ABSTRACT

The goal of the master's dissertation is the development of an automated thermal imaging system that can be used in production or at heavy industry enterprises to detect gas leaks in gas pipelines.

The content of the master's thesis includes an introduction, four chapters, conclusions, a list of sources used in the research and appendices. The work is posted on 72 pages, contains 23 figures and 27 tables.

Within the framework of this master's thesis, a study of the theoretical foundations of thermography was carried out, a functional scheme of the device was developed, a thermal imaging system was designed, the selection of optimal device components was carried out, and the development of a startup project for commercial use by both specialists in their work and ordinary users in everyday life was substantiated.

Keywords: thermal imaging system, thermal imager, gas detection, automation, thermal vision