

# Application of Mechanical Automatic Control Technology in Engineering Construction

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**Abstract:** With the continuous innovation and development of science and technology, mechanical automation manufacturing technology has become one of the measures to measure the development level of mechanical automation manufacturing technology. National science and technology development in the fierce market competition environment, we must attract enough attention. China is in an important period of economic development. It is necessary to improve the quality of products and the competitiveness of products in order to promote the best development of economy, to realize the leapfrog development of economy and the development of Chinese machinery manufacturing technology. Several factors affecting the construction of mechanical automation technology and the application of automation technology analysis the application of automation technology in modern engineering construction and the application of automation technology in future engineering construction and future cooperative project development. This paper focuses on the application of mechanical automatic control technology in engineering construction, hoping to bring some help to the development of engineering construction.

## 1. Introduction

At present, with the continuous development of science and technology, mechanical automation technology has been applied in various industries, but also has developed into a new type of mechanical automation technology. an important embodiment of the development of national science and technology. With the fierce competition in the market, it is of great significance to improve the quality and efficiency of production. In the continuous development of China's construction industry, the application of mechanical automatic control technology can effectively promote the development of the construction industry. This paper will analyze the application of mechanical automatic control technology in engineering construction, and put forward the corresponding measures. With the continuous development of society, the living standard and quality of the people are also constantly improving, and various needs such as daily life and environment are becoming higher and higher. Whether it is life or work, people demand more and more convenient and quick service. such as daily necessities automation, farm tools automation, etc.[1]. Communication and automation of mechanical equipment. If manual control is adopted, there may be more work to do, which not only takes a lot of time, but also takes a lot of time. However, the expected accomplishments could not be achieved. Through automatic control technology, can use complete equipment, both energy saving and convenient and fast. Therefore, the mechanical automation control technology in modern buildings is essential for excavators. The development of engineering construction industry in China is of great significance.



Figure 1 Technicians are operating machinery

## **2. Important Factors Affecting Mechanical Automation Technology in Engineering Construction**

### **2.1. Development Trend of Intelligent System in Engineering Construction**

With the continuous development of computer, control, communication and other science and technology, engineering construction system is becoming more and more intelligent. In other words, various intelligent systems in engineering construction are various transmission, processing and information collection tools. The Internet and communication technology and smart card technology, which are technically the information carrier, have become an indispensable part of daily life and work. Intelligent buildings should also adapt to the development of information technology and use these technologies to solve problems in buildings. These technologies are the technical foundation of intelligent building. Today, these advanced technologies can be integrated into a unified platform to serve the people involved in construction and construction. Need multiple systems; integration through a new generation of letters [2]. The platform of interest and its corresponding services can be extended from one building to the whole community and the whole city. According to this technological development route, an important part of this information platform will be the construction of the various services provided will also become the service function of this information platform. Therefore, according to past experience, different service function system architecture will change fundamentally. This will not only avoid the waste caused by repeated investment, but also give full play to the functions of the system.

### **2.2. Impact of Changes in the National Management System on the Elimination of the Development of Intelligent Systems for Engineering Construction**

The original management system is no longer suitable for engineering construction intelligent system to become a whole unified system, intelligent construction projects involve the design of engineering construction intelligent system, construction intelligent system design and implementation. Construction, fire, public security, radio and television administration. The obsession of multi-department management, review and application layer with management mode seriously hinders the development of construction. As China reform and opening up and join the World Trade Organization, such obs table changes greatly. According to the relevant national documents, a department can only manage one thing: for example, product quality management, etc. under the jurisdiction of the "product quality law" and the relevant documents of the state quality supervision and administration bureau, and the construction qualification management department in charge of construction shall install according to the "building law" and the "detailed rules for the implementation of the building law "; the operation of intelligent systems such as industrial related enterprise communications, fire protection and safety shall be managed by the information industry department, the information and communication technology department and the national security bureau, respectively. The Ministry of Public Security Fire and the Ministry of Public Security's Technical Defense Bureau, the new management approach is conducive to the

construction of the intellectual system [3]. Dump control technology can also be used in relatively important large sites, but because of the large flow of people in large sites, in view of these increasing safety risks, it is necessary to establish and improve the prevention system to ensure the personal safety of these people. Monitoring and early warning of airports, ports and nuclear power stations should also be carried out as early as possible, in particular with regard to the timely interception of suspicious targets and, where necessary, appropriate preventive and control measures to ensure the safety of critical sites.

### **2.3. Main Understanding of Intelligent Systems for Engineering Construction**

From the development of intelligent system in engineering construction, the function of intelligent system in engineering construction has changed greatly, and the initial stage of engineering construction and mechanical and electrical equipment are intelligent construction systems. With the passage of time, the construction of intelligent building system engineering can not only be used to improve the service and image of engineering construction, but also to improve the management and safety function of engineering construction. Now, the intelligent engineering construction system has become an operating system, providing people with a variety of convenient and efficient services [4]. With the progress of science and technology, technology and system change, in the near future, building intelligent systems will become the infrastructure of people living and working in the construction industry. offers a variety of services such as e-commerce, online entertainment property management, information retrieval, communication exchange, and other valuable service additions. For this purpose, we should know and understand T. Cheng intelligent building system.



Figure 2 Main equipment for mechanical automation

## **3. Application of Mechanical Automation Control Technology in Engineering Construction**

### **3.1. Application of Mechanical Automation Control Technology in Safety Systems**

Modern engineering construction safety system includes automatic fire alarm system, anti-theft door lock alarm system, emergency system and air quality monitoring system. With the continuous improvement of computer and communication technology, functional security devices have become an important part of computer security. Install automatic alarm device, which is an automatic device developed by using automation technology. Safety door lock tight alarm system for automatic control technology refers to the automatic alarm device installed in the door lock, when the alarm device contact the door lock, the door lock is pulled, alarm to avoid theft. At present, as a result of living environment reasons, life often occurs such as gas incidents [5]. Therefore, the safety system is very important for every household, such as air quality monitoring and alarm system, will be widely used, its main function is to detect air quality, and in the air quality over certain standards. The implementation and use of this security system requires further development and research.

### **3.2. Application of Automatic Control Technology in Lighting Equipment**

Mechanical automation control technology is widely used in the field of lighting engineering

construction, such as sound control switch, light sense switch and so on. Therefore, switches using acousto-optic delay lights are mainly used in office buildings and engineering workshops, toilets and other places. This switch is usually an acousto-optic delay switch, not a normal switch to be implemented. During the day, despite the sound, the light is still not on: after dark, when the sound is moved, the light bulb automatically opens and reaches a certain intensity to provide lighting. When the sound stops, the bulb naturally delays for a few minutes, automatically turning off this saves energy.



Figure 3 Mechanical control internal

#### 4. Conclusion

Mechanical automatic control technology plays a great role in the modern intelligent system of our country. It can not only realize the all-sided monitoring device which can not be realized by manpower, but also improve the signal coverage rate. Through this article, we also understand the close relationship between the application scenario of mechanical automation technology and this key technology. To sum up, the emergence of mechanical automatic control technology fully meets the higher requirements of network networks in different industries, and its application makes the speed and coverage of network network better than the previous mechanical automatic control technology. Therefore, in the practical application of mechanical automatic control technology involving various complex advanced technologies, it is necessary to fully understand the key technologies and mastering methods of mechanical automatic control technology, combine the characteristics of different application scenarios, select the corresponding technologies, and promote the optimization of application impact. Enterprises can integrate big data processing technology with enterprise information processing, form online information processing, and then develop relevant network information software, implement timely and effective online information processing, so as to promote the development of enterprises to implement network information processing mode. The information processing technology of enterprises includes three parts: information processing technology, information database technology and security and secrecy technology. It is necessary to establish an information security system to prevent attacks and threats against the processing information system. Establish a complete information database, preferably with full documentation of all information. The essence of advanced mechanical automation control technology lies in its application. Automation technology is widely used in modern architecture. The development of machine automation and control technology should be guided by the actual needs of production and technology development. It is only suitable for the production of products with appropriate automatic control technology, and obtains good technical and economic benefits and social and economic benefits. The development of mechanical automation technology in China should pay attention to the practicability of the actual situation, that is, the country with practical benefit to the economy.

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