# Analysis and Recommendations on the Current Development Status of Association Standards

Xu Qian<sup>1, 2, 3</sup>, Hongkui Zhang<sup>1, 2, 3, \*</sup>

<sup>1</sup> CCTEG Shenyang Research Institute, Fushun, CO 110178, China
<sup>2</sup> State Key Laboratory of Coal Mine Safety Technology, Fushun, CO 110178, China
<sup>3</sup> Fushun CCTEG Inspection Center Co. Ltd, , Fushun, CO 110178, China

\*Correspondence: 18940021505@126.com

**Abstract.** Standards serve as the foundation for production, the language of trade, the rules of the market, and a bridge for cooperation. Currently, standards have become the highland in international market competition. This paper introduces the current development status of association standards at home and abroad, analyzes issues such as the lack of association number, low timeliness, and varying quality during the association standards development process, and proposes recommendations to enhance the promotion of association standards, improve the technical capabilities of personnel in association standards, and strengthen supervision and guidance over association standards.

Keywords: Coal, Association Standards, Development, Current Status Analysis.

## 1. Introduction

In some areas with intense industrial innovation and market competition abroad, mostly take voluntary association standards as major. These foreign association standards are primarily led by enterprises and associations, providing strong guarantees for standardization to achieve optimal benefits and order. In developed countries and regions such as Germany, the United States, and the United Kingdom, the application of association standards has a history spanning over a century. During the implementation of these standards, internationally influential organizations have emerged, including the American Petroleum Institute (API), Institution of Civil Engineers (ICE) in the UK, Institute of Petroleum (IP) in the UK, Association of German Engineers (VDI), and Det Norske Veritas (DNV) from Norway. The association standards developed by authoritative industry societies or associations are widely adopted within their respective countries or internationally, holding significant industry influence. High-quality association standards can be widely utilized and upgraded into industry standards, national standards, or international standards, facilitating external standard exportation. The upgrading of association standards significantly enhances the drafting organization's industry status and its country's industry influence, increases the technological added value of products, expands sales markets for products, ultimately translating into economic benefits.

On March 11, 2015, the State Council explicitly proposed fostering the development of association standards in its "Plan for Deepening Standardization Reform," encouraging capable societies, associations, chambers of commerce, federations, and industrial technology alliances to coordinate relevant market entities to collaboratively develop standards that meet market demands and innovation needs for voluntary selection by the market to increase effective supply. Supported by national policies, association standards began to develop rapidly. On February 29, 2016, the General Administration of Quality Supervision and Inspection (AQSIQ) and National Standardization Administration issued "Guiding Opinions on Cultivating and Developing Association Standards," outlining basic principles for developing association standards as well as main objectives and management methods. On November 4, 2017, the newly revised "Standardization Law of the People's Republic of China" established legal status for association standards for the first time. On January 9, 2019, based on this law, the National Standardization Management Committee (NSMC) along with the Ministry of Civil Affairs formulated "Regulations on Association Standards Management,"

clearly specifying regulations regarding formulation, implementation, and supervision of association standards. On January 25, 2022, seventeen departments including NSMC jointly issued "Opinions on Promoting Standardization Work for Association Standards," aiming to regulate standardization work while promoting high-quality development of association standards. Under national policy guidance and stimulated by market demand, local governments at all levels have also introduced corresponding measures to implement these policies effectively; consequently, there has been rapid development in association standards within China over recent years.

# 2. Issues and Recommendations for the Development of Association Standards

Association standards Characterized in strong autonomy, high professionalism, targeted applicability, openness and transparency, and shorter development cycles. They have played a positive role in the development of various industries in China, providing standard support for the promotion and application of new technologies. However, the history of association standards is relatively short, leading to issues such as imbalanced development, a limited number of standards, and low levels of application. The development of association standards faces the following challenges:

- 1. Despite the establishment of a series of policies and regulations that have served to clarify the status of association standards within the market system, the quantity of association standards remains limited due to this concept is still in its infancy. This results in a rapid increase in the number of association standards being formulated and revised in China; however, due to their short development history, the absolute number remains low. When faced with standard-related issues, the public primarily considers national standards, industry standards, local standards, and enterprise standards, indicating that awareness of association standards still needs further enhancement.
- 2. In the context of fast economic activities and social development, new industries and technologies are evolving rapidly, placing higher demands on the effectiveness of association standards. However, the process of transforming scientific and technological achievements into association standards is gradual, which can lead to gaps in standardization for some emerging industries and technologies.
- 3. The development history of association standards in China is short. Despite having played a significant role in economic development, association standards are not widely adopted by market entities. Additionally, various social organizations lack a comprehensive understanding of the importance of association standards; this results in low enthusiasm for formulating and revising these standards, leading to inconsistent quality in their drafting.

The path toward developing association standards faces numerous challenges that require enhanced regulation and guidance. The following measures are recommended:

- 1. Publicity of group standards needs to be strengthened. Association standards are an essential component of China's standard system that can significantly enhance product branding and authority while increasing industry influence. By participating in the formulation and revision processes of association standards, stakeholders can transition from being "followers" to "developers," thereby gaining a voice in rule-making that guides industry direction and captures market opportunities.
- 2. The technical level of group standard personnel needs to be improved. To elevate the level of work related to association standards, it is crucial to implement multiple strategies aimed at accelerating the cultivation of standardized talent. A cohort of professionals who are well-versed in rules as well as specialized technical knowledge and management should be trained to ensure that experts handle specialized tasks effectively. By enhancing the capabilities of social organizations involved in standardization efforts through talent development, it becomes possible to construct a scientifically effective standardization system that rigorously adheres to relevant processes for formulating and revising association standards while establishing efficient internal departments for standardization work.

3. The supervision and guidance of group standards need to be strengthened. Given that standardization efforts related to association standards have a relatively short history in China, many social organizations lack awareness and initiative regarding these association standardization efforts. To effectively promote the development of association standardization work, it is crucial to enact relevant laws and policies that regulate this area. However, government policies should maintain appropriate boundaries by establishing certain threshold requirements from a management perspective while ensuring that the market attributes of association standards are preserved with minimal direct interference.

#### 3. Conclusion

Association standards can effectively stimulate market standardization vitality, enhance product quality and service competitiveness, thereby contributing to high-quality development. By analysing both domestic and international experiences with association standard development alongside current conditions in China's landscape for such standards, this paper offers recommendations aimed at fostering their growth as a reference for future advancements.

## References

- [1] LIU Shaoyu, ZANG Chunhua, XIE Jiana, LIU Guixiong. Discussion on the Formulation and Practice of Advanced Manufacturing Industry Product and Technology Series Association Standard [J]. Modern Information Technology,2022,6(02):177-179.DOI:10.19850/j.cnki.2096-4706.2022.02.045.
- [2] FANG Fang, LI Bei-bei, YANG Xiao-chun. The Experience of Social Organization Standards Supervision in Foreign Countries and its Enlightenment to China [J]. Standard Science, 2021(12):32-37.
- [3] Liu Feng, Cao Wenjun, Zhang Jianming. Continuously promoting the coal mine intellectualization and the high-quality development of China's coal industry [J]. China Coal, 2019, 45(12):32-36.
- [4] KANG Jun-sheng, MA Na, LU Huan-huan. Analysis of the Theory and Practice of Association Standardization in China [J]. China Standardization,2022(09):137-142.
- [5] LI Qiang, ZHANG Hong-Rui, DAI Yue, LIU Wen. Current situation analysis and development suggestions of food consortium standards in China [J]. Journal of Food Safety and Quality, 2021, 12(22):8940-8947.
- [6] Xie Huiyun, Yang Ningxiang, Chen Jianxun. Association Standards Promote the Transformation of Scientific and Technological Achievements of Special Equipment Inspection and Testing Institutions [J]. China Quality and Standards Review, 2021(05):30-32+37.
- [7] WANG Wen-feng, FANG Ye-xiang, CHEN Jing-jing. Research on Association Standard Association Decision Coordination Method Based on Improved Additive Reciprocal Matrices [J]. Standard Science, 2022(02):30-36.
- [8] WANG Linbo, WANG Lu. Research and analysis on the status quo of social organisations carrying out group standard work in the field of quality[J]. China Quality,2022(02):55-59.
- [9] FANG Fang, LI Bei-bei, YANG Xiao-chun. The Experience of Social Organization Standards Supervision in Foreign Countries and its Enlightenment to China [J]. Standard Science, 2021(12):32-37.
- [10] CHEN Hong-chao; QI Hong-li. On the Theoretical Basis of Self-declaration, Disclosure and Supervision System of Social Organization Standards and Enterprise Standards——An Explanation of Self Regulation [J]. Standard Science, 2021(07):6-14.
- [11] LI Yue-ling. Countermeasures for Developing the Medical Device Association Standards in China from the Perspective of Scientific Supervision and Service Innovation [J]. Standard Science,2020(12):127-130+139.
- [12] ZHENG Hehui, CHENG Yibin. Implication for Construction of Chinese Health Standardization System Based on Association Standard System in Developed Countries [J]. JOURNAL OF ENVIRONMENTAL HYGIENE, 2020,10(05):486-489.

- [13] Zeng Fan-wei, Guo Zhi-jia, Xu Ming-ze, Li Dong. Introduction to the Association Standard "Code for Design of Offshore and Offshore Explosion Hazardous Electrical Equipment" [J]. Electric Explosion Protection, 2022(01):10-12.
- [14] YI Yanlin, LI Tieyou, WANG Wanpeng, LIAO Cuilin, XU Hongquan. Status quo and the development of Association standards of hydropower equipment of China [J]. Water Resources Development Research, 2022, 22(02):66-70.DOI:10.13928/j.cnki.wrdr.2022.02.012.
- [15] WANG Linbo, WANG Lu. Research and analysis on the status quo of social organisations carrying out Association standard work in the field of quality[J]. China Quality,2022(02):55-59:55-59.