

Construction of Enterprise Safety Culture Corridor Based on the “Five Essences” Management Concept

Xiaolong Chang, Rui Xing, Pengju Qi, Yu Zhao

Henan Jinneng Huazhou Thermal Power Co., Ltd, Anyang 036000, Henan, China

Copyright: © 2025 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: Safety culture is a crucial part of building safe work teams in thermal power plants. It deeply integrates the long-term career development of employees with the high-quality development of enterprises. By improving the safety literacy of employees and further optimizing the production environment, safety values are integrated into production and become more closely aligned with production and daily life. Meanwhile, the construction of the enterprise safety culture corridor based on the “Five Essences” management concept further enhances employees’ safety awareness and strengthens the building of safe work teams. On the basis of steadily promoting safe production, enterprises clarify their development goals, continuously strengthen safety production supervision, and strive to achieve the goals of “zero errors, zero accidents, and zero casualties”.

Keywords: “Five Essences” management; Safety culture; Innovation

Online publication: July 26, 2025

1. Formation and development of the enterprise safety culture system

Safety culture is an important part of enterprise culture construction. For Henan Jinneng Huazhou Thermal Power Co., Ltd. (hereinafter referred to as Huazhou Thermal Power), it is necessary to strengthen safety production management and continuously build a relatively complete safety culture system to promote the sustainable, green, and high-quality development of the enterprise and achieve the basic goals of safety culture construction.

Huazhou Thermal Power has fully implemented the “Five Essences” management, established “Three Foundations and Nine Capabilities” teams, and actively implemented the work requirements of Jinneng Group, including reform and innovation, integrated development, and quality and efficiency improvement. Centering on the safety concept of “Life First, Safe Jinneng”, it has strengthened the normalized management of safety production at the production site. To further deepen learning and education, it has built an enterprise safety culture learning corridor with the characteristics of Huazhou Thermal Power.

On this basis, the enterprise has promoted the transformation of driving forces from “factor-driven” to “innovation-driven”, developing into a green and modern industry. It has continuously improved the mechanism for safety collaboration and innovation among various departments, and gradually raised the level of production safety management^[1].

2. Safety culture construction based on the “Five Excellence” management concept

Huazhou Thermal Power adheres to the “Five Excellence” management concept as the guiding ideology for safety culture construction. On the basis of production and green development, it continuously breaks through itself and actively innovates, and has gradually formed a safety culture concept with the characteristics of Huazhou Thermal Power. The “Five Excellence” management is mainly led by culture, takes refined management as the basic essence, and gradually realizes precise, accurate, lean, and exquisite management of the enterprise. At the same time, it integrates green development, scientific management, and corporate values for innovative integration, and continuously builds a diversified safety culture corridor featuring “unity of people and nature, and synergy between people and enterprise”.

During the “peak summer supply” period, the task of ensuring power supply was successfully completed through the concerted efforts of all staff. Many potential safety hazards emerged during this period. Through refined pre-inspection of on-site safety defects and timely elimination of defects, accidents such as equipment damage and personal injury were avoided.

In addition, Huazhou Thermal Power implemented a “review” of safety inspections, achieving the phased goals of zero safety accidents in production, zero equipment operation failures, zero loopholes in management coordination, and zero defects in quality management. During this period, the “two tickets and three systems” management system was strictly implemented. Non-standard operation tickets and work tickets were rectified and assessed accordingly. The results of assessments and rewards were posted on the public notice board in the safety culture corridor to warn everyone.

3. Building a new safety culture corridor integrating “Five Excellence” management and dual-carbon concept

3.1. Innovating safety culture promotion methods

3.1.1. Creating a safety culture atmosphere corridor

Vigorously promote safety culture and energy conservation and consumption reduction, establish an enterprise safety culture while keeping up with the development trend of “dual carbon”, and continuously promote the integration of “Five Excellence” management. Innovations have been made in the publicity methods through the cultural corridor, including the establishment of an enterprise safety culture construction corridor in the factory building, dynamic video playback of safety education videos in the factory area, regular fire emergency drills, on-site safety hazard inspections in safety knowledge training, “One Safety Activity for Ten”, “Be a Safety Officer for a Day Activity”, and other publicity methods combined with innovative learning.

3.1.2. Learning from typical violation warning education

Strengthen the management of the production site and strictly implement the safety education concept of “discover one, investigate one, solve one, and alert others”^[1]. Huazhou Thermal Power continuously improves the level of refined management of the production site. By publicizing the violation behaviors of typical violators and issuing assessment notices to the corresponding responsible persons for violations, it aims to achieve warning education and provide a learning opportunity for all production employees in the factory.

3.2. Innovating production safety management systems

With the improvement of production technology and the transformation of enterprise management concepts, the construction of enterprise safety culture needs to continuously integrate innovation and development to meet the current needs of enterprise development. At the same time, managers should innovate and enhance their management thinking, break away from inherent mindsets, and integrate enterprise safety culture into production and daily management work^[2]. Through scientific management systems, employees’ safety behavior capabilities can be further improved, ensuring reliable guarantees for safe production in enterprises.

3.3. Innovating safety culture thinking patterns

Each employee has a different level of understanding of safety culture. Most employees' safety awareness remains only at the ideological level and is not brought into their work. As production equipment continues to innovate, our safety concepts must also evolve, and self-protection awareness must be enhanced. The construction of a safety culture corridor can provide static ideological education for employees at the cognitive level, facilitating their learning and creating a favorable environment for them to study safety culture.

3.3.1. Encouraging employees to continuously switch safety thinking

Employees should enhance the exchange of safety experience and strengthen the sense of cooperation among themselves. Through the "thinking-guided learning" method, they can conduct simulated role-swapping exercises on the production site, express different viewpoints, engage in discussions and interactive learning, and create an environment for cultivating innovative safety culture thinking^[3].

3.3.2. Cultivating employees' safety concepts

Innovate and refine safety culture concepts to continuously strengthen employees' confidence in learning safety culture and make them deeply understand the necessity of such learning. Huazhou Thermal Power regularly organizes screenings of safety accident warning films to arouse employees' resonance and attention to safety, helping them profoundly grasp the in-depth meaning that "safety equals life"^[4]. At the same time, by closely combining this with the on-site static safety culture learning corridor, employees can continuously improve their identification with the enterprise culture while studying safety culture.

3.4. Display of achievements in innovating production concepts through the culture corridor

3.4.1. Display of innovative application models for multi-energy complementary systems

To further achieve the "dual carbon" goals, Huazhou Thermal Power has continuously explored and researched technologies. For multi-energy complementary heat utilization, its intermittency and volatility have been significantly reduced through mutual offset, thus significantly lowering the requirements for energy storage and power compensation devices. This enables full utilization of land and space, maximizing energy acquisition within limited land areas. This operation and management method improves operational efficiency, reduces costs, and ensures the safety of electricity and heat supply in the market^[5].

3.4.2. Display of innovative safety optimization designs for production equipment systems

There are many unreasonably designed aspects in the production site. For example, Huazhou Thermal Power modified the water return pipeline of the large machine lubricating oil cooling system for dual units. The original production process design failed to meet production needs and posed potential safety hazards. After joint discussions among multiple departments, the system was innovatively optimized. The modified cooling water return directly enters the cooling tower, greatly improving cooling efficiency, enhancing the economic performance of the units, and ensuring intrinsic safety.

4. Achievements in the construction of corporate safety culture

4.1. Promoting employees to develop correct safety behavior awareness

When enterprises create a good working environment and learning atmosphere, employees should consciously learn relevant safety theoretical knowledge. Through continuous learning of theoretical knowledge, they can correctly guide their own behaviors and better ensure their own safety in production and life. At the same time, employees should consciously abide by various rules and regulations, implement various operation regulations in accordance with the rules and regulations, so as to minimize the probability of accidents^[6].

4.2. Promoting the improvement of safety compliance management system

In the production process, we constantly summarize production management experience. Through system improvement, we can further restrict the code of conduct of production operators, improve safety production capacity, build a systematic safety management system, strengthen the correct guidance of safety ideology, and improve employees' safety behavior awareness^[7]. We will improve the safety management system through rational and innovative ways. Huazhou Thermal Power has avoided unnecessary accidents many times by learning from the experiences and lessons of its peers. Safety is no small matter. Combining with the actual work situation, it consciously implements safety rules and regulations and improves the scientificity and standardization of the safety management system.

Compliance and safety construction is an important part of safety work. In daily work, employees not only strictly abide by laws and regulations, but also actively promote the construction of compliance and other related legal culture to ensure the compliance and safety of the company's overall work^[8]. Through various publicity methods such as regularly organizing compliance training and sharing compliance case analyses, we enhance employees' awareness of learning, abiding by and using the law, and actively achieve the unity of knowledge and practice. At the same time, we have also established a sound compliance system, clarified compliance standards for various work, and ensured that employees can work in accordance with laws and regulations.

While actively participating in corporate compliance publicity and cultural activities, we should carry out various forms of compliance publicity work in combination with the actual situation of employees. Strengthen employees' learning of compliance knowledge, adhere to the policy of "safety first, prevention first", and abide by relevant safety operating procedures^[9]; regularly carry out the publicity and implementation of the Work Safety Law and compliance, with safety officers giving regular explanations. Later, questionnaires will be used to score their lectures, and relevant training examinations will be held. We also actively hold relevant knowledge and skills competitions to create a strong learning atmosphere. In practical work, employees strictly abide by national laws, regulations and industry standards to ensure the compliance of overall operations. For identified compliance risks, we promptly take effective measures to deal with them, ensuring that risks are properly handled and avoiding adverse impacts on the enterprise.

At the same time, employees are required to abide by the unit's work safety rules and regulations during operations, correctly wear and use labor protection articles, and effectively protect the legitimate rights and interests of employees in terms of health and safety. Employees continue to enhance the exchange of compliance experience, and carry out simulated role-playing learning at the production site through the "thinking-guided learning" method, and conduct discussion and interactive learning.

Enterprises implement list - based management for key field tasks. List - based management solves practical problems, assigns responsibilities to individuals, clarifies the direction for breaking through problems, delineates the scope of responsibilities, and realizes problem solving within a specified time range. We will continue to promote the work in key areas, refine tasks and clarify division of labor. Initially, we will adopt list - based task promotion management through weekly, biweekly, monthly and quarterly coordination meetings, aiming to improve work efficiency and problem - handling coordination ability, and effectively solve the root causes of problems. Based on the compliance system construction framework, this list forms documents such as the "Supervision Form for Key Work Tasks of Weekly Work Coordination Meetings" for key field tasks, which clarifies the specific content of supervision and the specific requirements of the meeting, assigns responsibilities to the leaders and collaborators, and strictly limits the completion time. The supervision content involves many professions, a wide range, detailed content and many personnel, including on - site training on wind power fire safety; the formulation and assignment of technical competition standards for power failure and transmission; the rectification of dangerous points in electrical operation tickets, etc. Tasks are clarified. It effectively gives the leaders the direction to solve problems, and at the same time, the refinement of problems narrows the scope of solution, makes compliance management more in line with the actual work, and ensures the effective promotion of various professional work.

Clarifying task division to individuals is conducive to the effective and comprehensive evaluation of compliance

management, promoting the improvement of the compliance management cultural system, and better sorting out the deficiencies of compliance and safety construction in list - based task management. And the time is fixed. The time limit for task completion further urges the responsible persons to strictly control the work progress, improve the standardized processing procedures for work completion, shorten the processing time and improve work efficiency; at the same time, according to the actual situation, we will continuously adjust the compliance process and put forward corresponding countermeasures.

4.3. Creating a favorable learning atmosphere for safety culture

Through the innovative construction of a safety culture corridor, employees' safety culture literacy has been significantly improved, habitual violations have been greatly reduced, employees' ability to resist violations has been enhanced, and their risk prediction capabilities have been exercised. A unique safety culture environment with distinctive characteristics of Huazhou Thermal Power has initially taken shape. With the stable development of the enterprise, the "Five Excellence + Dual Carbon" innovation system has become increasingly effective in building the enterprise's safety culture system.

Through various publicity methods such as regularly organizing compliance training and sharing compliance case analyses, employees' awareness of learning, abiding by, and using laws has been strengthened, encouraging them to actively integrate knowledge with practice. At the same time, we have established a sound compliance system, clarifying compliance standards for various tasks to ensure that employees have laws and rules to rely on in their work^[10-11].

In the process of building the compliance system, the enterprise has established a normalized and institutionalized compliance publicity mechanism and carried out offline compliance public lectures, aiming to improve all employees' knowledge and ability in compliance, ensure that they accurately understand the purpose and relevant content of compliance construction, and enhance their awareness of compliance and risk prevention. In addition, the company has used the OA platform to hold compliance knowledge competitions, stimulating employees' enthusiasm for learning compliance and creating a favorable atmosphere for compliance learning.

The construction of a compliance and safety system is a long-term task. At present, during the promotion of compliance culture, the enterprise has significantly improved employees' awareness of laws and regulations, changed their traditional perception of compliance, and established correct "outlooks on life and values". Secondly, it has enhanced the company's ability to promptly avoid potential risks and predict future risks. Enterprises should strengthen employees' learning and training on compliance knowledge and requirements to improve their compliance awareness and quality. Through regular compliance training, sharing of compliance cases and experiences, employees can understand the importance of compliance and their responsibilities and obligations in compliance work^[12]. Meanwhile, actively cultivating an enterprise compliance culture, integrating compliance concepts into the core values and business philosophy of the enterprise, and forming a good atmosphere where all employees jointly abide by compliance regulations.

Adhere to the core values of "people-oriented, pursuing excellence". The enterprise has always protected employees' rights and interests and actively created a diversified platform for their progress. Employees, while continuously learning the company's cultural concepts and compliance knowledge, also actively abide by national laws and regulations as well as corporate rules and regulations^[13], protect the company's assets and trade secrets, and ensure the reasonable, legal, and compliant disclosure and publicity of relevant information. In the process of compliance construction, individuals and the enterprise promote each other's growth^[14]. Enterprises should care about employees and effectively protect their rights and interests; employees should abide by rules and regulations, pursue excellence, share a common fate with the enterprise, and work together to promote the high-quality and healthy development of the enterprise. The enterprise will always place compliance and safety construction in an important position and continuously promote a significant improvement in the compliance level of this department^[15].

5. Conclusion

The innovative construction of the enterprise safety culture corridor further demonstrates the innovative achievements of Huazhou Thermal Power through management concept innovation, safety culture innovation, system improvement, management structure optimization, and the assistance of modern wisdom. Meanwhile, on the path of development, it has accelerated the realization of the “Five Excellence + Dual Carbon” goals. Through the establishment of an innovation system, the enterprise is continuously promoted towards a green and sustainable development path. The innovative construction of the enterprise safety culture corridor has endowed the corporate culture with innovative vitality, which in turn has stimulated employees’ thinking, making the enterprise vibrant in survival and internally motivated in development. Safety culture construction is a key task for enterprise development. Huazhou Thermal Power closely focuses on safety culture construction based on the “Five Excellence” management concept, continuously promoting the high-quality development of the enterprise.

Compliance is crucial for enterprises to achieve sustainable development. In the context of globalization and digitalization, the operating environment of enterprises has become increasingly complex and volatile, and compliance risks have increased accordingly. By building a sound compliance management system, enterprises can better respond to various compliance challenges and ensure their stable development. At the same time, compliance can help enterprises establish a good brand image and enhance their market competitiveness, thereby achieving sustainable development.

Disclosure statement

The author declares no conflict of interest.

References

- [1] China Southern Power Grid Co., Ltd., 2022, Guidelines for the Construction of Safety Production Risk Management System. Beijing: China Electric Power Press.
- [2] Kong H, Sun X, Li C et al., 2020, Creating “Safety +” Teams through Safety Culture Construction. *Electric Power Safety Technology*, 22(8): 75-78.
- [3] Chen W, Sun C, 2018 Research on Group Management Mode of Construction Safety: Based on Latent Class Model. *Journal of Safety and Environment*, 18(2): 595-601.
- [4] Ye H, 2023, Continuously Strengthening Nuclear Safety Culture Construction to Effectively Improve Nuclear Safety Level. *Green Leaves*, 2023(11): 24-27.
- [5] Kong H, Sun X, Li C et al., 2020, Creating “Safety +” Teams through Safety Culture Construction. *Electric Power Safety Technology*, 22(8):75-78.
- [6] China Southern Power Grid Co., Ltd., 2022, Guidelines for the Construction of Safety Production Risk Management System. Beijing: China Electric Power Press.
- [7] Song C, 2020, Exploration on the Relationship between Enterprise Safety Culture Construction and Safety Production Management. *Chemical Enterprise Management*, 2020(12): 97-98.
- [8] Gao B, 2022, Thoughts on the Construction of Team Safety Culture. *China Electric Power Enterprise Management*, 2022(03): 70-71.
- [9] Jiang K, Lu J, 2020, Ertan Hydropower Plant: Integrating Knowledge and Action in Safety Culture Construction. *Contemporary Power Culture*, 31(6): 28-29.
- [10] Yue L, 2023, Compliance Creates the Future: Chinese Enterprises Enter the New Era of Compliance. *Legal Person*, 2023(1): 18-21.
- [11] Yuan Y, 2024, Analysis on the Path of Compliance Management Assisting High-Quality Development of State-Owned

Enterprises. Legality Vision, 2024(21): 61-63.

- [12] An H, 2019, Research on the Development from Safety Culture, Public Safety Culture to Emergency Culture. China Public Security (Academic Edition), 2019(04): 6-8.
- [13] Huang X, Zhou F, 2022, Research on Legal Governance of Enterprise Data Compliance. Journal of Qiqihar University (Philosophy and Social Sciences Edition), 2022(5): 97-100.
- [14] Wang Y, Li N, Yang C, 2023, Safety Concept is the Fundamental Guarantee for Intrinsic Safety. China Work Safety, 18(08): 13-17.
- [15] Gao J, 2020, Discussion on Practice and Innovation of Enterprise Safety Culture. Safety, Health and Environment, 20(05): 58-60.

Publisher's note

Whioce Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.