ABSTRACT

Power transformers play a crucial role in power transmission systems, facilitating voltage level adjustments essential for efficient energy distribution. However, the geographical dispersion of transformers and the shortage of manpower pose challenges to regular monitoring, making it imperative to develop reliable and automated solutions. This project presents the design and construction of an automatic monitoring system for power transformers, utilizing the Node-MCU module (ESP8266) for real-time monitoring of voltage, oil level, and temperature (oil and winding) parameters. Leveraging the Internet of Things (IoT), the system establishes a self-defense mechanism for transformers. In a distribution network system there are many distribution transformers and connecting each transformer with such system can easily figure out faulty transformer from the message sent to mobile, thereby no need of checking all transformers phase current and voltage and thus it can improve the system in less time.Our system is designed based upon online monitoring of key Operational parameters of distribution transformers can provide useful Information about the health of transformers which will help the utilities to Optimally use their transformers and keep the asset in operation for a longer.