

Thoughts on the Application of Electronic Information Engineering in Electrical Engineering Automation

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Abstract: With the continuous development and improvement of information technology, the comprehensive utilization of electrical information technology, communication technology and electronic technology can promote the rapid development of electronic information engineering to a great extent. These will make electronic information engineering widely used in various industries. The application of electronic information engineering in the design process of electrical engineering automation system plays an important role in improving the level of automation and intelligence of electrical engineering. The analysis and research on the application of electronic information engineering in electrical engineering, and the discussion of the automation technology of electronic information engineering have important practical significance for promoting the development of electronic information engineering and the improvement of electrical engineering automation level.

1. Basic Overview of E-mail Engineering

Electronic information engineering refers to the comprehensive application of modern communication technology information technology and electronic technology. In the application process, electronic information engineering will make full use of scientific technologies such as computers to promote the intelligent development of information analysis and processing. Compared with electrical engineering and automation, electronic information engineering mainly focuses on weak current analysis and control, such as analyzing signal data. The application of electronic information engineering is extensive, and it plays an important role in people's daily production and life. For example, mobile phone networks that are indispensable to modern people use electronic information engineering technology.

In the development process, electronic information engineering technology can promote the development of other industries, especially the continuous development of modern Internet technology and information network technology. It will make the electronic information engineering more widely used in various industries, not only to drive the mobile phone market, etc. The development of the industry, and can guarantee the information security of the country. In addition, electronic information engineering has integrated modern science and technology in the development process, greatly improving its intelligence, networking and efficiency, and electronic information engineering itself is a comprehensive discipline in all walks of life. The application process can promote the rapid development of modern technology [1].

2. Application of Microcomputer in Electrical Engineering Automation

The introduction of microcomputer into electrical engineering automation can effectively improve the level of electrical engineering automation, and can use automated systems to record and monitor the operation status of electrical equipment. It can also analyze and process monitoring data using



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analytical models and discover problems in the operation of electrical engineering automation systems. In addition, the application of microcomputer in telecom engineering automation can ensure the accuracy of problem processing information, in order to prevent large calculation errors, and introduce microcomputer into the application process of electrical engineering automation, we mainly analyze from the following two aspects.

2.1 Introduction of Microcomputer Applications

The introduction of microcomputers into electrical engineering automation must recognize that the important research area of electronic information engineering itself is the design and development of equipment. Therefore, from this perspective, microcomputer applications in electrical engineering have promoted electronic information engineering. Effective application can improve the automation level of electrical engineering. Prior to the application of microcomputers in electrical engineering automation systems, the overall level of automation of electrical engineering systems was limited, and data could not be analyzed and utilized in a timely manner. Accurate analysis and processing of data is an important part of the electrical engineering automation system. Therefore, the application of the microcomputer in it can greatly improve the level of electrical engineering automation. When data is collected and analyzed, computer-related software is still needed for processing. But micro-technology is used for timely and accurate processing and analysis of data to promote the development of electrical engineering systems in a more intelligent direction [2].

2.2 Automatic Data Collection and Recording

In the process of electrical engineering automation system control, data must be recorded, collected and analyzed. In the process of processing data, application software and information system are needed. Information systems are an important research area of electronic information engineering. In recent years, the development of electronic information engineering has been relatively rapid, and scientific and technical personnel have a more prominent application effect in the process of research and development of information systems. The application of electronic information system in electrical engineering automation system can complete the data recording, collection and analysis work in the electrical engineering automation system. It also can improve the automation efficiency of data processing work, and ensure the accuracy and timeliness of data information processing results. In the process of managing electrical engineering facilities, once the facilities are faulty and problematic, timely and efficient measures can be taken to prevent the centralized collapse of the electrical engineering system. Thereby reducing the economic losses caused by the collapse of the electrical engineering system and ensuring stability and reliability of electrical engineering systems. This also has positive implications for improving the operational efficiency of electrical engineering automation systems.

3. Design of Monitoring Mode of Electrical Information Engineering in Electrical Engineering Automation

In the process of designing the electrical engineering automation system, in order to reduce the probability of failure of the electrical engineering system during operation, an effective monitoring mode can be designed, which can facilitate the timely and accurate monitoring and management of the electrical engineering operating system by the staff. Once an abnormal situation occurs, the source of the fault can be found in time, and effective measures are taken to eliminate these fault types to ensure the stability and reliability of the operation of the electrical engineering system. Therefore, reliable design of monitoring methods in electrical engineering automation systems is an important part of improving the level of electrical engineering automation. The effective application of electronic information engineering can greatly improve the operational efficiency of monitoring methods and the reliability of monitoring results in electrical engineering automation systems. When analyzing the monitoring mode of water, it mainly carries out two aspects: the remote monitoring mode design of electrical engineering and the design of on-site monitoring mode.

3.1 Remote Monitoring Mode Design

When using electronic information engineering to design remote monitoring of electrical engineering automation, we must pay attention to the important role of remote monitoring mode in the overall electrical engineering monitoring. Remote monitoring is an important part of the electrical engineering monitoring method, and it is an important part of improving the level of electrical engineering automation. The main function of the remote monitoring mode is that the staff of Fangxinxin Engineering Construction can use remote monitoring equipment to find the fault source of electrical engineering in time and accurately, which can effectively save equipment such as cables. In addition, the design of remote monitoring methods in electrical engineering automation systems can effectively reduce the cost of each electrical engineering construction, and has positive significance for improving the reliability and stability of electrical engineering automation systems. Therefore, we must pay attention to the effective application of remote monitoring design work in electrical engineering automation [3].

In recent years, electronic information engineering has been applied in electrical engineering automation systems, and has developed a more adaptive monitoring method with electrical engineering automation remote monitoring system. After continuous innovation and improvement, it has finally achieved better application results. In addition to improving the monitoring efficiency, the automated remote monitoring system based on electronic information engineering can greatly simplify the operation process of remote monitoring by staff. The staff can directly manage the interface intelligently. This graphical operation is beneficial to the operation, it can improve the efficiency of information usage. It also enables accurate analysis and processing of graphical information to improve the efficiency and accuracy of information processing. With the intelligent remote monitoring system, the entire electrical engineering automation system can be monitored in a timely and accurate manner. Once a fault occurs, the cause of the fault at the electrical engineering site can be found in time, and effective measures are taken to solve the fault to ensure the electrical engineering automation system operational stability and reliability. In short, the application of electronic information engineering in the design process of electrical engineering automation system can greatly improve the efficiency and intelligence of remote monitoring of electrical engineering.

3.2 On-site Monitoring

In recent years, when designing electrical engineering automation monitoring methods in electrical engineering such as power plants and power plants, it mainly relies on computer network technology, Ethernet and fieldbus. However, with the rapid development of electronic information engineering, the intelligence and automation level of electronic information engineering is higher. Applying it to the monitoring mode design process of electrical engineering automation can promote the development of electrical engineering automation and bring electrical engineering automation into a new stage of development. The new electronic monitoring equipment using electronic information engineering has the following application advantages: Firstly, its volume is relatively small, occupying a small space, saving installation space and improving application flexibility. Secondly, it has a unique information system that can improve the operability and pertinence of monitoring methods.

When using the electrical engineering automation to monitor and design the current electrical engineering construction site, it can effectively improve the intelligence and automation level of the monitoring method. In addition to controlling the electronic monitoring equipment according to the situation on the spot, the staff can also use the electronic monitoring equipment to comprehensively understand and master the electrical engineering site. In addition, the electronic information engineering network system can connect the electronic monitoring equipment to the background control. Even if the electronic monitoring equipment has a problem, it only affects the specific equipment components, and does not affect other electronic equipment. And will not affect the entire electrical engineering automation system. It can greatly improve the operating efficiency of the electrical engineering automation system and reduce the probability of failure of the electrical engineering field system [4].

4. Embodiment of Automation Technology in Electronic Information Engineering

4.1 How Automation Technology Works

In the process of research and development of intelligent control systems, multiple communication methods such as duplex serial communication and duplex wireless communication and parallel communication are mainly adopted, which can improve communication automation in the system construction process. The micro-controller used in the system can use the parallel mode for automatic communication. The parallel communication method can jointly transmit 8-bit data, and the parallel port used by the host directly communicates with other chips, which has outstanding application advantages. In addition, the intelligent control system can be used for secondary development with a single microprocessor, which is conducive to subsequent development and expansion. Therefore, the system mainly uses two micro processors for application, which can realize parallel communication. Thereby achieving the purpose of automatic transmission of data.

The collected system information can be automatically transmitted to the host by the sensor, and then the host processes and classifies the information, sends the control command to each control module in the system, and then the control module automatically updates the corresponding device according to the sent control command. Control to complete the automation control function. When the sensor and the micro controller are connected in communication, the simplex serial communication connection method is mainly adopted. And the sensor can directly transmit the collected data to the host microprocessor by simplex serial communication, and then the information is processed accordingly to achieve automatic control [5].

4.2 Performance in System Design

The use of electrical information engineering for automation technology design relies mainly on computer-aided design. This can use some computer software for system development and application, and can use C language to program the system's automation program. As the core of the automation control system, the microcontroller can coordinate various control modules in the system and strengthen the modules communication situation. When controlling the electrical engineering automation system, the remote terminal can be used to complete the system control commands to achieve the purpose of automatic control.

4.3 Performance in Functional Design

When designing the functions in the automation system, the automation technology is mainly embodied in the automatic control of the machine equipment, the remote terminal can send the information, the relevant control commands are issued, then the system receives the control commands, and the relay module is used to automate the electrical equipment. control. In addition, the automation technology is fully embodied in the security alarm system. A large number of sensors can be installed in the intelligent control system. The sensor can effectively monitor and control the operating environment of the intelligent control system. If there is danger, the system is miniature. The processor can identify the dangerous situation, and can use GSM to send the dangerous situation to the terminal of the control device, and perform an alarm work according to the preset dangerous handling program. Improving the efficiency and accuracy of the danger alarm has positive significance for ensuring the normal and stable operation of the machine.

5. Conclusion

In summary, the application of electronic information engineering in the process of electrical engineering automation can not only promote the improvement of automation technology level, but also greatly improve the design efficiency of electronic information engineering products, which can effectively reduce the workload of designers. To improve the quality of design work, and to promote the intelligent and automated development of electrical engineering products, it is of great help to promote the current level of automation technology in electrical engineering. The application of

electronic information engineering in telecom engineering automation system requires research and analysis of the application mode of electronic information engineering according to the actual situation of the current electrical engineering automation system. The electrical information engineering should be fully applied in the electrical engineering automation system. Improving the operational efficiency of electrical engineering automation systems is of great practical significance for promoting the entry of electrical engineering automation systems into new phases. In addition, relevant researchers should increase research on electronic information engineering and electrical engineering automation systems. Thus not only can improve the technical level of electronic information engineering in China, and improve the application effect of electronic information engineering. But also can promote a wide range of electrical engineering automation technology application and development.

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