units in broad range of change of their dynamic parameters, restrictions on controlling action, and also methods of synthesis and the analysis of such systems are developed and researched.

For the first time in Ukraine for control of heat power units the offered and probed control systems which respond production schedules and restrictions in control laws, carry out operative correction of regulating actions for the purpose of improving of direct and integral indexes of system operation.

Software solutions are developed for comparative researches of new methods of automatic control.

PDF