

Study on the Role of Engineering Technicians in Coal Mine Safety Production Management

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Abstract: At this stage, along with the continuous and rapid advancement of China's modernization work, and the increasing expansion of the demand for coal mine resources by the people's production and living, local governments have increased their exploitation of coal mine resources, aiming at industrial production and the general public. The normal life provides adequate energy support. At the same time, however, the frequent occurrence of various types of coal mine safety accidents all over the country has also constrained the progress of China's modernization to some extent. In this context, the value of the work performed by engineering and technical personnel has become increasingly prominent and has become one of the important factors that affect the safety of coal mine production. Based on this, this paper is based on the development of China's coal industry, discusses the specific application of engineering technicians in the process of safety production management, and hopes that the theoretical study can be helpful to the actual work.

1. Introduction

Due to the complex and ever-changing market environment and the increasingly diversified development needs of the broad masses of people, relevant companies must firmly grasp this element of engineering and technical personnel in order to avoid all kinds of safety accidents in the production process as far as possible and realize their own operating economy. Maximum value and social benefits. Based on this, to explore the application of engineering and technical personnel in the process of coal mine safety production management, has a high practical value and practical significance.

2. Overview of the Research Background

Compared with production operations in other fields, coal mining production operations highlight the distinctive features of high risks. In particular, subject to the spontaneity, profitability, and blindness of the market economy, many coal mining companies have failed to implement corresponding management processes and quality standards for the selection, training, and management of engineering technicians in order to improve their economic efficiency. Or it is impossible to invest necessary funds for the development of related work. Therefore, coal mine safety accidents of various types and scales occur from time to time. This not only seriously threatens the lives and property of the general population, but also to some extent. Restricted the progress of China's modernization [1]. For coal mining companies, comprehensively improving the safety of coal production is not only an important measure to ensure the maximization of their comprehensive benefits, but also an effective way to achieve their own social service functions. The engineering and technical personnel as the motive force and foundation of coal mine production, how to choose, train, and manage their level not only directly affect the safety of coal mine production, but also have a close relationship with the overall competitiveness of the enterprise and the market share. To a certain extent, it shows the level of China's modernization. The important role of engineering and technical personnel in the safety production process of coal mines and the strategy for optimal allocation of this element are the focus of this study.

3. The Status Quo of China's Coal Mine Safety Production

In recent years, along with the continuous expansion of China's industrialization construction, China's coal mining industry has also shown significant development in terms of scale expansion. As a result, people are paying more attention to the safety management in the production process, aiming at boosting the economic value of coal mining production. Maximize social benefits. In recent years, coal mining companies have recognized the important value of safe production for their own operations and development. As a result, they have given greater policy guidance and capital input at the management level, and established the initial safety and quality standards. Against this background, the death toll per hundred tons of coal production has fallen significantly, and the social benefits of coal mining enterprises have also been significantly improved.

At the same time, we still cannot ignore the problems and defects in the safety production process of coal mines. First of all, for many coal mine reconstruction or expansion projects, engineers and technicians have failed to fully understand and practice the requirements of the "three simultaneous" system. Therefore, there are timings, improper facilities, and failures in the production process of technological transformation projects. The problem of compliance. Secondly, many coal mining companies have not been equipped with high-professional and high-level engineering and technical personnel in order to maximize the economic benefits of their own operations. The actual implementation of safety management is generally in the form of a lack of substantive significance and value [2]. In addition, most coal mines have not yet established a relatively sound, scientific, and robust safety management mechanism. The phenomenon of separate governance between different entities is very common. The internal business cooperation and information exchange efficiency is very low, which to some extent hinders the security. Management work.

In addition, compared with other types of enterprises, the development of coal mining companies highlights the characteristics of high risks and high returns, which puts high requirements on the safety management awareness and level of the majority of engineering and technical personnel. However, subject to the blindness and spontaneity of the market economy, many workers did not correctly recognize the important value of safety management in their work. Therefore, problems such as task scheduling, schedule setting, and method selection frequently occur, which pose serious threats. The personal and property safety of personnel in other positions also restricts the sustainable development of coal mining enterprises.

4. Analysis of the Role of Engineering Technicians in Coal Mine Safety Production Management

The mining and production of coal resources cannot be separated from the actual investigation and scientific analysis of the actual conditions of the coal mine, and it must always be based on a scientific, rational and effective coal production scheme. The scientific and rational management and control of coal mine production plans cannot be separated from the engineering and technical personnel. Specifically, prior to the development of coal mining resources exploration and development plans, engineers and technicians need to go deep into the site of the mining area to conduct a comprehensive survey of the surrounding topography and geomorphology and resource distribution, and then reasonably determine the equipment and technologies applied to the coal mining, which will be coal mines. The formulation of the production plan provides strong information support and protection [3]. It should be noted that the formulation and application of relevant programs also need to highlight the principles of centralization, rationalization, and mechanization. That is, the designed mining mode and technology selection should be as simple as possible and meet the requirements of mining. Coal mine production safety.

Due to the harsh environment, complicated geological environment, and high technical level highlighted by coal mining operations, it is necessary to pay attention to the management of mining and production activities. Otherwise, coal mine accidents of various types and scales will occur. In particular, with the continuous expansion of China's industrialization construction scale and the

needs of the broad masses of people for production and living coal, China's coal production also highlights the development trend of scale expansion, technological complications, diversification of ideas, and value integration. Relevant personnel's professional quality, management ability, level of innovation and sense of responsibility put forward higher requirements. Once the actual mining or production process fails to follow the scientific process and corresponding standards to operate the production equipment, or the lack of links between different links. Close and efficient cooperation will severely threaten the personal safety of the personnel involved and limit the maximum economic benefits and social value of coal mining enterprises. In the actual mining process, engineering and technical personnel are required to fully investigate various types of risk factors existing in the coal mining process and take appropriate measures to eliminate them at the first time [4]. It should be noted that this work needs to be carried out before the accident occurs, that is, engineers and technicians need to predict the possible risk factors in the coal mining process in advance, and formulate corresponding preventive measures to minimize the production process. All kinds of damage caused by insecurity, comprehensively improve the safety of coal mining production activities.

To realize the specific requirements for safety and efficiency in the entire production process, coal mining companies must firmly grasp the development trend in this field and continuously introduce and apply various advanced production technologies. In this process, engineers and technicians play an indispensable role, that is, they need to take the lead in learning various advanced production technologies and apply them to the entire process of coal production, and then pass on to other positions. For the safety production of coal mines, lay a solid foundation for personnel organization. In particular, with the continuous improvement of China's scientific and technological level and the comprehensive, in-depth, and effective application of various new production technologies in the coal mine production field, engineering and technical personnel must actively and actively learn various safety production technologies and experiences, and Under the specific analysis of specific issues and under the guidance of the concept of advancing with the times, a variety of new technologies, materials, and new equipment are applied to the entire process of coal mine safety production, and the economic and social benefits of their production activities are realized. Build a solid material foundation.

5. Development Strategies to Enhance the Engineering and Technical Personnel Work Value

Through the above analysis, we can clearly perceive the important role played by engineers and technicians in the process of coal mine safety production management. Therefore, in the course of the operation and development of coal mines, they should increase their attention to this group. To achieve this goal, first of all, coal mining companies need to use good engineering and technical jobs, clear the thresholds for employment of relevant positions and work standards, and firmly implement the principle of employing people with certificates, avoiding the appearance of cronyism or arbitrary assignments. The source safeguards the professionalism of the engineering and technical team. On this basis, based on the complex and ever-changing market situation, coal mining enterprises should increase policy guidance and capital input, and provide standardized theoretical training and practical guidance for the majority of engineering and technical personnel. Specifically, with the help of professional seminars, expert exchange meetings, job technology contests and other rich forms of activities, relevant personnel can understand advanced concepts and cutting-edge technologies in the field, and enhance their professionalism in the course of continuous learning. Literacy, business ability, technical level, and sense of responsibility, better serve the development of practical work. In addition, at the level of personnel management, coal mining companies should implement a management mechanism that combines post responsibility and performance assessment. That is, on the one hand, it is necessary to clearly define the authority and responsibilities of different subjects in the form of institutions, so as to avoid duplication and lack of power and responsibility, and provide strong support and guarantee for the actual work. On the other hand, scientific assessment and effective rewards and penalties are also required for the actual conditions of the different subjects, so as to create a good competitive environment in the entire

production process of the company, and to help enhance the overall quality and efficiency of personnel in different positions. [5].

In view of the low safety awareness of engineering and technical personnel that prevails in coal mining enterprises at the current stage, managers of the state and enterprises should increase their guidance and education for this group so that they can clearly define the safety of production for their own work and The important role of maximizing the value of business operations. At this stage, many engineering and technical personnel still confine their work development to the management level of production equipment, ignoring their own value in supervising the production of coal mines and ensuring the safety of mining. Based on this, each coal mining company should increase its propaganda to engineering and technical personnel so as to fully clarify the scope of its own work. And specific criteria. On this basis, a sound, scientific, and robust safety management system has been established to clarify the authority and responsibilities of different entities, as well as the quality standards, operational procedures, and detail requirements for different production processes, so as to avoid the occurrence of actual production processes. The embarrassing situation that can be followed by the chapters lays a solid institutional foundation for the safe production of coal mining enterprises. The

Based on the characteristics of high-risk and high-tech requirements highlighted in the production process of coal mines, engineers and technicians should firmly grasp the specific requirements of the principle of “one pass and three defenses” in the course of their actual work, so as to ensure the safety of coal production activities. Provide the necessary protection. The so-called universal reference is to strengthen the ventilation management of the coal mine production site to ensure that the working environment of the personnel concerned can be in a state of ventilation. The objects of the three defenses are coal dust, gas and fire. Preventing these accidents is also an inevitable requirement for improving the safety of coal mine production. The realization of this goal requires, first and foremost, coal mining companies to firmly grasp the various policies, laws and regulations promulgated by the state, and in conjunction with the actual conditions of their own production, establish a set of perfect one-pass and three-defense management systems and carry out this work. Specific responsibilities are assigned to the department or individual [6]. Secondly, it is necessary to pay attention to the introduction, maintenance and overhaul of ventilation facilities to ensure that the ventilation system can always be in a healthy operation. Finally, the elements such as coal dust and gas in the production environment should be regularly tested. Once they are found to exceed the rated standards, they should be properly handled immediately to avoid the problem of expanding development.

6. Conclusion

In short, the safety of coal mining enterprises' production activities not only directly affects the quality of life and production efficiency of the majority of people, but also shows the level of China's modernization to a certain extent, while engineering and technical personnel are in the process of safe production and management of coal mines. Play an irreplaceable important role. Based on this, each company should start from the aspects of strengthening the attention of engineers and technicians, strengthening the safety consciousness of engineering technicians, and the “one pass and three defenses” of the management of coal technology, fully demonstrating the work and development value of engineering technicians for our country. The promotion of modernization work lays a solid foundation for energy.

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References

- [1] Gao Hui. Coal Mine Safety Production Management System and Improvement Measures [J]. Hydraulic Coal Mining and Pipeline Transportation, 2017(03):84-87.
- [2] Zhang Min. Application of Behavioral Safety Management in Coal Mine Safety Production Management[J]. Inner Mongolia Coal Economics, 2017(10):74+76.
- [3] Yang Jiaying. Analysis of the role of engineering technicians in coal mine safety production management [J]. Energy and Energy Conservation, 2017 (01): 22-23.
- [4] Xu Xianping. Coal Mine Safety Production Management Concept and Practice [J]. Science and Technology Information, 2015, 13(29):111-112.
- [5] Fu Xinyi. Discussion on the Role of Road Engineering Technicians in Safe Production Management [J]. Management and Technology of SMEs (Last Issue), 2014(05):64-65.
- [6] Peng Tao, Wu Shiyue. Analysis of the role of engineering technicians in coal mine safety production management [J]. Information and Communications, 2011(06): 179-180.