Research on the Application of Computer Network Technology in Production Information Management

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Abstract: This paper focuses on the application of computer network technology. Based on the realization conditions of computer network control system, this paper analyzes the application of computer network technology in production information management from the aspects of supervision and control system, information collection system, central management system, data storage system, enterprise information networking and network security system. The purpose is to make better use of computer network technology, promote it to play a positive role in the production information management, and lay a foundation for promoting more stable and sustainable progress and development of enterprises.

1. Introduction

The rapid development of computer technology, network technology continues to optimize and improve, promote the emergence of computer network technology. This technology not only represents information technology, but also has the characteristics of network and automation, which makes this technology widely used. Nowadays, various industries have gradually realized the importance of computer network technology, and gradually become the development core of each industry, which provides favorable conditions for promoting the development of various industries. At present, in the process of enterprise development and production, the amount of information generated is relatively large, and the information analysis project is more complex. If the computer network technology is not fully used to carry out management work, it will hinder the stable development and progress of enterprises. In view of this, enterprises need to strengthen the research and analysis of computer network technology management, which provides favorable conditions for further promoting the development of enterprises.

2. Production Information Management System Based on Computer Network Technology Management

The application of computer network technology can promote the production and operation of enterprises more efficient and stable, and achieve the goal of automatic supervision and control management. For example, a certain enterprise has fully applied computer network technology in production, as follows:

Objectively speaking, computer network management system can be divided into three parts: central management system, supervision and control system, information collection system. These three systems are not only independent of each other, but also can influence each other, which has an important impact on the whole production process of the enterprise. It is convenient to realize the application of computer network technology and promote the effective improvement of enterprise management level [1].

3. Realization Conditions of Computer Network Control System

3.1 Software and Hardware Conditions

In the process of enterprise development and management, in order to realize the computer

network control system, the key is to need the support of software and hardware. For example, in enterprise a, hardware products are used in the supervision and control system and information collection system, and monitoring software and programming software are also combined to fully guarantee the integrity of control equipment. Among them, the information collection system mainly uses Ethernet thick cable, and also applies twisted pair, repeater and other equipment in the supervision and control system, which fully meets the basic requirements of software and hardware of computer network control system, plays the computer network system to the greatest extent, and provides favorable conditions for promoting the development and progress of enterprises.

3.2 Database Conditions

In the computer network control system, the key is the database management system, and the management mode in this system is closely related to the management efficiency of the computer network system, which can greatly affect the security and reliability of the computer network system operation. The database needs to contain the data information of equipment operation and offline production management data. The application of SQL management system not only has ideal management effect, but also has smooth application. At the same time, SQL control system can be compatible with most of the systems, providing favorable conditions for subsequent control. Moreover, the application of sol system makes the database share resource information with other software to realize the goal of control integration [2]. In this process, we still need to pay attention to that in the actual production process, the enterprise needs to establish the database according to the actual situation, and set the database scientifically and reasonably, collect and analyze the operation status of the production equipment, and help the enterprise control center to issue reasonable control instructions.

3.3 Network Conditions

The central control system of the enterprise mainly adopts the bus type MB + network, and the supervision and management system can choose Ethernet. If the enterprise contains less data information, it can manage the production network through a computer, and this computer can also serve the operation of equipment, and realize information exchange, information sharing and other functions. If the distance between the dispatching room and the control room is too far, it is necessary to add a repeater in the center of the network, so that the information can be effectively transmitted. When enterprises realize the function of computer network control, they should pay attention to meet the network conditions, so as to better achieve the goals of network automation and network communication, promote the full play of computer network technology, and facilitate enterprises to carry out production information management more efficiently [3].

4. Application of Computer Network Technology in Production Information Management

The advent of the information age, promote the rapid development of computer technology and network technology, the two continue to integrate innovation, produced computer network technology, and is gradually applied in various industries. Some enterprises also use this technology in the production information management, which can not only supervise and manage the actual production situation of enterprises, but also strictly control the production of enterprises, so as to ensure the normal operation of each production equipment. And the technology has good stability and security, which can promote the rapid and stable progress and development of China's production enterprises.

4.1 Application of Supervision and Control System

In the production process of enterprises, the supervision system method plays a good role in supervision and control. Through the use of PLC automation technology, the automatic control of equipment is realized, and the actual operation situation is supervised, and the operation related information content is collected automatically, and these data messages are analyzed at the same time. At the same time, these data messages can also be sent to the control center, which conducts

research and analysis, and distributes the next command. The installation of automation equipment in the equipment can more accurately supervise and manage the operation of the equipment and ensure the stable and efficient operation of the equipment. The application of the monitoring system in this link is mainly to connect the Internet facilities and equipment with the controller, so that the control of the equipment can be more comprehensive [4].

4.2 Application of Information Collection System

Information collection system, the key role is to collect data information, and ensure the authenticity of data information, and improve the integrity of data information. At the same time, we also need to upload these data information to a system to collect all aspects of data information. In addition, collecting it into the unified system can provide favorable conditions for enterprises to understand the production status.

4.3 Application of Central Management System

The application of the central management system can better achieve the production information control and management objectives, and can browse the data information before, during and after the operation of facilities and equipment. At the same time, the application of computer network technology in this system can not only provide convenience for the transmission of data information, but also ensure the system to complete the corresponding operation in strict accordance with the requirements. It can supervise and urge the interaction between various systems, make the production process gradually automatic, and finally make the positive role of computer network technology fully play, further improve the management ability of production enterprises, and lay a good foundation for promoting the healthy and sustainable development of enterprises [5].

4.4 Application of Data Storage System

In the process of business development, the storage of information is mainly through the database for storage, and this technology has been widely used in the management of various enterprises, this technology is also the earliest computer management technology mastered by people. With the rapid development of computer technology and the continuous improvement of network technology, the emergence of computer network management technology has gradually attracted people's attention, and has been widely used in various industries. Due to the great changes in human resources and business activities of most enterprises, a large amount of data information is needed for any enterprise. However, from the current development of enterprises, the single Internet information technology can not fully meet the basic development needs. Therefore, enterprises need to build a perfect data storage system according to their own development, and then research and analyze the data information collected daily. In addition, in the computer network system, data information backup occupies a very important position, and in this context, computer network technology is also widely used. Especially in the production information management link, this technology has been fully utilized, thus ensuring the authenticity and reliability of stored data information, and providing favorable conditions for promoting the stable and sustainable development of enterprises [6].

4.5 Application of Enterprise Information Networking

Enterprise information networking mainly refers to that in the process of mutual communication and cooperation, enterprises can achieve the goal of resource sharing by using information technology with the help of relevant platforms. When the enterprise production information management, we can make full use of information network, fully meet the basic needs of social development, and promote the healthy and sustainable progress and development of enterprises. At the same time, the realization of the goal of enterprise information network is rising with the development of computer network technology, which represents the development characteristics of modern society. After understanding the relevant information of the enterprise, we can have a deeper understanding of the market information, and provide a favorable basis for promoting the long-term development of the enterprise [7].

4.6 Application of Network Security System

Nowadays, the application of computer network technology in enterprise production information management will inevitably produce a large number of data information, which contains a large number of confidential content. Therefore, in the practical application of computer network system, we need to pay more attention to this part of confidential information. In the specific transmission process, we should improve the awareness of security protection and pay full attention to the security and stability of the system. In the current social background, the more commonly used protection measure is firewall, through this technology to protect the security of computer network system, so as to fully guarantee the stability and security of information transmission. In addition, enterprises in the process of development and operation, if they want to better manage their own computer network security, then they need to apply the corresponding network protection software according to the actual development situation. However, with the rapid development of science and technology, computer network system has gradually appeared a variety of problems. In view of this situation, the enterprise in the actual application of computer network management technology, it is necessary to conduct in-depth research and analysis of the computer network system. Moreover, in the production information management link, make full use of computer network technology, improve the attention to the software system, and timely update and maintain it, so as to make it play the greatest value and role [8]. The use of software system can directly show the specific development of the enterprise, so it is necessary to update and optimize the software system in time to ensure the efficiency of the enterprise, improve the core competitiveness of the enterprise, and promote the development and progress of the enterprise.

5. Conclusion

The rapid development of China's information technology, the arrival of the network era, all promote the rapid development of computer network technology. In the process of enterprise production information management, the use of computer network technology management can further improve the efficiency of enterprise production information management, ensure the quality of production information management, and provide favorable conditions for promoting the healthy and sustainable development of enterprises.

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