

Annotation

The master's thesis consists of such sections as a list of abbreviations, an introduction, three sections, a conclusion, a list of references and appendices. The work contains 97 pages, 51 figures, 5 tables, 1 diagram, 32 formulas and 17 sources.

The aim of the thesis is to develop an automated system for recording information from sensors to an information model.

The relevance of this work lies in the demand for automation and data structuring in the program.

The object is programs using the information model.

The subject is the automation of recording information to the model.

In the review materials, already existing programs for information modeling were considered, as well as the stages of creating an information model. Also familiarization with the construction of the pit and types of soils for a better understanding of the topic.

In the design and construction section, the operation of the sensors, their characteristics, the parameters of the read information are calculated and compared with the output signals from these sensors. Graphs were built based on these calculations. The emergency values of the components of the pit were also accepted and an algorithm of actions when these values were reached was built. A structural diagram of the automated system is offered, as well as a sketch of the interface.

In the development section of the startup project, an analysis of the market and competitors was carried out. The cost was calculated, the team was selected and the calendar plan-schedule of the project implementation was developed.

Keywords: information model, BIM, load strain gauge, inclinometer, measuring pin, emergency value, interface.