

ABSTRACT

This bachelor thesis is devoted to the study of heating systems of private houses and pump automation in these systems.

The work reviewed various heating systems, focusing on solid fuel single-circuit boilers, and also investigated the principles of operation of pumps and existing heating systems. The work also includes conclusions and an overview of the problem.

The paper describes the presented version of pump automation. The principle of operation of the device is considered, as well as an overview of the elements used in the subsystem. The electrical schematic diagram and calculated elements in the diagram are described. The principle of operation of the Arduino Uno microcontroller board in the subsystem is also explained in detail.

This work is relevant and important, as it requires knowledge and understanding of various heating systems of private houses and the possibilities of automation of pumps. The results of research and development in this field can be useful for energy-efficient heating of private houses.