



Research Article

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Analysis of safety awareness culture in coal enterprises and its construction measures

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ABSTRACT

Safety culture plays an important role in guiding and ensuring safety projection of energy source enterprises. Coal enterprises, as a main constituting part of energy source enterprises, should attach more importance to the role and status of safety culture in corporate safety management. In this paper, on the basis of investigating methods used for statistical analyses of safety awareness culture in coal enterprises, a pointed analysis is made of problems existing in safety culture of Chinese coal enterprises. Moreover, the On the Job Training (OJT) method is put forward for constructing safety awareness culture.

Key words: Coal enterprises; Energy; Safety culture; Safety awareness culture

INTRODUCTION

Safety culture, as a new safety management mode, can offer great assistance in reducing and controlling unsafe behaviors and faulty operation of people, and serve as a basic measure for improving the safety management level and safety production level. [1]

Safety awareness culture mainly refers to safety awareness, safety concept and safety values of both leaders and employees. [2] Safety awareness culture, as the core and soul of safety culture, constitutes a basis and cause of forming and improving safety behavior culture, institutional culture and material culture. [3]

STATUS INVESTIGATION AND PROBLEM LIST STATUS INVESTIGATION

In this study, questionnaires are distributed to coal enterprises to investigate problems of coal miners in safety awareness culture. Corresponding measures are put forward to deal with their problems. A total of 270 questionnaires were sent out. 248 valid questionnaires and 22 invalid questionnaires were received. A 5-point scale was used for developing questions in this questionnaire. In the scale, five responses including "strongly disagree, disagree, neither agree or disagree, agree, and strongly agree" corresponded to 1, 2, 3, 4 and 5 points, respectively. The proportion of respondents who omitted or refused to answer a question was considered to be the rest.

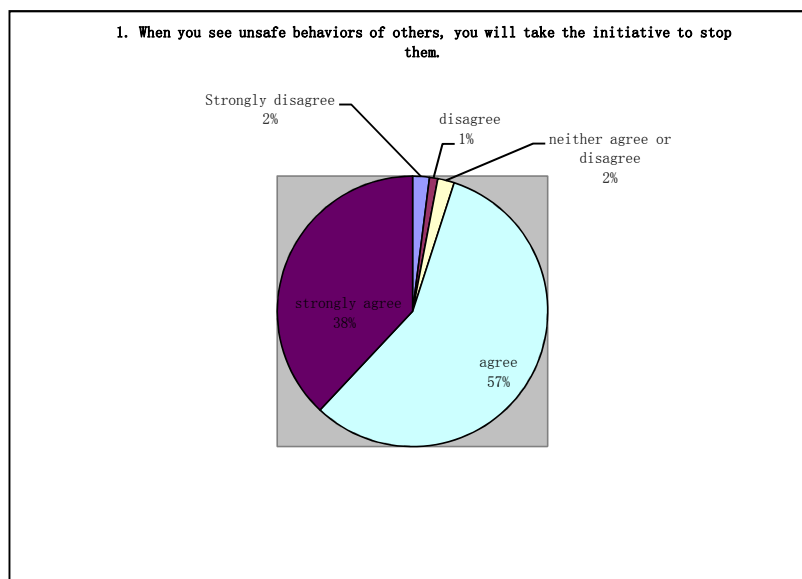


Fig.1 Status of miners' safety awareness to stop unsafe behaviors of others

As can be seen from Figure 1, coal miners are highly consistent with each other in their views on whether they will take the initiative to stop unsafe behaviors of others. 38 % of respondents strongly agree with the statement that they should stop unsafe behaviors of others; 57% of them agree with it; only 3% of them disagree with this statement. Thus it can be seen that almost all coals would take the initiative to stop unsafe behaviors of others.

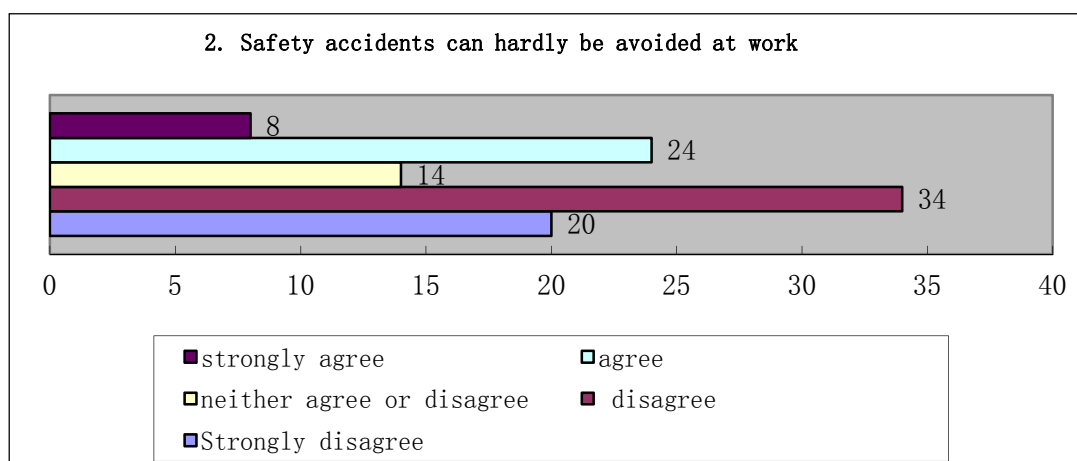


Fig.2 Status of miners' awareness of unavailability of safety accidents at work

According to the investigation results of "miners' awareness of unavailability of safety accidents at work", as can be seen from Figure 2, among 207 respondents, 17 (20%) of them strongly disagree with the statement that "safety accidents can hardly be avoided at their work"; 49 (34%) of them disagree with this statement; 30% of them neither agree nor disagree with this statement; 24% of respondents agree with this statement; and 8% of them strongly agree with this statement. Therefore, it can be concluded that about half of miners think that safety accidents can be avoided at their work; part of miners hold a neutral attitude towards the unavailability of safety accidents; almost a third of miners believe that it is hard to avoid safety accidents at work. Awareness of unavailability of safety accidents runs contrary to the safety awareness culture, which is not conducive to the building of the safety culture system.

As seen from Figure 3, 27% of respondents informed partners of safety conditions of their working environment every time; 64% of them informed partners of safety conditions of their working environment, in most cases; 6% of respondents informed partners of safety conditions of their working environment, in few cases; and 3% of respondents have never told their working environment to their partners. Thus it can be seen that almost all miners would not only pay great attention to their own safety, but also care about safety conditions of others, and consciously inform safety conditions of their working environment to their partners.

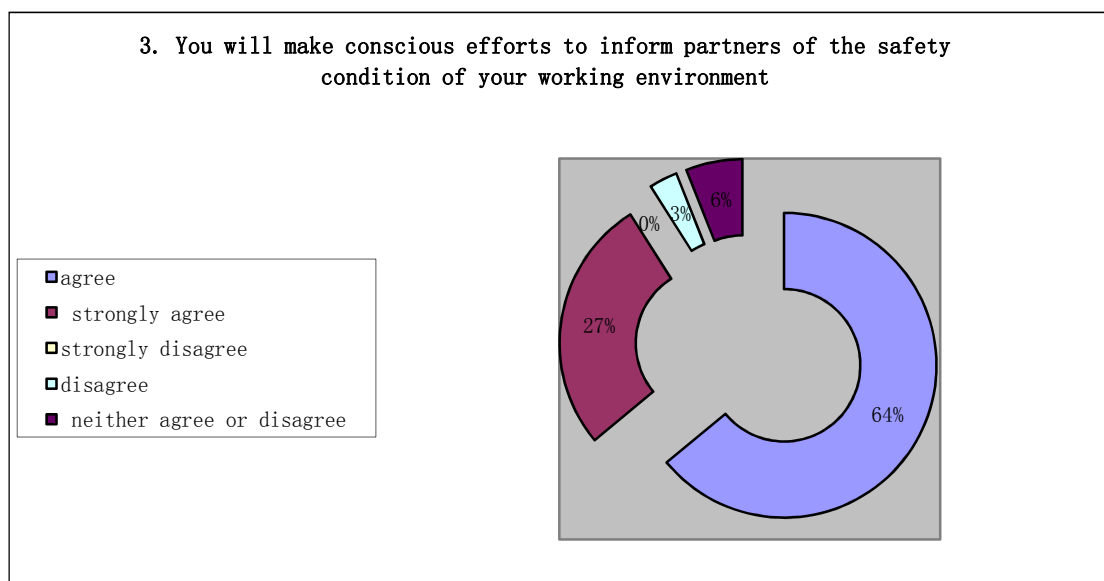


Fig.3 Status of miners' awareness to inform partners of safety conditions of their working environment

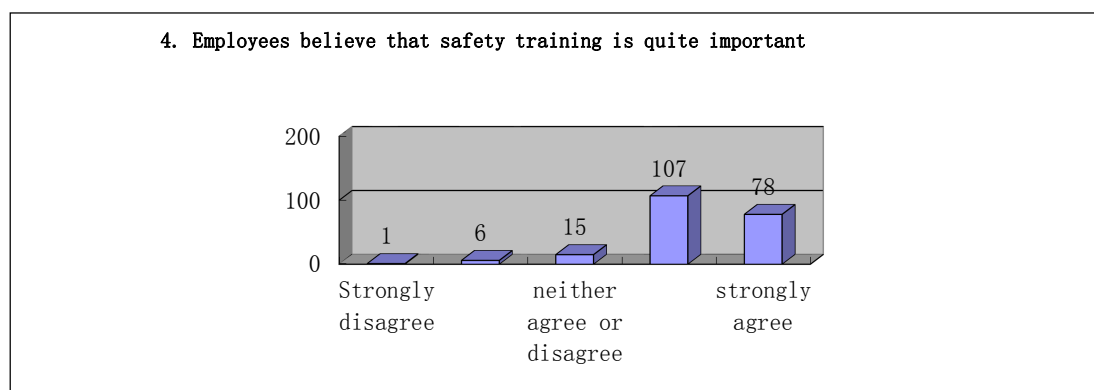


Fig. 4 Status of employees' attitudes towards safety training

From Figure 4, it can be seen that among 207 respondents, 107 (half) of them believe that safety training is quite important for them; 70 of them think that receiving safety training is particularly important; 15 respondents believe that safety training is inessential; only 7 of them feel that safety training is completely unnecessary. Therefore, it can be concluded that most respondents show willing to receive safety training and realize the great importance of safety training.

PROBLEM LIST

From the questionnaire investigation made above, it can be seen that employees in coal enterprises have some wrong awareness of safety culture, which is mainly reflected by following problems.

First of all, in coal enterprises, no consensus has been made on the awareness of safety culture. Some employees even think safety culture is useless, or simply equate safety culture with safety and warning signs, slogans and safety production-promoting activities.

Secondly, some people advocate the "leadership-oriented theory", so they believe that the construction and quality of safety culture depend on leaders, and lack a sense of being masters.

Thirdly, some of them seek quick construction of safety culture. They want to construct their corporate culture quickly, simply by asking for help from management consulting companies to extract some principles and summarize a few experiences, putting up these principles and experiences on the wall, and then popularizing them in enterprises.

RECOMMENDATIONS FOR COUNTERMEASURES

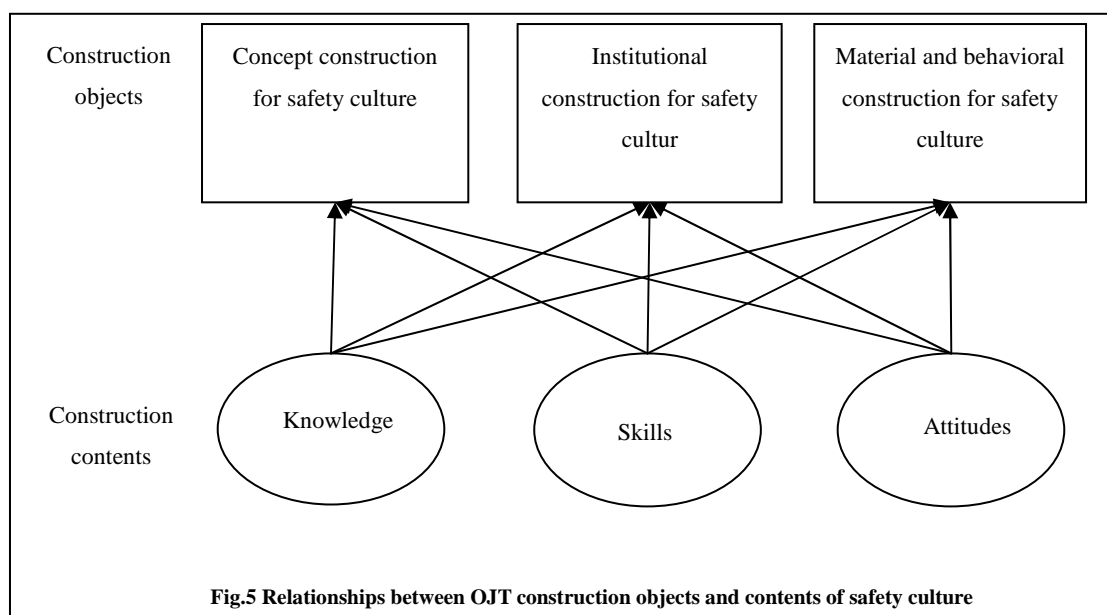
So as to solve the above-mentioned problems, the OJT method is put forward to construct the safety awareness culture.

□ **Objects of the OJT Method**

The OJT method refers to a method improving professional skills through production practices. In general, the OJT method is applied, to smoothly promote “actual business” and improve professional skills of employees. That is to say, objects of the OJT method include the smooth promotion of the entire safety culture construction work and improvement of employees’ safety working capacity.

□ **Contents of the OJT Method**

Contents of the OJT method include safety culture knowledge, skills and attitudes. As a key to improve effects of safety culture construction, employees should have a good command of safety culture knowledge and can make a flexible use of safety culture construction skills, on the basis of showing an explicitly positive attitude towards safety culture. In the safety culture construction, OJT construction objects include the safety culture concept and implementation of the safety culture system and safety culture. The key to successfully implement safety culture construction lies in a thorough implementation of awareness culture. System implementation is facilitated to provide a guarantee for safety culture awareness, while safety culture is fulfilled to put safety awareness culture into practice, and improve the safety production level of the entire coal industry.



□ **Three Steps to Promote Safety Culture Construction**

<Step 1>The OJT method is used to make employees understand and experience safety culture concepts, so that every member of enterprises can learn and experience various contents of safety culture.

<Step 2>Employees should apply the safety culture concepts repeatedly in safety production, so as to improve their understanding of safety culture.

<Step 3> In the self-evaluation of safety culture construction, employees are required to identify their own advantages and disadvantages for self-praise and self-criticism, so that they can find and solve problems in self-criticism and learn to be self-motivated.

In the process to implement the OJT, employees should encourage themselves, when they make some progresses. In this way, employees can keep enthusiastic about safety culture training, thus promoting the smooth construction of safety culture.

④Promotion of Safety Culture Construction with the OJT Method

First of all, specific goals and objects of safety culture construction should be identified and put into the OJT plan. On this basis, according to various requirements for safety culture construction, the OJT is implemented in practices. Thirdly, growth goals are set according to abilities of safety culture construction objects. Language use in the training should be popular and easy to understand. Meanwhile, specific time for launching OJT activities should be determined.

Lastly, essential contents of OJT should be identified. Contents of three steps should be firstly identified and recorded. Correctly interpreting and applying the OJT method in safety culture construction is of great significance for OJT practices of employees, as shown in Figure5:

CONCLUSION

In the process to construct safety culture, great attention should be attached to the building of safety awareness culture. In particular, the safety concept in the corporate safety awareness culture of should be implemented in the entire process of safety production. Conscious efforts should be made to use the advanced safety awareness culture to guide employees to give full play to their enthusiasms and conscious efforts in safety production, and change to self-discipline from heteronymous. Moreover, the safety culture concept should be implemented to promote the realization of safety goals “no operation and command against rules, no violation of labor disciplines, no hidden risks and no safety accident”, thus achieving the healthy development of safe production.

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