Abstract. In this paper, the method of remote monitoring and diagnosis of electrical equipment using thermal imaging surveys are considered. Thermal vision diagnostics is based directly on the results of a study of a particular object of electrical equipment based on an assessment of heating temperatures. Inspection of the electrical equipment of intersystem electrical networks is conducted in two stages without interference in the technological cycle of production. Identification and elimination of excessive heating of electrical equipment, i.e. a local defect at an early stage of its development makes it possible to avoid accidental defects. Studies conducted in this direction contribute to improving the technical and economic indicators of electrical equipment of intersystem electrical networks, reliability and safety of operation and can reduce damage from emergency situations.

Key words: thermography, diagnostics, intersystem networks, thermal vision monitoring

The arising malfunctions of the electrical equipment lead to large material and time costs, both in the repair process and in the restoration of the normal production cycle. In this case, the cost of diagnosing a defect can be a significant amount (up to half) of the total cost of equipment. The most costly, including in time, is the diagnosis of defects in electrical equipment, due to the need to analyze a large number of tightly located contact groups, assemblies, current-carrying circuits. Ensuring high-quality and uninterrupted operation of electrical equipment depends on a large number of parameters, among which one can distinguish the influence of the external environment, the regularity and types of loads, the influence of random factors (human factor), etc. [1].

Therefore, the clarification of the technical condition of the electrical equipment of the intersystem electrical networks based on thermal imaging surveys will allow, at the minimum financial cost, in the shortest possible time, without removing the electrical equipment from work, to check the reliability of the monitored object, identify defects at an early stage of their development, reduce maintenance costs by predicting the timing and volume of repair work. As a result of this, research into the methods of thermal imaging diagnostics of electrical equipment that prevents emergency equipment failure and enhances operational reliability by identifying local defects is becoming relevant.

In connection with the foregoing, the main attention is paid to the study of thermal imaging inspection of electrical equipment of intersystem electrical networks.

The situation that has developed in recent years in the electric power industry, within the framework of the economy, forces us to take measures aimed at increasing the life of various equipment, and this is equipment from non-CIS countries, which after installation does not require a comprehensive examination for...