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Spotlight

A review of China's standardization in 2023

2023年中国标准化社会关注度评议

Special Report

Greetings for the 60th anniversary of CNIS

共贺中国标准化研究院建院60周年

Features

Survey of the vocational perception of standardizers in China

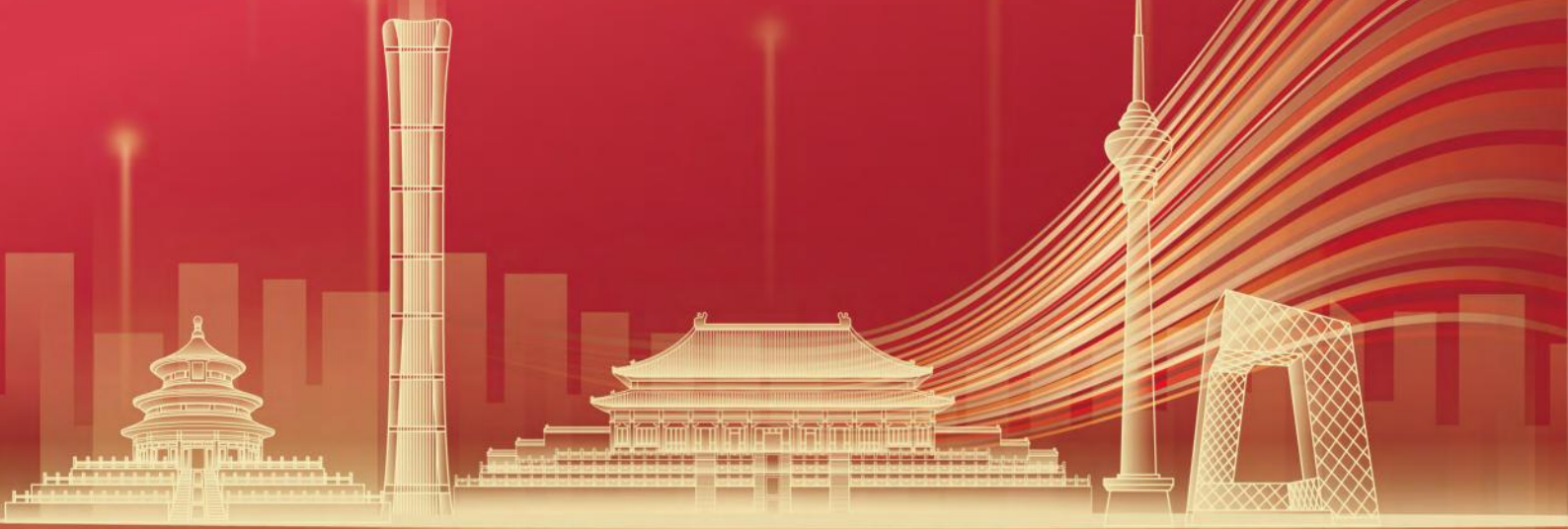
标准化工作者职业认知调查问卷分析

CSP
CHINA STANDARDIZATION PRESS

“Two Sessions”

will be held in Beijing in early March, 2024.

全国两会将于3月初在北京召开



“Two Sessions” refer to the Second Session of the 14th National People’s Congress (NPC) of the People’s Republic of China and the Second Session of the 14th National Committee of the Chinese People’s Political Consultative Conference (CPPCC).

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For more information

Reflection of the past year

No matter for an individual or an organization, it is essential to reflect upon the highs and lows, the wins and the losses in the past year, and evaluate them so as to improve the overall performance in the next year. That's what we did in this issue, to review the achievements in China's standardization area in 2023, which may help policy makers to make adjustment and set new goals in 2024.

In December 2023, China Standardization Press (CSP) organized an online voting on its social media platform to figure out who have made greatest contribution in this field, and what are the most influential events and standards in the public's mind. Surprisingly, almost 220,000 users participated in the vote that lasted for four days. The results are presented in the issue. Read the SPOTLIGHT column and find more details.

CSP also conducted a survey on the vocational perception of standardization workers in China in late October. The six-day survey received 406 answers, which can help you know more about the Chinese standardization workers, such as the region, age and gender, education background and professional capability, reasons for employment, work time, sectors, job satisfaction, and promotion opportunities. The analysis report of the survey is presented in the FEATURES column, which can help you have a better understanding of the vocation.

Another big event is that China National Institute of Standardization (CNIS) celebrated its 60th anniversary in December and received warm wishes and congratulations from its domestic and international cooperation partners. As a national think tank focusing on the research about standardization strategies, theories, principles and standards system, CNIS has made remarkable achievements in the past six decades and provided strong support for the policy making and implementation, standards development & revision and system building in the standardization field in China. The SPECIAL REPORT column showcases the greetings from the international partners as well as their cooperation and long-lasting friendship with CNIS.

At the beginning of the new year, we've got not only great memories from the past but also clarity and courage to go forward.

THE EDITORIAL COMMITTEE
OF CHINA STANDARDIZATION PRESS

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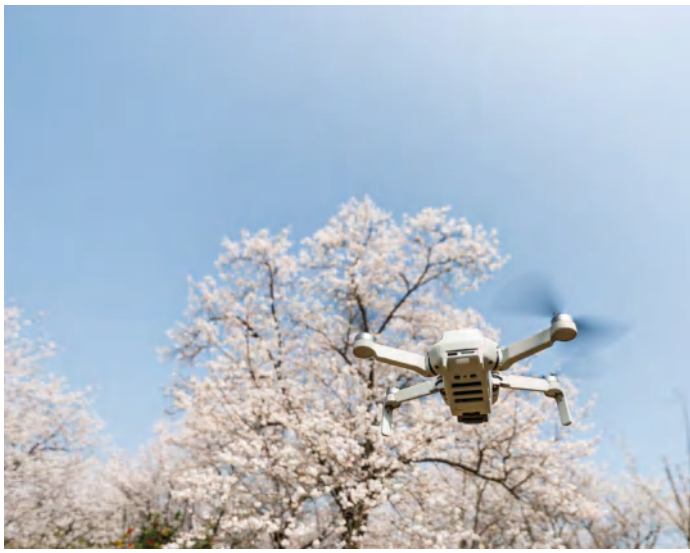

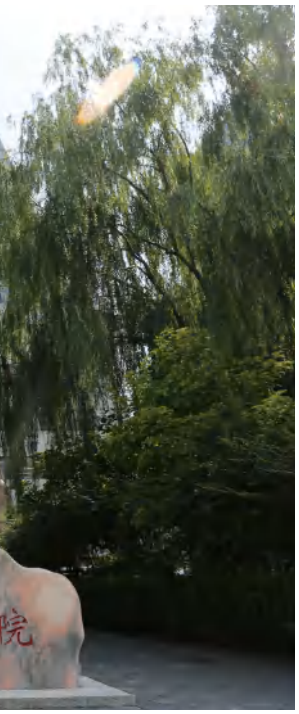

HEADLINE |

China issues the working plan on the construction project of standards system for basic public services

In order to implement the deployments of the construction project of the standards system for basic public services in the *National Standardization Development Outline*, 18 ministries and commissions jointly issued the *Working Plan on the Construction Project of Standards System for Basic Public Services* recently, which includes the Standardization Administration of China (SAC), the National Development and Reform Commission, the Ministry of Finance, the Ministry of Education, the Ministry of Civil Affairs, the Ministry of Justice, the Ministry of Human Resources and Social Security, the Ministry of Housing and Urban-Rural Development, the Ministry of Culture and Tourism.

Basic public services can meet the fundamental demands of people's living and development, and correspond to economic growth and social development, which are the responsibility of the government to guarantee the quantity and quality of service supply. By now, China has released over 1,100 national standards in this field.

The working plan aims to promote the equalization, universality and convenience of basic public services with standardization. It further makes overall deployments in 9 fields of standardization work, including children nurturing, education, wage allocation, health care, elderly care, housing, poverty alleviation, serviceman preference service, and cultural and sports service, which facilitates resource allocation, normalizes service process, improves service quality, and promotes governance effectiveness.

Key tasks and supporting measures are put forward in the working plan, delineating the general framework of the standards system for basic public services. Together with relevant departments, SAMR (SAC) will thoroughly implement the standards system construction project. By 2027, 200 new national and sectoral standards will be developed in this field together with more effective supporting local standards, to build a more sound standards system. In addition, 80 standardization pilot projects of basic public services will be established. As a result, the overall level of China's standardization work on basic public services will be upgraded to increase people's sense of gaining, happiness and security.

Shanghai Urban Railway Standardization Alliance set up

The launching meeting and the first plenary meeting of the Shanghai Urban Railway Standardization Alliance commenced in Shanghai on December 20, 2023, which is China's first local technical body for the standardization of urban railway.

At the meeting, the *Implementation Plan of Shanghai Promoting Urban Railway Standardization Construction (2023-2026)* was jointly released by Shanghai Municipal Transportation Commission, Shanghai Administration for Market Regulation, and Shanghai Municipal Commission of Housing and Urban-Rural Development, concentrating on standards coordination, development of key standards, research on major tasks, as well as standards connectivity in the Yangtze River Delta.

According to the plan, the overall goals are as follows: by 2026, the standards system supporting the construction and operation of urban railways in Shanghai will be formed, and a relatively complete framework of the standards system will be established; by 2030, the innovation-led urban railway standards system with Shanghai's characteristics and a mature framework will be formed. When the standards working mechanism are more complete, the standards supply will be more adequate, and the standards system will be more sound, technically supporting Shanghai in building strengths in transportation and leading the development of modern metropolitan areas.

The Yangtze River Delta has entered the critical period of coordinated and integrated regional development, and the urban railway is an important driver to construct metropolitan areas. With several railways under construction, Shanghai will integrate excellent standardization and industrial resources to form the joint force for standardization.

Relying on its technological advantages, Shanghai Urban Railway Standardization Alliance will fully play a fundamental and leading role in promoting the modernization of governance system and ability, facilitating the high-quality development of urban railway standardization.

Standardization technical subcommittee on brain-computer interfaces set up

Brain-computer interface technology has become the key engine to boost scientific and technological development, attracting global attention. In 2022, the ISO/IEC JTC 1/SC 43, *Brain-computer interfaces*, was set up, the chair and secretariat of which are undertaken by China.

To integrate international and domestic standardization work in this field, SAC announced the establishment of SAC/TC 28/SC 43 on brain-computer interfaces on December 18, 2023, as the counterpart of ISO/IEC JTC 1/SC 43.

The working scope of SAC/TC 28/SC 43 includes the revision and development of standards for fundamental and key technology, system, equipment, product testing and evaluation, ethics, and other aspects of brain-computer interfaces, the secretariat of which is held by China Electronics Standardization Institute (CESI).

The subcommittee has 50 members. The chair of the subcommittee is Wu Chaohui, Academician of Chinese Academy of Sciences. The vice chairs are Fan Kefeng, Director of Information Technology Research Center, CESI, and Prof. Ming Dong, Vice President of Tianjin University. The secretary-general and deputy secretary-general of its secretariat are respectively assumed by Yu Yuntao, Senior Engineer from CESI, and Pan Gang, Deputy Executive Director of National Key Laboratory of Brain-computer Intelligence in Zhejiang University.

In the future, the subcommittee is expected to promote the research, proposal and drafting of national standards on brain-computer interfaces, establish and improve the standards system, and lead the high-quality development of the industry via standards.

First national standard on integrated farming released

China is notable for its great population and long history of agriculture. Rice production is crucial to China's food security.

In the context of ecological protection, sustainable development and finite farmland, it is important to develop efficient farming modes to feed all people. That is where GB/T 43508-2023, *General technical requirements for integrated farming of rice and aquatic animals*, shines.

Approved by SAMR (SAC), the new national standard will come into effect on July 1, 2024, the development of which is led by the National Fisheries Technology Extension Center. The standard will provide a vital basis and support for regulating the integrated farming of rice and aquatic animals, promoting the high-quality development of the industry.

According to related experts, the integrated farming of rice and aquatic animals realizes efficient and intensive utilization of farmlands, saving agricultural lands, guaranteeing national food security and increasing farmers' income, which is an excellent modern agricultural mode to be replicated and promoted.

The standard clarifies requirements and key technological indicators in three aspects. First, only necessary trenches can be dug, the proportion of which should not exceed 10%. Second, considering biological traits of aquatic animals, the lower limit of rice yield and the target yield per unit area of aquaculture are determined, with the aim to avoid the reduction of rice yield and damage to the soil and water environment. Third, inputs such as fertilizer, pesticide, feedstuff, and veterinary drug for aquaculture are specified. Comparing with rice monoculture under the same conditions, the use of chemical fertilizer and pesticide per unit area should be reduced by more than 30%.

Plenary meeting of SAC/TC 470 on social credit held in Beijing

The 2nd plenary meeting of SAC/TC 470, *Social credit*, was held in Beijing on December 22 in hybrid forms, with the main venue set at China National Institute of Standardization (CNIS).

More than 50 members attended the meeting, who are from the Department of Finance and Credit Construction of National Development and Reform Commission, the Executive Office of Supreme People's Court, and the Insurance Business Management Center of the Ministry of Human Resources and Social Security, colleges and universities, research institutions, industrial associations, and enterprises.

Zhou Li, Researcher from the Branch of Quality Research, CNIS, reported the work of SAC/TC 470 in 2023 on behalf of the secretariat. The participants discussed in depth about the national standards to be developed in the field of social credit and the main work in 2024, concluding the key points of work in the new year.

There is still a long way to establish the standards system on social credit, and the leaders and members need to cooperate to reach a consensus. Holding the secretariat, CNIS will strengthen the communication with all departments and parties, actively pool resources, support and serve the members, and constantly improve the performance and effectiveness of research, development and implementation of social credit standards, promoting the orderly and rapid development of standardization of social credit, said Jiang Jiadong, Vice President of CNIS.

Participating members reviewed and approved the draft of two national standards for the unified social credit code information and the construction of unified social credit code platform, as well as related documents.

CESI releases the blue book for RFID technology and standardization

Recently, the 5th IoT Industry Development and Technology Cooperation Seminar in 2023 was held in Xi'an, Shaanxi province.

Focusing on the industrial progress and trend of 5G Internet of Things (IoT), radio frequency identification (RFID), passive IoT and other issues, the attendees discussed new technologies, new application and development trends of IoT, to accelerate the integration and large-scale application of IoT industry.

At the conference, CESI released the *Blue Book on RFID Technology and Standardization (2023)*. Wang Wenfeng, Vice Director of IoT Research Center of CESI, Dr. Wang Honggang from Xi'an University of Posts & Telecommunications, and representatives of drafting units attended the publishing ceremony.

The RFID technology, the key technology of the perception layer of IoT, provides important technical support for promoting the informatization and digital transformation of the industry. In order to give full play to the supporting role of standardization, and further promote the high-quality development of RFID industry, CESI has developed the blue book together with 26 domestic RFID enterprises, institutions and universities.

The blue book comprehensively introduces the status of RFID related technologies, especially the development trend of the latest RFID technologies; analyzes the development status, RFID application status, problem, as well as status and demand of RFID standardization in 12 typical RFID application fields, such as logistics, transportation management, retail, manufacturing, anti-counterfeiting traceability, etc.

The document sorts out the lists of relevant international and domestic standardization organizations, standards systems and various types of standards, and puts forward suggestions on international standardization of RFID, standards system improvement, implementation and application of independent innovative standards, development of application standards, and construction of public service platform for testing and certification.

HIGHLIGHTS |

Side event on standardization held at China Pavilion during COP28

The 28th session of the Conference of the Parties to the UN Framework Convention on Climate Change (COP28) took place from November 30 to December 12 in Dubai, United Arab Emirates. During the conference, the Chinese delegation held a series of activities at the China Pavilion, including the "Standardization Contributes to Meeting Climate Goals" side event.

More than 60 participants from ISO, national standardization bodies, media, research institutions and the industry attended the event, which provides a high-end platform for exchanges of policies on green and decarbonized transformation as well as cases of standardization application and practice.

Xiao Han, Director General of Standards Innovative Management Department of SAMR, Sun Zhen, First-class Inspector of the Department of Climate Change under the Ministry of Ecology and Environment, Noelia Garcia Nebra, Head of Sustainability in ISO, attended and addressed the meeting.

Representatives of China National Institute of Standardization (CNIS) and Standards Innovative Management Department of SAMR introduced China's policies and frameworks on promoting standardization in the field of carbon peak and neutrality, as well as priorities in the future. Also, representatives of the Department of Climate Change under the Ministry of Ecology and Environment presented China's progresses in alleviating and adapting to climate change, and the construction of carbon market across the nation.

Attendees from national standardization bodies of Germany, the U.K., Singapore, and other countries shared the experience and best practices of standardization in the field of climate change. The representatives of relevant enterprises further discussed how to contribute to realizing the climate goals via standardization means.

During the event, Noelia Garcia Nebra demonstrated ISO's efforts, achievements and prospects to respond to climate change. She expounded that ISO standards will play an important role in fulfilling the climate commitment.

Chinese expert wins ISO Excellence Award for efforts in sharing economy

At the 10th plenary meeting of ISO/TC 324, *Sharing economy*, held in Japan on December 7, Yao Xin, Secretary-General of China Council for the Promotion of International Trade Commercial Sub-council (CCPITCSC), was honored with the ISO Excellence Award.

The ISO Excellence Award is the most important individual award to annually reward the contribution of standardizers for their achievements in ISO's technical work.

Yao Xin has devoted himself to the international standardization for sharing economy, and made outstanding contribution in the development of ISO/TS 42502:2022, *Sharing economy—Guidance for provider verification on digital platforms*. Serving as the convenor of a task group and a working group in ISO/TC 324, he has participated in the development of three deliverables of ISO with leading efforts.

As the second international technical specification in the field of sharing economy, ISO/TS 42502:2022 delineates the principles that should be followed by sharing economy platform providers in various stages such as on-boarding, maintenance, and deactivation, which covers the aspects of intellectual property protection, security and privacy protection in the verification process of the providers.

ISO/TS 42502:2022, the first international deliverable with the leading efforts of Chinese experts, was reported by China Central Television, and displayed at the China Pavilion during the 6th China International Import Expo as an important achievement of China's participation in global economic governance.

HIGHLIGHTS |

Meeting on standards for product circularity data exchange in APEC region held in Beijing

Hosted by CNIS, the meeting on the sharing and analysis of standards for product circularity data exchange in the APEC region was held in Beijing on December 6-7 in hybrid forms.

The APEC is the important economic cooperation forum and the intergovernmental cooperation organization at the highest level in the Asia-Pacific region. Supported by the APEC Sub-Committee on Standards and Conformance (SCSC) and SAMR, experts were invited to give keynote speeches to share their experience, who were from ISO/TC 323 on circular economy and APEC economies, including Thailand, Chile, the U.S., Japan, Singapore, and Malaysia. Wang Yuhan, Deputy Director of International Cooperation Department of SAMR, and Catherine Chevauché, Chair of ISO/TC 323, attended and addressed the meeting.

Focusing on relevant standards for product circularity data exchange in the APEC region, the participants held in-depth discussions on issues such as how to improve the exchange efficiency of product circular data among APEC economies. Keynote speeches were made by Jérôme Petry, Convenor of ISO/TC 323/WG 5, Witchuda Daud, Director of National Metal and Materials Technology Center in Thailand, Jean-Pierre Doussoulin, Professor of Austral University of Chile, Douglas Mulhall, Researcher from Delft University of Technology.

China has attached great importance to standardization research and innovation. SAMR has been vigorously supporting the international cooperation on standardization, which is an important way to stimulate creativity and strengthen communication. Directed by SAMR, CNIS expands standardization dialogues under the mechanisms such as APEC, to deepen communication with regional standardization organizations. Following the global trends of green, low-carbon and circular development, CNIS will enhance the cooperation in the area of international standardization and offer its wisdom to realize global sustainable development goals.

International Conference on Smart Shipping Technology & Standardization held in Shanghai

Hosted by China Institute of Marine Technology & Economy, undertaken by the Standardization Research Center of China State Shipbuilding Co., Ltd., the International Conference on Smart Shipping Technology & Standardization was held in Shanghai on December 6, during the Marintec China 2023.

The development of smart shipping needs more open and closer international cooperation, and Monohakobi Technology Institute (MTI) Co., Ltd. and the China Institute of Marine Technology & Economy will strengthen exchanges and cooperation in the field of smart shipping technology and standardization, addressed Hideki Suzuki, President of MTI Co., Ltd., Nippon Yusen Kabushiki Kaisha (NYK) Group, at the conference.

Recently, smart shipping has become an important trend in the development of the shipping industry, which plays an important role in improving the safety level of shipping, reducing accident risks and damages, and alleviating the shortage of seamen. The world's major maritime countries have accelerated the pace of autonomous research on ships, and have carried out a lot of work in the research and development of equipment systems, the development of regulations and standards, and the establishment of business models.

Therefore, ISO/TC 8 on ships and marine technology, whose secretariat was held by China Institute of Marine Technology & Economy, gathers technological and expert sources from countries including China, Japan, South Korea, Norway, and the U.S. to develop international standards in key areas such as international standardization roadmap and ship data, communication, and network security of smart shipping. ISO 23799, *Ships and marine technology—Assessment of onboard cyber safety*, will be officially published in January 2024.

The conference was attended by approximately 100 experts and representatives from industrial sectors related to smart shipping industry, transportation industry, universities, and enterprises. The participants held in-depth discussions on the technical status, project application, standards, future trends of smart shipping as well as the standardization demands of maritime autonomous surface ship technology.

A REVIEW OF CHINA'S STANDARDIZATION IN 2023

2023年中国标准化社会关注度评议结果揭晓

Looking back at the past year, prominent achievements have been made in China's standardization field with the promulgation and implementation of policies and administrative measures on standardization and quality work.

Remarkable progress has also been made in the development, revision and management of Chinese standards at various levels, together with the great efforts of experts who contributed their expertise to make Chinese standards more harmonized and applicable.

At the end of 2023, an online voting was organized by China Standardization Press through its WeChat official account to select the top 10 major events, 10 outstanding figures, and 10 popular standards in 2023. The four-day campaign attracted the extensive participation of both standardizers and the public, reaching a record high of nearly 220,000 times of reading.

Here, the results are presented to showcase China's standardization development in 2023.

10 MAJOR EVENTS
十大标准化新闻事件

China maps out an outline to boost its quality strength

The *Outline of Boosting China's Quality Strength* was released by the Central Committee of the Communist Party of China and the State Council on February 6, 2023 to actively align with the international advanced technologies, rules and standards, and boost the national quality strength in an all-round way, providing quality support for building a modern socialist country in all respects and realizing the great rejuvenation of the Chinese nation.

According to the Outline, by 2025, China will achieve initial results in increasing its quality strength by improving the economic quality and efficiency, enhancing the quality competitiveness of industries, improving the quality of products, projects and services, making more progresses in brand building, making quality infrastructure more modern and efficient, as well as improving the quality governance system.

By 2035, China will have a more solid foundation of quality development, with prevailing advanced quality culture, and stronger comprehensive strength of quality and brands.

Revised *Administrative Measures for National Standards* put into effect

Revised by SAMR, the *Administrative Measures for National Standards* was officially put into effect on March 1, 2023.

Based on the standardization practices over the past years, the document adjusts the specific scope of national standards, makes clear the work requirements on the procedures and stages of national standards development, and specifies the new requirements for the development and revision procedure, organization and management, implementation and supervision, as well as other aspects of national standards, so as to meet the increasingly growing demands for standards and raise the international level of standards. It also further strengthens the feedback and evaluation of standards implementation.

The document will play a prominent role in improving the governance of national standards, reinforcing the efficiency of standardization governance, and better supporting the high-quality economic and social development with standardization.

First China Standardization Conference held in Nanjing

The first China Standardization Conference, co-hosted by China Association for Standardization, People's Government of Nanjing and Jiangsu Administration for Market Regulation, was held on March 30, 2023 at the IEC International Standards Promotion Center (Nanjing) in Nanjing, capital of East China's Jiangsu province.

With "standards and a unified market" as the theme, the conference consisted of one main session, five parallel sessions and seven technical activities. All standardizers were encouraged to improve the standards system to support the market rule-making, exert the leading role of standards in stimulating the vitality of business entities, strengthen the coordination of standards to smooth the circulation of market elements, and expand the institutional opening up of standards to facilitate the interconnectivity of national and international markets.

The conference is expected to serve as a platform for the standardization cooperation and communication at home and abroad, and standardization knowledge promotion.

Guidelines for standards system on carbon peak and neutrality released

The *Guidelines for Establishing the Standards System on Carbon Peak and Neutrality* was released in April 2023 by SAC and other 10 ministries and commissions such as National Development and Reform Commission and Ministry of Industry and Information Technology. The standards system on carbon peak and neutrality includes four subsystems on basic common standards, carbon reduction standards, carbon removal standards and market-oriented mechanism standards, 15 second-class subsystems, as well as 63 third-class subsystems.

The document puts forward the work priorities in four aspects: first, making concerted efforts on international standardization by taking measures such as setting up special working group and innovation team; second, enhancing international communication and cooperation especially with international organizations and Belt and Road countries; third, actively participating in international standards development; and fourth, promoting the harmonization of national and international standards.

Action plan on standardization talent cultivation released

The *Special Action Plan on Standardization Talent Cultivation (2023-2025)* was released in November 2023 by SAC, Ministry of Education, Ministry of Science and Technology, Ministry of Human Resources and Social Security, and All-China Federation of Industry and Commerce.

According to the plan, efforts will be made to innovate the standardization talent cultivation mechanism, improve the education and training system for standardization talents, optimize the environment for standardization talent development, and promote the development of expert teams in a coordinated way.

It sets the following goals by 2025: the national standardization talent cultivation mechanism will be professional, vocational and systematic, the cultivation pattern of valuing, educating, and introducing standardization talents will take shape, and the vocational capability evaluation mechanism of standardization talents will be initially established.

SAMR (SAC) and CAE launch a major research project on standardization

SAMR (SAC) and Chinese Academy of Engineering (CAE) launched the "research project on major issues in implementing the Outline" on April 17, 2023. The project was designed to conduct in-depth research on four main subjects within two years.

To be specific, the "research on the supporting role of association standards in high-quality development" will probe into the supporting role of association standards in high-quality industrial development, and the internationalization strategy and digitalization of association standards. The "research on key issues in the standardization of environmental and social governance" will explore how to use standardization means in the aspects such as policy, standards system architecture, coordination and promotion to drive the green, low-carbon economic growth.

The "research on key issues in the standardization of energy safety" will offer policy consultancy for safeguarding national energy security by means of standardization in key fields. The "research on policies and measures for institutional opening up of standards" will conduct thorough research on the implementation path and work mechanism for the institutional opening up of standards.

BDS included in the standard of ICAO for global application

The latest version of *Annex 10 to the Convention on International Civil Aviation* of the International Civil Aviation Organization (ICAO), which was put into effect in November 2023, included the BeiDou Navigation Satellite System (BDS) as one of the common navigation satellite systems for global civil aviation.

The BDS has been independently constructed and operated by China with an eye on the needs of the national security and economic and social development. As one of the four internationally recognized navigation satellite systems, the BDS provides all-time, all-weather and high-accuracy positioning, navigation and timing services to users in more than 200 countries and regions across the world.

International standardization work has provided the foundation for the global application of the BDS.

International Standardization (Chilin) Forum held in Nanjing

Focusing on the theme of "driving the transition to an all-electric society", the International Standardization (Chilin) Forum was held on June 7, 2023 in Nanjing, Jiangsu province, attracting more than 400 standardization experts from international standards organizations, China, Germany, the U.K., and other countries.

The event was hosted by Nanjing Municipal People's Government, Chinese Society for Electrical Engineering, and China Huaneng Group Co., Ltd. With the support of IEC, ISO and ITU, the event was guided by SAC, German Commission for Electrical, Electronic & Information Technologies (DKE), and British Standards Institution (BSI).

During the event, an initiative was unveiled to accelerate the development of international standards for all-electric society. Three IEC white papers in Chinese were released, which showcased China's latest outcomes in the participation of IEC standardization work and the development of the standards system for carbon peak and neutrality. These white papers were drafted with the concerted efforts of experts from China, Germany, France, the U.S., Japan, Italy and other countries.

IEC SEG 15 on metaverse officially established

With the leading effort of China Electronics Standardization Institute, IEC Standardization Evaluation Group 15, *Metaverse*, was officially established on January 12, 2023 to explore the needs for standardization and opportunities in the area of metaverse and related technologies.

The tasks of the SEG 15 include investigating the needs for standardization in the area of metaverse, taking into account current research, technology and standardization activities, and trends; recommending an initial roadmap for standardization activities in the area of metaverse; engaging at the earliest stage with IEC and ISO TC/SC/SyCs, including JTC 1, as well as with other relevant organizations such as consortia; and making further recommendations to SMB and TMB as appropriate.

The SEG 15 serves as an important outcome of international standardization in the area of metaverse.

2023 Qingdao Forum on International Standardization held

With the theme of "standardization for green, low-carbon and high-quality development", the 2023 Qingdao Forum on International Standardization was held at the Qingdao International Conference Center on June 9, 2023. The event was co-hosted by SAMR (SAC) and Shandong Provincial People's Government, and organized by Qingdao Municipal Government and Shandong Administration for Market Regulation.

During the event, the *Qingdao Initiative: International Standards for Green, Low-Carbon and High-Quality Development* was released; a MoU was signed by SAC and African Electrotechnical Standardization Commission (AFSEC); IEC Statement on Supporting Capacity Building in China was announced; and the agreement on the International Standardization Training Base (Qingdao) was signed by ISO, SAC and Qingdao Municipal Government.

Besides standardization activities, five sub-forums were convened, covering the topics of standardization & ocean negative carbon emissions, standardization & new power systems (green energy), standardization & modern green port and shipping, standardization for green and low-carbon development of SCODA, as well as capacity building and creating leadership in standardization.

10 OUTSTANDING FIGURES
十大标准化新闻人物

Zhang Xiaogang receives lifetime honor of national standardization award

The China Standards Innovation and Contribution Award 2022, the highest national award in the standardization field, was unveiled at a ceremony held in Nanjing on March 30.

The Standard Project Award went to 60 standards projects, the Organization Award went to four organizations, and the Outstanding Contribution Award and the Excellent Youth Award were given to four experts and three experts respectively.

Zhang Xiaogang, President of Chinese Society for Metals, won the Lifetime Achievement Award for his remarkable contribution to both Chinese and international standardization work over the past years. Dr. Zhang once assumed the President of ISO for a three-year term from 2015 to 2017, who is the first Chinese expert serving as the ISO President.

Dong Mingzhu honored with national standardization award

Dong Mingzhu, Chair of the Board of Gree Electric Appliances Inc. of Zhuhai, received the Outstanding Contribution Award of the China Standards Innovation and Contribution Award 2022.

Dong, Chair of ISO/TC 86/SC 4 on testing and rating of refrigerant compressors and Chair of the subcommittee on low-voltage DC technology in IEEE Power & Energy Society DC Electric Power System Committee-China, received the China Quality Award in 2018 for the perfect quality management model of Gree products, which was included in a national standard.

She has also led the company to establish the national research and appraisal center of technical trade measures of refrigeration equipment for WTO TBT and SPS agreements, the national standardization demonstration pilot area of energy conservation, and the national standardization pilot area of consumer products successively, setting an example in the household appliance industry.

Yao Xin assumes the Chair of ISO/TC 342 on management consultancy

Yao Xin, Director-General of China Council for the Promotion of International Trade Commercial Sub-council (CCPITCSC) and Secretary of Subcommittee on Trade in Service of China Association for Standardization, was elected the Chair of ISO/TC 342, *Management consultancy*, with a five-year term from 2023 to 2028, according to a resolution of ISO/TMB on May 30, 2023. It is the first time for a Chinese expert to assume the chair of a technical committee in the management field in ISO.

On December 7, Yao was given the ISO Excellent Award of 2023 at the 10th plenary meeting of ISO/TC 324 on sharing economy in Tokyo of Japan for his outstanding efforts in the international standardization of sharing economy in ISO.

Yuan Yu assumes the President of IEEE SA

In the annual election of 2021, Yuan Yu was elected the President of IEEE Standards Association (IEEE SA) for 2023. Dr. Yuan officially assumed the post on January 1, 2023, who became the first non-American president ever in the history of the association.

IEEE SA is a leading consensus building organization that nurtures, develops and advances global technologies through IEEE, the world's largest technical professional organization dedicated to advancing technology and the trusted "voice" for engineering, computing, and technology information around the globe.

Since 2012, Dr. Yuan has been a passionate volunteer in various leadership positions at IEEE and IEEE SA. His outstanding contribution in IEEE standards activities at different levels has been widely appreciated by standards developers, individual members, and corporate members.

Liu Meng elected the Chair of APEC EGEEC

APEC Expert Group on Energy Efficiency and Conservation (EGEEC) announced on March 27, 2023 that Liu Meng, Associate Research Fellow from the Branch of Resource and Environment, China National Institute of Standardization (CNIS), was elected the Chair of EGEEC with a term from July 2023 to June 2025.

EGEEC was established by APEC Energy Working Group (EWG) in 1993 to assist in achieving energy security, advance the economic and social well-being, and realize environmental benefits in the Asia-Pacific region through energy conservation and the application of energy-efficiency practices and technologies.

The expert group is in charge of the regular communications on policies, standards and projects related to energy efficiency and conservation within APEC member economies.

Bao Qifan adds electronic locks to containers

ISO/TS 7352:2023, *Freight containers—NFC or/and QR code seals*, was published in March 2023, which was developed with the leading efforts of Bao Qifan, Professor at East China Normal University. The document is a big breakthrough of China in the international standards development in the field of logistics transportation to promote the upgrading of standardization for container logistics with digitalization.

Container seal plays a big role in the global logistics transportation. If the seal of a container is open or broken, it can be used as an evidence to judge the safety or management issue during the transportation. With NFC and QR code seals, it will be much easier to make judgement.

At present, nearly 6 million NFC or/and QR code seals have been exported to countries such as the U.S. and Canada with increasingly growing orders.

Yang Lan calls for more scientific standards to guide ESG

At the Green Development Forum 2023 of Zero Carbon Research Institute held on December 12, Yang Lan, a popular TV hostess and Chair of the Board of Sun Media Group, said that the low-carbon sustainable development index of listed companies in China was released by the group together with World Sustainability Standards Organization, Institute for Sustainable Development of Tsinghua University, and Energy Investment Committee of Investment Association of China.

The standard, whose development has undergone design, data selection and computing, focuses on the main forces of low-carbon economic growth in China, and takes the carbon governance at its core and the long-term value creation as its priority. It also helps create the ideas and methodologies for environmental, social and governance (ESG).

According to Yang, the standard is expected to contribute to the effective formation of sustainable development ecosystem.

Zhu Liguo elected academician of CAE

On November 22, 2023, the Chinese Academy of Sciences (CAS) and the Chinese Academy of Engineering (CAE) announced the newly elected academicians with the number of 59 and 74 respectively.

Zhu Liguo, Wangjing Hospital of China Academy of Chinese Medical Sciences, was elected academician of CAE. He is also the Vice Chair of SAC/TC 478 on traditional Chinese medicine, and a member of SAC/TC 476 on integrative medicine.

Zhu has actively participated in the development of standards for traditional Chinese medicine in SAC/TC 478, which approved seven standards projects during the plenary meeting held in February 2023.

Yu Haibin elected academician of CAE

Yu Haibin, Research Fellow of Shenyang Institute of Automation of CAS and Doctoral Supervisor, became the newly elected academician of CAE of the year, which was announced by CAE in November 2023.

Yu is also the Chair of SAC/TC 124 on industrial process measurement and control and a member of SAC/TC 591 on robot. With the ongoing exploration in industrial wireless control system for nearly two decades, Yu and his team have established the international advanced technical system known as Wireless Networks for Industrial Automation Process Automation (WIA-PA). First published as a national standard, WIA-PA was included in IEC 62601, *Industrial networks—Wireless communication network and communication profiles—WIA-PA*, which was published in 2011 and later revised in 2015.

Jin Zhengyu elected academician of CAE

Jin Zhengyu, Doctoral Supervisor of the School of Food Science and Technology, Jiangnan University, became the newly elected academician of CAE of the year, which was announced by CAE in November 2023.

Jin is also the Chair of SAC/TC 384 on feed machinery and Chair of SAC/TC 490 on leisure food. Working on the deep processing of food for more than three decades, Jin and his team have made great contribution to the science and technological advancement in the area of food in China through theoretical innovation, technological research and development as well as equipment upgrading.

10 MOST CONCERNED STANDARDS
十大最受关注标准

ISO/TS 44006:2023, *Guidelines for university-business collaboration*

The International Organization for Standardization (ISO) officially released the world's first international technical specification in the field of university-business cooperation, ISO/TS 44006:2023, *Guidelines for university-business collaboration*, on October 13, 2023. This document adopts the association standard T/CCPITCSC 1172022, *Guidelines for university-business collaboration*, which is developed by the China Council for the Promotion of International Trade Commercial Sub-Council (CCPITCSC), making itself another successful case of the "association standardization + international standardization" dual-driven development model.

The development of the standard is led by CCPITCSC and Shenzhen Institute of Standards and Technology, and participated by the global business and education sectors as well as international organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Organization for Economic Cooperation and Development (OECD). The ISO technical specification signifies that China has made great contribution to the international standardization work in the field of university-business cooperation, which has a profound significance for China's deep involvement in the formulation of international rules and standards.

The mandatory national standard GB 1103.1-2023, *Cotton—Part 1: Saw ginned upland cotton*

On September 8, 2023, the State Administration for Market Regulation (SAMR) and Standardization Administration of China (SAC) released the mandatory national standard GB 1103.1-2023, *Cotton—Part 1: Saw ginned upland cotton*, which was drafted by the National Fiber Standardization Technical Committee and will be implemented on September 1, 2024. The standard is of great significance for ensuring the security of China's cotton supply and promoting the high-quality development of the cotton industry.

Six national standards for infant and child products including GB/T 41801-2023

On the occasion of the International Children's Day on June 1, 2023, SAMR and SAC released six national standards closely related to the growth of infants and children, including GB/T 42801-2023, *Juvenile products—General requirements for daily sports protection articles*. These standards cover home protection products, bathing appliances, daily sports protective equipment, mother-and-baby room supporting products, soothing articles bearing children, and tableware and feeding utensils. They specify technical requirements for product material safety, mechanical and physical performance, testing methods, labels, and usage instructions. The technical content of these standards aligns with the international advanced standards in the field of infant and child products.

The implementation of the six standards further improves China's standards system for infant and child products, contributing to improving the quality of these products and creating a high-quality growth environment for infants and children.

ISO/IWA 41:2023, *Guidelines for live streaming marketing service*

On November 27, 2023, the International Organization for Standardization (ISO) officially released ISO/IWA 41:2023, *Guidelines for live streaming marketing service*, the world's first international standard in the field of live streaming marketing. With the support of the China Council for the Promotion of International Trade (CCPIT) and SAC, this standard was developed by the global business community and international organizations such as the Asia Marketing Federation (AMF) and the Asia Council for Small Business (ACSB) with the organization of CCPITCSC.

It provides guidance for the service processes and operational management of live streaming marketing services for live streaming hosts, live streaming marketing platforms, live streaming marketing personnel, and live streaming marketing agencies, which is applicable to all stakeholders in live streaming marketing services.

The mandatory national standard GB 42590-2023, *Safety requirements for civil unmanned aircraft system*

SAMR and SAC released the mandatory national standard GB 42590-2023, *Safety requirements for civil unmanned aircraft system*, on May 23, 2023. With the drafting organized by the Ministry of Industry and Information Technology, the standard will be implemented on June 1, 2024.

The standard can effectively guide the design and production of research and development units, regulate compliance testing of testing institutions, and ensure the safe use by users. It is conducive to further strengthening the safety baseline of civil unmanned aerial products, implementing the requirements for the management of civil unmanned aerial vehicles (UAVs), and promoting the healthy development of the civil UAVs industry. It is the first mandatory national standard in the field of civil UAVs in China.

The ski resort service standards system of Zhangjiakou city

The ski resort service standards system of Zhangjiakou city, compiled by the Zhangjiakou Market Regulation Bureau, was officially released at a ceremony held at the Fulong Ski Resort in Chongli district on November 10, 2023. This system provides scientific guidance and technical specifications for the innovation and quality improvement of services in the ice and snow industry. It standardizes and restructures the six aspects of ski resorts including food, accommodation, transportation, sightseeing, shopping, and entertainment.

The association standard T/CCPITCSC 120-2023, *General rules for Chinese brand influence evaluation*

The association standard T/CCPITCSC 120-2023, *General rules for Chinese brand influence evaluation*, was officially released during the Brand Power Economic Forum and the Six Promotion Activity for Innovation Achievements on April 22, 2023. The standard was jointly developed by CCPITCSC, China International Brand Strategy Research Center of the University of International Business and Economics, and Beijing Zhongji Kexin Economic Information Research Institute.

It defines the specific requirements for overall evaluation principles, evaluation indicator systems, value rules, evaluation work, and evaluation application and improvement. The goal is to provide effective guidance for the evaluation of Chinese brand influence and contribute to the cultivation of Chinese brand influence.

Three revised voluntary national standards on connection set for conductive charging of electric vehicles

SAMR and SAC released three voluntary national standards on September 7, 2023, including GB/T 20234.1-2023, *Connection set for conductive charging of electric vehicles—Part 1: General requirements*, GB/T 20234.3-2023, *Connection set for conductive charging of electric vehicles—Part 3: DC charging coupler*, and GB/T 20234.4-2023, *Connection set of conductive charging for electric vehicles—Part 4: High power DC charging coupler*. The standards will be implemented on April 1, 2024.

The most significant change in the new standards is the increase in the maximum charging current from 250 amperes to 800 amperes, along with a power increase to 800 kilowatts. These standards are associated with the domestically developed electric vehicle (EV) charging interface technical standard known as "ChaoJi". The release of these standards signifies an upgrade to GB/T 20234-2015, the existing series of national standards on charging, providing support for high-power charging that has been widely anticipated. Additionally, the "ChaoJi" charging interface standard, prepared and tested for several years, has officially gained recognition.

The mandatory national standard GB 23350-2021, *Requirements of restricting excessive package—Foods and cosmetics*

The revised mandatory national standard GB 23350-2021, *Requirements of restricting excessive package—Foods and cosmetics*, released by SAMR and SAC in August 2021, came into effect on September 1, 2023.

The standard emphasizes that the size, thickness, structure and cost of packaging should be appropriate for the quality, specifications and price of the product, aiming to minimize waste and discarded materials due to excessive packaging.

The mandatory national standard GB 43284-2023, *Requirements of restricting excessive package—Fresh edible agricultural products*

SAMR and SAC released the mandatory national standard GB 43284-2023, *Requirements of restricting excessive package—Fresh edible agricultural products*, on September 8, 2023. With the drafting organized by the Ministry of Agriculture and Rural Affairs, the standard will be implemented on April 1, 2024.

The implementation of the standard will strengthen the overall governance of excessive packaging throughout the supply chain, guide producers and operators of fresh edible agricultural products to use packaging reasonably and appropriately, and provide legal basis and foundational support for the law enforcement in market regulation work.

Greetings for the 60th anniversary of CNIS

共贺中国标准化研究院建院60周年

Founded in 1963, China National Institute of Standardization (CNIS) mainly focuses on the research into the standardization development strategies, fundamental theories, principles and methods as well as standards systems. It also carries out the standardization scientific research, experimental verification, test and evaluation, standards development, revision and promotion, and transformation and application of science & technology achievements. CNIS has played an active role as a public welfare research institute, providing technical support for the work of State Administration for Market Regulation (SAMR), other ministries and local governments.

In the past two decades, CNIS has undertaken 81 scientific research projects of many national science & technology plans. Up to now, CNIS has held 55 national standardization technical committees/subcommittees, and led or participated in the development of more than 2,600 national standards. It has developed more than 1,600 national standards as the first drafter and participated in the development of 75 international standards with leading efforts.

CNIS has also actively participated in international standardization activities. CNIS experts have taken 32 key posts of technical bodies of international standards organizations, such as Chair, Vice Chair, Secretary and Convenor. CNIS has also undertaken 90 domestic counterparts of ISO/IEC technical committees/subcommittees and technical supporting bodies of other international organizations. In addition, CNIS experts have registered as the working group experts of international standards organizations for more than 400 times. Three experts have won the ISO Excellence Award for their contribution to the achievements related to ISO's technical work.

On the occasion of the 60th anniversary of CNIS, many international cooperation partners have sent their greetings to CNIS to review the achievements of their cooperation and anticipate the future collaboration possibilities.

oriGIn

Organization for an International
Geographical Indications Network

Massimo Vittori

oriGIn Managing Director

Dear Mr. Luo Fangping, dear colleagues of the China National Institute of Standardization, at the occasion of the 60th anniversary of your institution, I'd like to send this video and congratulate you for this important achievement, which demonstrates the importance and relevance of your organization.

I represent oriGIn, the global alliance of geographical indications. Since 2005, we've been very happy, pleased and satisfied to cooperate with you, the China National Institute of Standardization, for the promotion, the knowledge raising awareness of the GIs in China. The signature of the agreement back in 2005 was the celebration of oriGIn General Assembly in China. Since then, your institution has been serving as the office of oriGIn in China, and it has been very important and instrumental to allow the communication, better exchange of best practices and the promotion of GIs in China. So I think there are days we have a great opportunity to further improve our cooperation.

We have the pleasure to have a CNIS delegation in Geneva this year in October for our biannual meeting. Mr. Li Zhiping was reelected the Vice-President of oriGIn for China. We have learnt that China has more than 10,000 GIs recognized at the international level, which makes it country number one in the world for number of GIs recognized. There has been a tremendous improvement of the legal framework. There has been the signature of the agreement with the European Union for the mutual recognition of GIs. So I think all the factors up there show that the GIs are very strategic and growing sector in China. So as oriGIn we are very keen to keep this cooperation with you, we hope to continue to receive information, renew and continue providing information about these practices and latest development of GIs in China and we will also give the number of GIs that your country has. I hope to see more and more GIs from China becoming members of oriGIn and becoming very active in our global network. Again, congratulations on your 60th anniversary, all the best! I hope you enjoy the celebration and I look forward to seeing you in Geneva or in China. Thank you very much.

IEEE SA STANDARDS ASSOCIATION

James E. Matthews

President of the IEEE Standards Association

Hello. I am Jim Matthews, President of the IEEE Standards Association, Chairman of its Board of Governors and Director of the IEEE Board of Directors.

Thank you for the invitation to speak to you on the occasion of the 60th anniversary of the China National Institute of Standardization. It is my pleasure and an honor on behalf of the IEEE Standards Association to congratulate CNIS. The milestone 60th anniversary celebrates the great achievements by CNIS in supporting groundbreaking research around standardization in many fields of technology and in assuming leadership positions nationally and internationally. From 1963 to today, CNIS and the IEEE Standards Association have a long history of collaboration.

As an IEEE SA Entity Member, CNIS is collaborated with IEEE and its diverse entity membership to develop global standards and build robust standards development communities.

Congratulations to all those who contributed to the development and success of CNIS and for their dedication and commitment to advancing technical innovation through standardization.

At the IEEE Standards Association, we look forward to the next 60 years of successful collaboration with CNIS and standardization. And I look forward to the opportunity to meet with many of you in person in China in the near future, hopefully in the first half of 2024. Thank you and congratulations again.

Christine Egan

Chief Executive Officer of CLASP

Greetings to everyone celebrating the 60th anniversary of the China National Institute of Standardization, and congratulations on this important milestone.

I'm Christine Egan, Chief Executive Officer of CLASP, an international NGO founded in 1969 and based in Washington D.C. Since then, CLASP has worked in over 100 countries around the world to improve the energy and environment performance sciences, lighting and equipment that we use every day. CLASP's work has included a special focus on international cooperation on energy and environmental standards and labels and promoting a global transformation to a low-carbon economy.

CNIS has been one of our longest and closest partners. I have found memories of the warm welcome and productive collaboration with CNIS staff on my first trip to China over 20 years ago. Over the years, our collaboration with CNIS has made a tremendous impact to reduce carbon emissions and mitigate climate change.

We've worked together on a wide range of topics, ranging from development of the China energy label to sharing CNIS's experience of developing world-leading room air conditioner minimum performance standard in countries such as Indonesia and Brazil. These collaborations have reduced global carbon emissions by several giga tons and have helped ensure customers can access efficient, high-quality appliances in many countries around the world.

We look forward to many more years of cooperation. Given China's unique position as the world's largest producer of the appliances and many products, along with CNIS as a strong technical expertise and mandate to develop and share ambitious efficiency standards. This partnership would be essential to our joint efforts to achieve net-zero carbon emissions in China and in the world. Together, we can ensure that we make the maximum contribution possible to mitigating catastrophic climate change.

Congratulations to CNIS on the 60th anniversary!

Elena Santiago Cid

Director General of
CEN/CENELEC

Dear friends and colleagues,

My name is Elena Santiago Cid and I am the Director General of two European standards organizations, the European Committee for Standardization (CEN) and the European Committee for Electrotechnical Standardization (CENELEC). Our mission is to develop high-quality, voluntary and market-driven European standards for products and services that incorporate quality, safety, security, environmental protection, interoperability, accessibility requirements empower the European single market. Our members are the national standards bodies and national committees in 34 European countries who are also deeply engaged in the international standardization in ISO and IEC.

Today, I extend my warm congratulations to the China National Institute of Standardization on your 60th anniversary. Standards are not just technical specifications, they are the bedrock of economic advancement, they ensure product safety, drive innovation and facilitate international trade. International collaborative efforts have played a crucial role in creating a foundation for harmonization and interoperability. In the context of global challenges we are all facing, collaboration is the key for all of us to identify actionable solutions that benefit the whole world through international standardization in ISO and IEC. I know in particular the important support you give to international standards in many years including environment and energy. Our organizations share a commitment to advancing international standardization through ISO and IEC as a tool to support trade and economic development. Together, we tackle challenges, foster innovation and build bridges that connect us across cultures and continents.

I congratulate the China National Institute of Standardization for its first 60 years of excellence. May the next 60 years be marked by even greater achievements, as we work together to set international standards that will shape the future for generations to come.

Joseph Tretler Jr.

Vice President for International Policy of ANSI

Congratulations to all our friends at the China National Institute of Standardization on this occasion of the 60th anniversary of your remarkable organization.

My name is Joseph Tretler and I am the Vice President for International Policy at the American National Standards Institute (ANSI). On behalf of the entire ANSI organization, I would like to extend my heartfelt congratulations to our CNIS colleagues for reaching this incredible milestone. ANSI and CNIS have enjoyed a long standing relationship with frequent exchanges and high-level visits. CNIS has been a valuable partner for ANSI over the years. We were glad to sign a new letter of intent in 2021, so we can continue to further collaborate on international standards. I would also like to thank CNIS and your entire team for your hospitality and hosting an ANSI delegation led by our Senior Director Leslie McDermott this past August.

The CNIS 60th anniversary celebration marks a pivotal moment in advancing international standards and innovation. We look forward to having more in-depth communication and collaboration with CNIS in the upcoming years. With that I wish everyone at the China National Institute of Standardization a very happy 60th anniversary! Congratulations!

Olivier Peyrat

CEO of AFNOR

Hello, my name is Olivier Peyrat. I am the CEO of AFNOR, which is the French standardization body, member of ISO and IEC. And it is my great pleasure to respond positively to the invitation, which has been sent to me by the CNIS, on the occasion of its 60th anniversary. I think that 2023 is obviously a big yardstick for CNIS, because 60 years mean quite a lot for an organization. And 2024 is equally an important yardstick, because it is the 60th anniversary of the establishment of the diplomatic relationship between China and France. I think that the timing between 2023 and 2024 is absolutely excellent to celebrate such an occasion.

So we'd like to share with you a few things, statements and beliefs, because I think that it's important that we are all players of the international standardization system. For instance, AFNOR, together with our friends from SAC, are attending and trying to make progress at the international level. Of course we did a lot at the European level, where we had our respective histories, with lots of standards and so forth. The beauty of CEN and CENELEC was to replace a lot of national standards with the European standards. That was quite an effort, that was quite breathtaking. Therefore I think that it's important to reinforce the very strong commitment of CEN and CENELEC to the international standardization. We feel that it's way more effective if we start from the beginning to work at the international level. And it is here that we are quite happy that China and France, that SAC, with the efforts of CNIS and AFNOR, are undertaking a lot of things at the international level.

And I think that there are challenges that are unique currently and that humanity is confronted to a lot of challenges. For instance, if we just pick up a few examples, such as biodiversity, which is ISO/TC 331, I think that it has to do a lot with political policies and priorities. And being able to rely on international standards will enable a number of countries, a number of stakeholders to prioritize, to make best use, and to preserve the resource from biodiversity. And as AFNOR in charge of the ISO/TC 331, we are quite happy to be able to count on these Chinese expertise, which is made available to the community. This will entail naturally a lot of good things in terms of green development. Because development is needed but in fact that green and preserved nature is quite important.

The second point that I would like to mention, which is quite important, is related to circular economy. Circular economy is a key element inside ISO/TC 323, which is also run by AFNOR, so we must have more knowledge about what is happening there. And I would like to insist on the fact that sometimes I took the approach, and we need to make sure that this will work, and it will try to optimize globally. It's not a number of little gears working together with one another, we need to have something which is more strategically intended. These are of paramount importance, so I would like to comment there is sincerely the work which is done within the ISO/TC 323 by China. Because there is a standard in particular which is related to the product circularity data sheet, which is of paramount importance. It has deeply influenced the European approach with the digital product passport. So it's just talking about the commitment of China which I personally really cherish.

And I would like to conclude: first of all, congratulate again China and CNIS for sharing their expertise at the international level, and wishing CNIS and all the staff a very great and happy anniversary. Thank you!

Anna Söderholm

Acting CEO of Swedish Environmental Research Institute (IVL)

Greetings to everyone celebrating the 60th anniversary of CNIS and congratulations on this important milestone. My name is Anna Söderholm. I am the Acting CEO of IVL (Swedish Environmental Research Institute). IVL was founded in 1966, that was three years after CNIS. We have both our organizations being developing during the last 60 years, which is a very long time. We were one of the first environmental research institutes in the world, and have had cooperation with China since the 1980s and together with CNIS during the last decade.

We see standardization as a very important tool to develop valuable, transparent and acknowledgeable ways of measuring and communicating the end amount of performance of products especially into the international market. And this is also a very important tool how we can verify the climate impact of products value chain. And CNIS and IVL come together with joint efforts in order to develop such standards for credible and transparent ways of measuring and formatting performance of products.

Recently, we cooperated on product categories, and these can be used in wind power development for example, that is very important for renewable energy systems, and of course any of these. We look forward to many more years of cooperation and the partnership will be essential to our joint efforts to achieve the maximum carbon emission in SAC in China and around the world. Together we can ensure that we make the maximum contribution possible to mitigate climate change. Congratulations once again to CNIS on your 60th anniversary from us at IVL. And we wish you a wonderful celebration. Thank you for this opportunity to congratulate you on your 60th birthday.

SIEMENS

Matthias Gommel

General Manager of Regulation & Standardization Asia Pacific, Siemens

Congratulations to you, my very good old and new friends from CNIS.

Let me thank you for our long-lasting relationship and friendship between CNIS and Siemens, working together on the development of international ISO and IEC standards, which assure interoperability and connectivity which are the basis for our markets, for international markets, international supply chains from suppliers to customers around the globe.

I'm so glad that I can send to you my congratulations on your 60th anniversary of CNIS, and I'm looking forward to our mutual next 60 years. Congratulations.

Survey of the vocational perception of standardizers in China

2023年标准化工作者职业认知调查问卷分析

Building the capacity of standardization workers can help implement the strategy to enhance China's strengths via standardization. The *National Standardization Development Outline*, issued by the Central Government, puts forward strengthening the building of standardization talent teams and establishing a sound vocational ability evaluation and incentive mechanism of standardization talents.

To put the requirements of the Outline in place, China Standardization Press (CSP) conducted a survey about the vocational perception of standardizers on October 14, the World Standards Day, on its official account of Wechat, a popular chatting and sharing app in China. A total of 406 answers were received when the six-day survey ended on October 20.

The analysis of the feedback is as follows:

1. Coverage area

According to the results, the survey covers a relatively wide range of 30 provinces, autonomous regions and municipalities except for Heilongjiang province and Xizang autonomous region. Respondents from Beijing hold the largest share (14%), followed by Guangdong province (10%) and Shandong province (9%).

2. Age and gender

Most of the respondents are standardization workers aged 20 to 50, accounting for 85%. And 15% respondents are 50 years old and above. People aged 30 to 40 are a major force of China's standardization work, accounting for 39.8%, see Figure 1.

The number of male standardization workers is about 1.5 times that of female workers, see Figure 2.

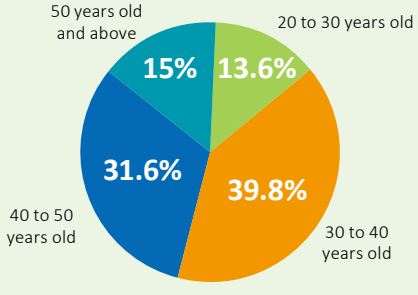

Figure 1: Age

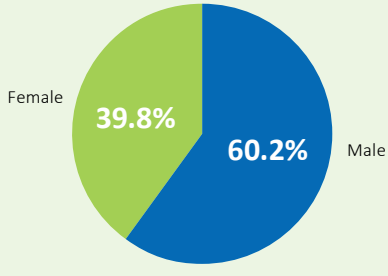

Figure 2: Gender

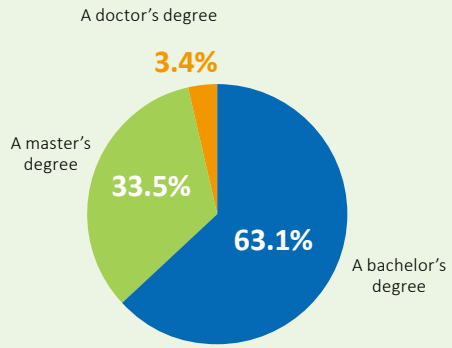

Figure 3: Education background

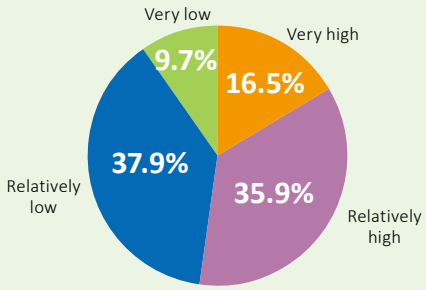

Figure 4: The degree of compatibility between your major with the highest academic qualifications and current job

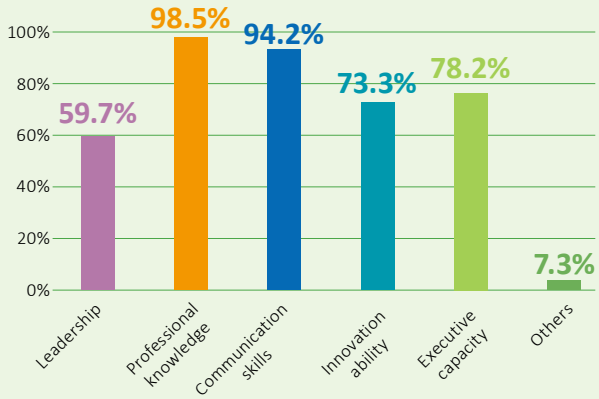

Figure 5: What abilities and qualities should a good standardization worker have?

3. Education background and professional capability

Respondents with a bachelor's degree hold the largest share (63.1%), followed by the ones with a master's degree (33.5%) and a doctor's degree (3.4%). It reflects the structural unbalance of the education background of standardizers in China to some extent, see Figure 3.

In terms of the degree of compatibility between the major with the highest academic qualifications and the current job, "relatively low" and "relatively high" account for a larger proportion, 37.9% and 35.9% respectively. They are followed by "very high" (16.5%) and "very low" (9.7%). About half of the respondents are engaged in the standardization work closely related to their major, see Figure 4.

In terms of the abilities and qualities that a good standardization worker should have, "professional knowledge" and "communication skills" are the top two skills, accounting for 98.5% and 94.2% respectively, see Figure 5.

4. Reasons for employment

"Assignment" is the main reason why the respondents engage in standardization work, accounting for 62.6%, followed by "employment needs" (25.2%), "interests and hobbies" (21.8%), "values" (18%) and "majors related" (17.5%). The top two options reflect that there is a lack of subjective initiative of current standardization workers when entering the standardization industry, and most of them choose standardization as a passive choice, see Figure 6.

5. The nature of unit and years of working

In terms of the nature of unit, respondents from government agencies, public institutions, and state-owned enterprises account for 6.8%, 24.8%, and 28.6% respectively; while the ones from private enterprises hold the largest share (30.1%). It shows that private enterprises have relatively large demands for standardization workers and also actively participate in standardization work, see Figure 7.

In terms of years of working, respondents with more than 6-year work experience account for 65%, see Figure 8. To a certain extent, it reflects the relatively stable career development of standardization workers.

6. Sectors

In terms of sector distribution, respondents from the high-end equipment manufacturing sector holds the largest share (33.5%), followed by the sectors of information technology (24.3%), new materials (20.4%), new energy (19.4%), traditional services (18.9%), agriculture and food (16.5%) and energy conservation and environmental protection (16%). The gap in the shares of the above sectors is relatively small. The proportion of respondents in the construction and transportation, science, education and culture, and medical care and health is obviously low, accounting for 12.1%, 11.2%, and 9.7% respectively; the respondents from the biosafety sector has the lowest proportion of 4.4%, see Figure 9.

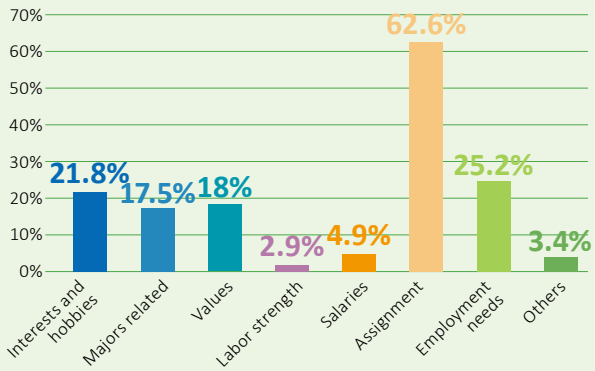

Figure 6: The reason for your engagement in standardization work

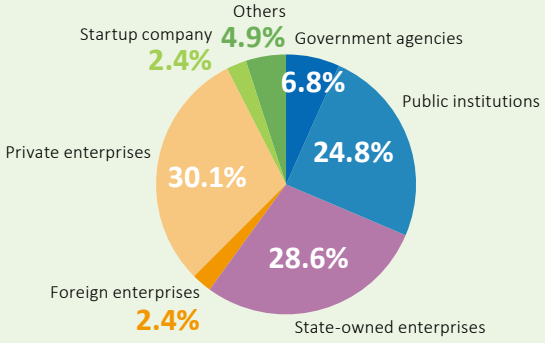

Figure 7: The nature of your unit

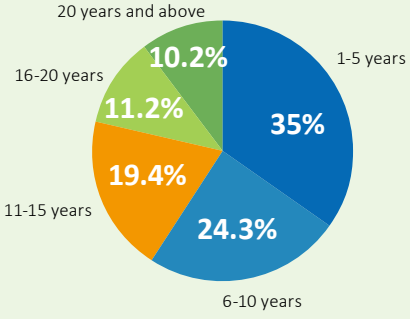

Figure 8: Years engaged in standardization work

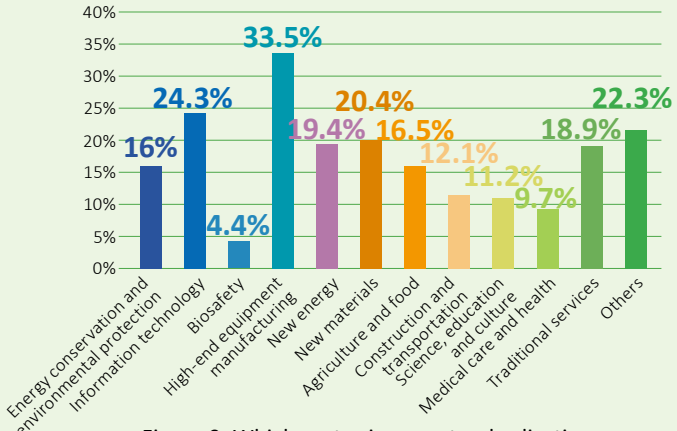

Figure 9: Which sector is your standardization work related to?

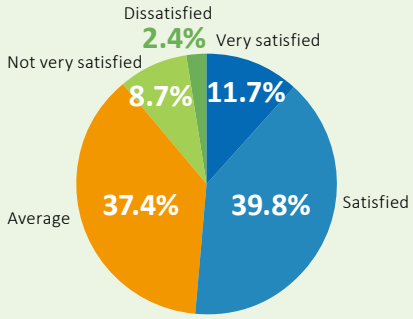

Figure 10: Are you satisfied with the standardization work you are engaged in?

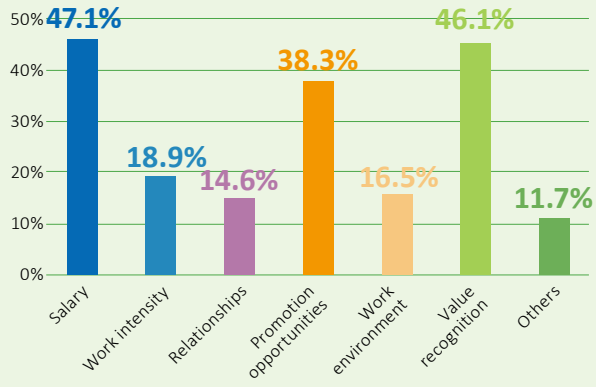

Figure 11: What factors make you dissatisfied with the current job?

7. Job satisfaction

In terms of whether they are satisfied with the standardization work they are currently engaged in, 51.5% of the respondents said they were "satisfied" and "very satisfied", and 11.1% of them said they were "not very satisfied" or "dissatisfied". It shows that standardization workers generally have a positive attitude towards their job, see Figure 10. The main factors that make respondents dissatisfied with the current job include "salary", "promotion opportunities" and "value recognition". The feedback results can provide reference and basis for establishing and improving the incentive mechanism for standardization workers, see Figure 11.

In terms of vocational and social recognition, 50% of the respondents believe that vocational recognition comes from "social recognition", see Figure 12. In terms of the social status of standardization workers in China, 61.7% of the respondents think that "they have a certain social status in the professional field", while 34% of the respondents think that their "social status is relatively low, and they are often ignored". It demonstrates that social recognition is the difficulty faced by standardization workers in China. Currently, the general public's awareness and recognition of standardization are obviously lacking, see Figure 13.

8. Promotion opportunities

In terms of promotion opportunities, 68% of the respondents think that their units attach importance to standardization work but pay little attention to the cultivation and motivation of standardization workers, see Figure 14. About 59.7% of the respondents think that compared with other posts, there is no clear promotion path for standardization workers, see Figure 15.

9. Future development

86.9% of the respondents believe that they face difficulties in the development of current standardization work, see Figure 16, for example, there is inconsistent understanding of the boundaries between standards and laws, regulations, and rules, insufficient financial and policy support for standards projects, and a large number of enterprises do not really value standardization work.

In terms of the satisfactory work achievements, many respondents said that they can actually participate in the work of preparing for standards projects and developing standards, promote the release and implementation of standards, be recognized for the standardization projects they have participated in, improve their personal abilities, and obtain expert qualifications.

Meanwhile, 56.3% of the respondents are willing to let their children engage in standardization work in the future, which shows that most standardizers have a strong recognition of the vocational development prospects of standardization, see Figure 17.

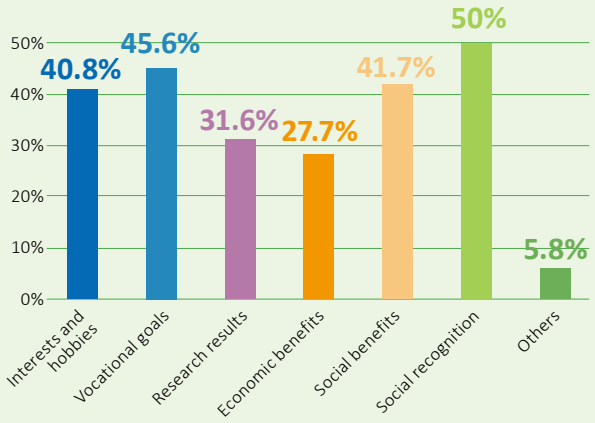

Figure 12: What reflects your vocational recognition of the current job?

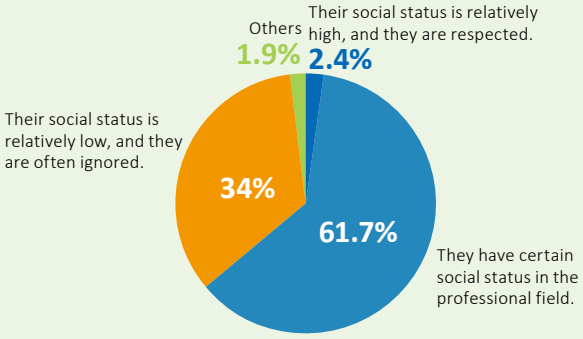

Figure 13: How is the social status of standardization workers?

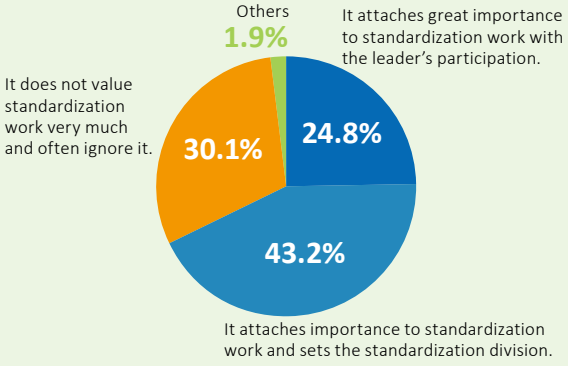

Figure 14: How does your unit attach importance to standardization work?

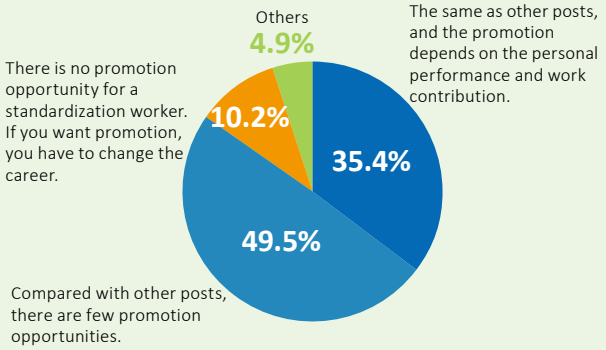

Figure 15: How is the promotion opportunity of a standardization worker in your unit?

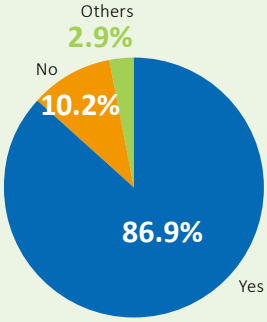

Figure 16: Are there any difficulties in the current standardization work?

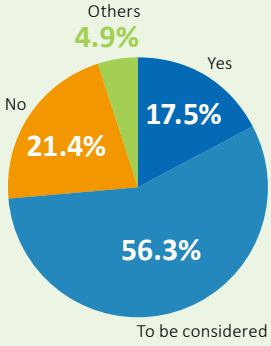

Figure 17: Are you willing to let your children engage in standardization work in the future?

Conclusion

The feedback of the survey demonstrates that the standardization work in China is in the transition from "government-led" process to the "government-led and market-oriented" process. Enterprises value and proactively participate in standardization work. The standardization in high-grade, precision and advanced industries and traditional services industry develops at a relatively high speed; in contrast, the standardization in traditional industries develops at a relatively low speed, where more attention should be paid to standardization. More efforts should be made to enhance the building of standardization talent teams, and improve the vocational ability evaluation and incentive mechanism of standardization talents. There is a clear lack of public awareness and recognition of standardization work and its practitioners.

According to the survey, standardization workers generally have a positive attitude towards their current work status; the degree of compatibility between their highest academic qualifications and their work is relatively balanced, but the educational background structure is significantly unbalanced; they are clearly stable and deeply involved in their career development, but most of them did not choose standardization work proactively; most of the respondents believe that the current development of standardization work is facing difficulties, and the career promotion path is relatively unclear compared to other positions. The dissatisfaction factors are mainly about "salary", "promotion opportunities" and "value recognition".

Based on the analysis, the following suggestions are put forward: first, strengthen publicity and enhance the social recognition of standardization work; second, establish and improve the career promotion path for standardization workers; third, increase training on basic knowledge and professional abilities needed for standardization workers, and provide opportunities and channels for them to improve their abilities.

World Radiocommunication Conference revises the ITU Radio Regulations to support spectrum sharing and technological innovation

Member states of the International Telecommunication Union (ITU) agreed on revisions to the global treaty governing the use of the radio frequency spectrum, both on Earth and in space, at the close of the World Radiocommunication Conference 2023 (WRC-23) on December 15 in Dubai, United Arab Emirates.

The agreement on updates to the Radio Regulations identifies new spectrum resources to support technological innovation, deepen global connectivity, increase access to and equitable use of space-based radio resources, and enhance safety at sea, in the air, and on land.

"WRC-23 puts the world on a solid path towards a more connected, sustainable, equitable and inclusive digital future for all," said Doreen Bogdan-Martin, ITU Secretary-General. "Key regulatory achievements on spectrum for space, science and terrestrial radio services build on the momentum of ITU's ongoing work to achieve universal connectivity and sustainable digital transformation."

A total of 151 member states signed the WRC-23 Final Acts. The Final Acts constitute a record of the decisions taken at the conference including both the new and revised provisions of the Radio Regulations, all Appendices, and the new and revised Resolutions and ITU-R Recommendations incorporated by reference into the treaty by the conference.

Among the decisions, WRC-23 identified spectrum for International Mobile Telecommunications (IMT), which will be crucial for expanding broadband connectivity and developing IMT mobile services, also known as 4G, 5G and, in the future, 6G.

The conference provisionally recognized the BeiDou Satellite Messaging Service System for GMDSS use, subject to successful completion of coordination with the existing networks and elimination of interference.

The conference, which took place in Dubai from November 20 to December 15, was hosted by the Telecommunications and Digital Government Regulatory Authority (TDRA) of the UAE.

(Source: ITU)

A new standard on the marking of metallic valves ensures the safety of pressure equipment

Industrial valves are mechanical devices that control the flow of liquid or gas within a system by opening, closing, or partially obstructing channels. They are crucial in numerous areas of life as they improve efficiency and ensure precise control and overall safety in a variety of industrial processes.

A newly developed standard, EN 19:2023, *Marking of metallic valves*, is a noteworthy milestone. The significance of this umbrella standard lies in its comprehensive coverage of general characteristics and requirements for marking industrial metallic valves. It aligns with the provisions in the Essential Safety Requirements (ESR) of Annex I section 3.3 of the Pressure Equipment Directive 2014/68/EU (PED). It offers a systematic approach to the marking and labeling of pressure equipment.

Operating in tandem with various product-specific standards, this umbrella standard forms a robust framework that ensures the quality and conformity of various valve products.

The Pressure Equipment Directive is vital for ensuring the safety of pressure equipment within the European Union. It establishes essential safety requirements, promotes market access by requiring conformity with standards, contributes to harmonization across EU Member States, safeguards consumers and the environment, provides a legal framework, and facilitates international trade by setting consistent standards for products entering the EU market. This aligns with the EU single market's goal to facilitate the seamless transfer of technical trade, emphasizing uniform product requirements through the European approach to harmonization, which integrates essential safety considerations.

The initial version of EN 19:2023, *Marking of metallic valves*, dates back to 1975. The latest version was meticulously developed under CEN/TC 69, *Industrial valves*, with AFNOR, the French Standardization Association, serving as the secretariat.

(Source: CEN)

Webinar "The role of standardization in climate change adaptation"

January 26, virtual

Hosted by CEN, this webinar will present the process in Germany that led to the commitment of the three largest standardization organizations in Germany (DIN, DKE and VDI) to deal with the topic of climate impact adaptation in strong cooperation. The webinar also aims to motivate other NSBs/NCs to follow suit.

The webinar includes presentations of what climate projections can achieve today and what requirements exist in Germany and Europe, a report on impulses and breakout sessions from the DIN/DKE/VDI workshop, and a brief report on the concept of DIN, DKE and VDI based on the identified stakeholder requirements.

For more information on the event website: **https://www.cencenelec.eu/news-and-events/events/2023/2023-01-26-webinar-climate-change-adaptation/**

Consumer Safety Central Webinar

February 13, virtual

Standards are working behind the scenes to improve our everyday lives. Product standards aim to help reduce or prevent injuries. They are developed by thousands of volunteers who are experts in their relevant field—such as health professionals, engineers and designers, consumer advocates, victims of injuries or their survivors, government employees (federal, state, and local), those who work in testing laboratories, academic researchers, lawyers, and others also contribute.

But greater involvement in standards setting from individual consumers is critical to improving the safety of products that we all rely on every day. You don't have to be an expert—just a consumer who cares. Join this free webinar to learn about standards development, the need for consumer participants, and ways to get involved and make a difference.

For more information on the event website: **https://www.ansi.org/events/standards-events/02-13-24-consumer-safety-webinar**

37th International Electric Vehicle Symposium & Exhibition

April 23-26, Seoul, South Korea

As we further advance into the e-mobility era, the e-mobility industry has been experiencing significant expansion and innovation. Industry, research, and academia have been at the heart of this shift, developing sustainable e-mobility for daily use and transforming it into an essential means of transportation.

Since its inception in 1969, the International Electric Vehicle Symposium and Exhibition (EVS) series has been at the forefront of this movement and has grown to become the largest and most prominent global event in the electric vehicle industry, showcasing current and emerging technologies both in the market and under development.

The EVS37 organizing committee aims to address and shape the monumental movement of e-mobility under the theme of "Electric waves to future mobility" with academic, government, and industry professionals involved in electric vehicle technologies. As the EV revolution continues to evolve at increasingly faster speeds, EVS37 serves a critical role as a nexus to exchange ideas and feature the latest EV breakthroughs.

For more information on the event website: **https://evs37korea.org/main.asp**

AI for Good Global Summit

May 30-31, Geneva, Switzerland

The Summit is the leading United Nations (UN) platform for global and inclusive dialogue on artificial intelligence (AI), organized by ITU in partnership with 40 UN agencies and co-convened with the government of Switzerland.

The goal of AI for Good is to identify practical applications of AI to accelerate progress towards the Sustainable Development Goals (SDGs) and to connect AI innovators with public and private sector decision-makers to help scale up AI solutions globally. Recognizing the urgency brought on by the emergence of generative AI and the challenges posed by this new technology, the Summit will discuss the need for guardrails and global AI governance frameworks.

The event will feature talks from thought leaders as well as demonstrations of state-of-the-art AI solutions that could achieve global scale with the support of the international AI for Good community, while also addressing the global challenges. AI and robotics innovators—and their high-tech creations—will join humanitarian leaders for the latest edition of the Summit to demonstrate how breakthrough technologies can advance the SDGs. For more information on the event website: **https://aiforgood.itu.int/summit24/**

Research on the technical standards system of smart urban rail vehicle-ground integrated electromechanical system

智慧城轨车地一体化机电系统标准体系构建研究

By Yang Tingzhi
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(CRRC Qingdao Sifang Co., Ltd.)

Abstract: With the rapid development and application of emerging information technologies such as cloud computing, big data, artificial intelligence, 5G, satellite communication, and blockchain in urban rail transit, China's urban rail transit has entered an era of intelligent transformation and upgrading. The development of intelligent systems and the construction of smart urban rail transit have formed a consensus in the industry. The electromechanical system is an important component of urban rail transit engineering, covering power supply stations, vehicles, stations, and lines. The depot and control center are important support for promoting the development of urban rail transit towards informatization and intelligence. However, research on the technical standards for the smart urban rail vehicle-ground integrated electromechanical system has just begun, and a technical standards system has not yet been formed, which cannot better support the electromechanical system. Therefore, it is necessary to conduct research on the technical standards system, propose the common criteria structure and standards list of the standards system, which can provide reference and guidance for the planning and establishment of China's smart urban rail standards system.
Keywords: smart urban rail vehicles, vehicle-ground integration, electromechanical system, standards system, standards list

1. Introduction

With the development of emerging information technologies such as big data, cloud computing, artificial intelligence, the Internet of Things, 5G, blockchain, and intelligent manufacturing, and their application in urban rail transit, China's urban rail transit has entered an era of intelligent transformation and upgrading. The development of intelligent systems and the construction of smart urban rail transit have formed industry consensus and been put into action. The electromechanical system is an important component of urban rail transit engineering, which is an orderly and highly timely system composed of transportation organization, function realization, safety assurance and other goals. Its scope involves power supply stations, vehicles, stations, lines, depots, and control centers. The vehicle-ground integrated mechanical and electrical system is an important component of China's smart urban rail system. Conducting research on the standards system can better support the healthy and stable development of vehicle-ground integrated mechanical and electrical system integration, and promote the development of China's smart urban rail.

2. Research on vehicle-ground integrated electromechanical system

The vehicle-ground integrated electromechanical system involves operational scenarios such as vehicle main line operation, station passenger service, and vehicle depot maintenance, providing functions such as vehicle-ground collaborative power supply, passenger information service, and vehicle maintenance. It mainly consists of a vehicle-ground collaborative traction power supply system, a vehicle-ground collaborative depot system, and a vehicle-ground collaborative signal system.

The integrated electromechanical system of vehicle and ground is a top-level goal of "safety, reliability, efficiency and convenience, energy conservation and carbon reduction, open collaboration, and intensive economy". It integrates the vehicle and its closely related electromechanical systems such as power supply, communication signals, depot and passenger services through physical equipment integration, control function integration, and interaction and linkage of information flow, control flow, and energy flow, creating an "organic and functional" integration platform, supporting the simplification of equipment configuration for vehicles and related electromechanical systems, reducing comprehensive costs, and improving the common criteria efficiency.

The construction of the technical standards system for the vehicle-ground integrated electromechanical system is still in its early stages. So far, there have been few standards developed and published, with limited coverage, which cannot

better promote the development of smart urban rail transit. As a result, there is a lack of effective standards guidance in the deep integration process of basic electromechanical systems such as smart transportation signals, power supply, passenger service, and depot with urban rail vehicles. It is not conducive to reflecting the "people-oriented" values of the vehicle-ground integration, and the supporting, promoting, and leading role of standards in the industrial development of the vehicle-ground integration electromechanical system cannot be fully utilized and reflected. In March 2020, the China Association of Metros released the *Outline for the Development of Smart Urban Rail Transit in China*, which clearly stated the need to establish a set of technical standards system on smart urban rail to promote the construction of smart urban rail[1].

3. Establishment of the technical standards system framework for vehicle-ground integrated electromechanical system

3.1 Requirements and principles

The requirements for the establishment of a standards system include: the construction of a standards system is based on a systematic approach, which comprehensively arranges the different levels, elements, attributes, and other elements of standardized objects from a holistic perspective, with the aim of integrating resources and efficiently achieving work goals[2]. The technical standards system of vehicle-ground integrated electromechanical system is an organic whole of technical standards with intelligent elements as the main content. The standards system consists of an architecture diagram and a list of standards.

A standards system is a scientific organic whole formed within a specific application scope, in which various standards are interconnected and interrelated. Its structure can fully express and describe the goals, application environment, scope and boundaries, internal relationships, and reflect the direction of standardization development of the standards system. When constructing a standards system, principles such as comprehensive and complete sets, appropriate levels, clear division, scientific advancement, simplicity and effectiveness should be followed[3].

3.2 Architecture diagram

The integrated electromechanical system of vehicle and ground mainly consists of collaborative traction power supply system, communication signal system, and depot system. By analyzing these subsystems, the framework of the integrated electromechanical system of vehicle and ground is proposed.

1) The common criteria technical standards mainly include the general requirements, system requirements, evaluation and acceptance standards of the vehicle-ground integrated electromechanical system.

2) Collaborative traction power supply system

The standards system of collaborative traction power supply system includes three subsystems: common criteria, collaborative traction power supply system (DC), and collaborative traction power supply system (AC). Therefore, the standards system for collaborative traction power supply system is mainly composed of these three subsystems, as shown in Figure 1.

3) Communication signal system

The communication signal system includes two subsystems: the autonomous train operation system and the passenger service system, as shown in Figure 2.

4) Depot system

The depot system includes four subsystems: common criteria, intelligent control system, new daily train inspection system, and intelligent frame overhaul system, as shown in Figure 3.

Therefore, the technical standard system of the vehicle-ground integrated electromechanical system adopts a two-layer structure. The first layer includes four subsystems: common criteria, collaborative traction power supply system, communication signal system, and depot system. The second layer includes several subsystems under each subsystem in the first layer. The architecture diagram of the technical standards system for the vehicle-ground integrated electromechanical system is shown in Figure 4.

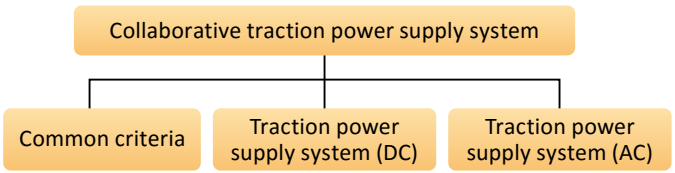

Figure 1: Composition of the collaborative traction power supply system

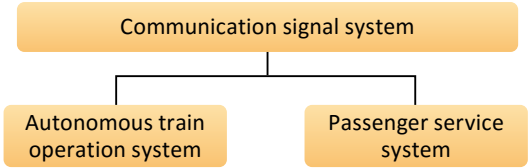

Figure 2: Composition of the communication signal system

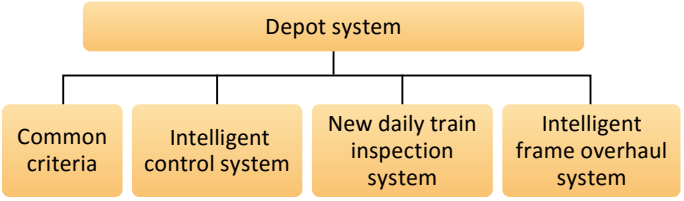

Figure 3: Composition of the depot system

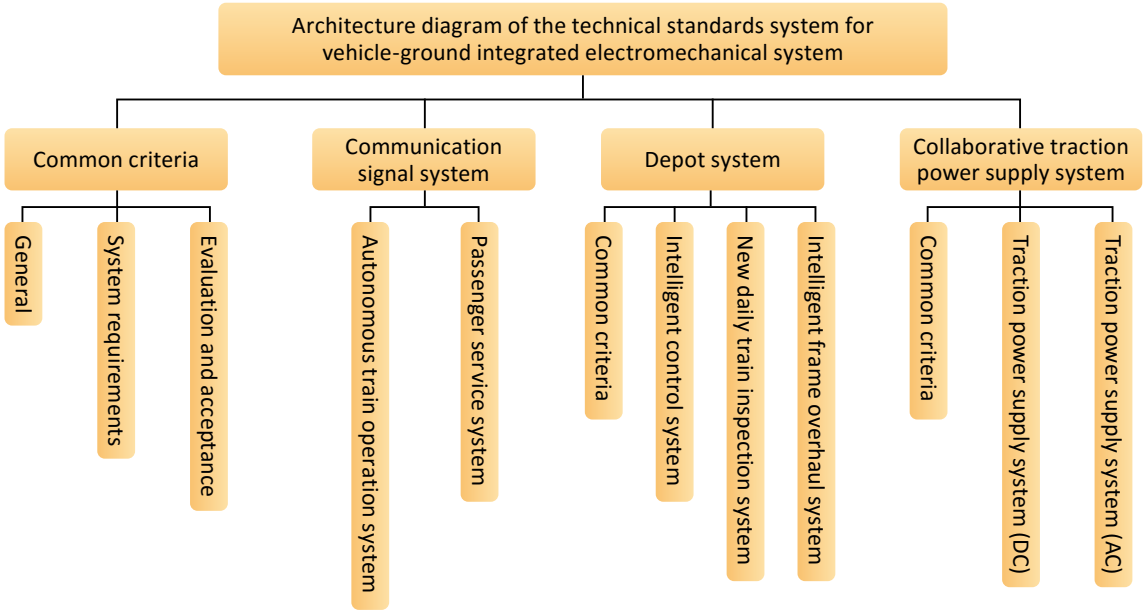

Figure 4: Architecture diagram of the technical standards system for vehicle-ground integrated electromechanical system

4. Suggestions for the technical standards system of vehicle-ground integrated electromechanical system

On the basis of the architecture diagram of the technical standards system for the vehicle-ground integrated electromechanical system, according to the principles of standards system compilation, a new list of standards for the technical standards system of the vehicle-ground integrated electromechanical system is proposed, as shown in Table 1.

Table 1: Suggestions for the compilation of the technical standards system for vehicle-ground integrated electromechanical system

Serial number	Standards system	Subsystems	Existing standards	Recommended technical standards for vehicle-ground integrated electromechanical system
1	Common criteria	/	GB 50174-2017, *Code for design of data centers*	Integrated evaluation system and method for vehicle-ground integrated electromechanical system
			GB/T 15532-2008, *Specification of computer-software testing*	General technical requirements for vehicle-ground integrated electromechanical system
			GB/T 21563-2018, *Railway applications—Rolling stock equipment—Shock and vibration tests*	Technical specification for interface of vehicle-ground integrated electromechanical system
2	Collaborative traction power supply system	Common criteria	GB 50255-2014, *Code for construction and acceptance of power conversion equipment electric equipment installation engineering*	Active traction power supply system for urban rail transit—Part 3: Energy operation control device
			GB/T 50299-2018, *Standard for construction quality acceptance of metro engineering*	-
		Collaborative traction power supply system (DC)	-	Active traction power supply system for urban rail transit—Part 1: General technical requirements
			-	Active traction power supply system for urban rail transit —Part 2: Bidirectional converter device
		Collaborative traction power supply system (AC)	GB/T 32593-2016, *Railway applications—Fixed installations—Electronic power converters for substations*	Technical conditions for same phase power supply devices in electrified railways
			TB 10009-2016, *Code for design of railway traction power supply*	-

Serial number	Standards system	Subsystems	Existing standards	Recommended technical standards for vehicle-ground integrated electromechanical system
3	Communication signal system	Autonomous train operation system	GB/T 12758-2004, *Signal system for urban rail transit—General specifications*	Specification for train operation control system based on new autonomous perception technology
			TB/T 3074-2017, *Technical specification for protection against lightning electromagnetic impulse on railway signaling equipments*	Specification for virtual coupled train control system
			CJ/T 407-2012, *Technical requirements of communication based automatic train control system for urban rail transit*	-
		Passenger service system	GB/T 50526-2021, *Technical standard for public address system engineering*	Specification for passenger information system of urban rail transit
			GB/T 26718-2011, *Technical requirements for safety system of urban mass transit*	-
4	Depot system	Common criteria	GB/T 37393-2019, *Digital factory—General technical requirements*	-
			TB/T 3185-2007, *Pantograph dynamic inspecting system for electric locomotive*	-
			TB/T 3182-2007, *Wheel dynamic inspecting system for rolling stock*	-
		Intelligent control system	JT/T 1218.2-2018, *Technical specification for maintenance and renewal of urban rail transit operation equipment*	Requirements for IoT technology of equipment under the intelligent control system of the depot
		New daily train inspection system	TB/T 3339-2013, *Detection apparatus of truck performance detection system*	Specification for digital daily inspection configuration of urban rail vehicles
			-	Technical specifications for inspection robots for railway vehicle depots

5. Conclusion

Through the study of relevant technologies for the standards of vehicle-ground integrated electromechanical system, and based on the principles of constructing standards systems, various standards have been analyzed, forming a standards system for vehicle-ground integrated electromechanical system with new standards. This will help guide the development of vehicle-ground integrated electromechanical system projects, optimize and unify product platforms, save costs, improve product quality and labor productivity, and promote the stable and healthy development of the smart city rail transit industry.

It will help actively promote the development of new standards to form a scientific, orderly, comprehensive, and technologically advanced standards system within five years, encourage the participation in the development of international standards, promote the internationalization of electromechanical integration standards for smart urban rail transit, and contribute to the development of smart urban rail in China.

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Coordination and transformation of quality management system and standards system

质量管理体系与标准体系的协调与转化

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(1. Changchun Standards Research Institute; 2. Jilin Provincial Institute of Standards; 3. Jilin Provincial Administration of Market Regulation; 4. Jilin Institute of Product Quality Supervision and Inspection)

Abstract: This paper elaborates on the differences and connections between the quality management system and standards system, as well as the principles and sequence of establishing the quality management system and standards system. It provides suggestions on how to establish and integrate another system in the existing system and coordinate with it.
Keywords: quality management system, standards system

1. Introduction

1.1 Definition of quality management system and standards system

1.1.1 Quality management system

The quality management system refers to the management system that directs and controls an organization in terms of quality. The quality management system is a systematic quality management model established within an organization and necessary for achieving quality objectives. It is a strategic decision of the organization[1].

1.1.2 Standards system

The enterprise standards system refers to the scientific organic whole formed by the internal connections of standards within an enterprise. The establishment of an enterprise standards system helps enterprises improve overall performance, achieve sustainable development, make strategic planning and conduct management based on industry characteristics and its own characteristics, and form a self-driven mechanism for standards implementation, evaluation, and improvement[2].

1.2 Differences between quality management system and standards system

Firstly, the objects of the two are different. The object of the quality management system is the products and services covered by the system, while the object of the standards system is standards that each subsystem must implement.

Secondly, the purposes of the two are different. The purpose of the former is to provide customers with satisfactory products and services, in order to achieve customer satisfaction. The purpose of the latter is to improve the management level of the entire organization by establishing a comprehensive and detailed standards system.

Thirdly, the implementation process of the two is different. The quality management system is based on the standards of the quality management system, through the enterprise's own management review and certification agency audit, to find problems and then solve them through rectification. Establishing a standards system is a process in which an enterprise develops standards or improves existing standards based on standards drafting rules, which is followed by standards implementation.

1.3 Relationship between quality management system and standards system

In order to maintain a good state and meet the review requirements of quality management system, it is necessary

to establish a standards system in the corresponding management process. The enterprise standards system generally consists of a general basic system, a product implementation or service provision standards system, product or service guarantee standards system, and job responsibility standards system. All the above four systems include content related to quality management system, which covers all standards of the quality management system. While the quality management system is an important part of the standards system, in terms of all the constituent elements, the two are not in a completely inclusive relationship. Therefore, the standards system can almost cover the content of the quality management system, but the quality management system is a part of the enterprise standards system.

2. Principles and sequence of establishing quality management system and standards system

2.1 Current situation

At present, most enterprises have established quality management systems, rather than standards systems, because they need quality management systems to enter a specific market. Due to the lack of professional quality and standardization talents in enterprises, there is not an overall vision to consider the logic, hierarchy, sequence, and content of the two systems, which means the quality management system and standards system can not be coordinated and transformed. This becomes a mere fusion of forms; as a result, quality goals or standards requirements can not be achieved, failing to play a positive role in driving quality improvement and leading development through standards.

So, what kind of order should the enterprise quality management system and standards system be established in? Is it redundant to do both? How to coordinate and integrate the establishment of another quality management system or standards system with the existing one?

2.2 Principles

The purpose of establishing a quality management system is to ensure product quality, meet customer's specified needs, and achieve quality objectives. It mainly focuses on several quality management activities, and the implementation of each quality management activity requires the development of relevant standards as support. That is to say, the quality management system ensures the implementation of product standards and other standards from a management perspective. While the standards system is the largest working system among various management systems of an enterprise, it is a scientific organic whole formed by the internal connections of enterprise standards, which is conducive to regulating internal management behavior, reducing production costs, improving product quality, and improving production efficiency[3]. Therefore, the standards system and quality management system cannot replace each other, but complement each other.

2.3 General sequence

Based on the scientific nature of establishing and implementing a system and the effectiveness of its application, it is recommended to establish an enterprise standards system before establishing an enterprise quality management system. But as mentioned above, many enterprises have not formed a standards system before establishing a quality management system, which is not conducive to the construction and implementation of the enterprise's quality management system.

The standards system is rarely considered the market access requirement, because it is not widely understood and recognized by the society. Many enterprises choose to establish a quality management system first. This situation can easily lead to the problem of the two systems being unable to connect, resulting in disharmony between the two systems.

3. How to coordinate the relationship between quality management system and standards system under the GB/T 15496-2017

3.1 Content changes in the GB/T 15496-2017

The clause 5.2 in the old version of GB/T 15496-2003, *Enterprise standards system—Requirement*, stipulates that "the enterprise standards system is the foundation of other management systems of the enterprise, such as quality management, production management, technical management, financial cost management, environmental management, occupational health and safety management system, etc." This sentence is deleted in the new version of GB/T 15496-2017. The old version of GB/T 15498-2003 stated in 7.6.1 that "the quality manual and program files specified in ISO 9001 are a form of management standards. Existing enterprise management standards should be fully utilized to incorporate the quality manual and program files into the enterprise management standards system." This paragraph is also deleted in the new version.

The relationship between the quality management

system and standards system in the new version of GB/T 15496-2017 is described as follows: "the enterprise standards system focuses on providing standardized management methods and management platforms for achieving corporate strategy. Various management system documents are part of the enterprise standards system. For the general requirements of each management system, integration, compatibility, and expansion can be adopted to revise corresponding standards and incorporate them into the standards system. For the specific requirements of each management system, the original management system documents can be directly incorporated into the enterprise standards system."

GB/T 15496-2017 specifies the general and specific requirements of various quality management systems to be incorporated into the standards system. It emphasizes that "various documents of management system are a part of the enterprise standards system".

3.2 How to establish a standards system under the existing quality management system

If an enterprise already has a quality management system, when establishing a standards system, the quality management system documents can be integrated into the standards system. For some standards that do not need to be changed, they can be directly applied. For some that require partial modifications, they can be incorporated into the standards system or used as supplementary documents through integration and compatibility.

3.3 How to establish a quality management system under the existing standards system

If an enterprise already has a standards system but does not establish a quality management system, it will be relatively easy to establish a quality management system. The content of quality management system can be extracted, integrated, and refined from the standards system.

4. Conclusion

Standards system covers a wide range, while the quality management system supplements and improves the content of the standards system. No matter which system is established first, enterprises need to adjust the content of each system according to their own situation, and foster a close relationship between the two. For quality management documents that cannot be included in the standards system, supplementary documents can be used for processing. This can ensure the coordination, consistency, and operability of the quality management system and standards system.

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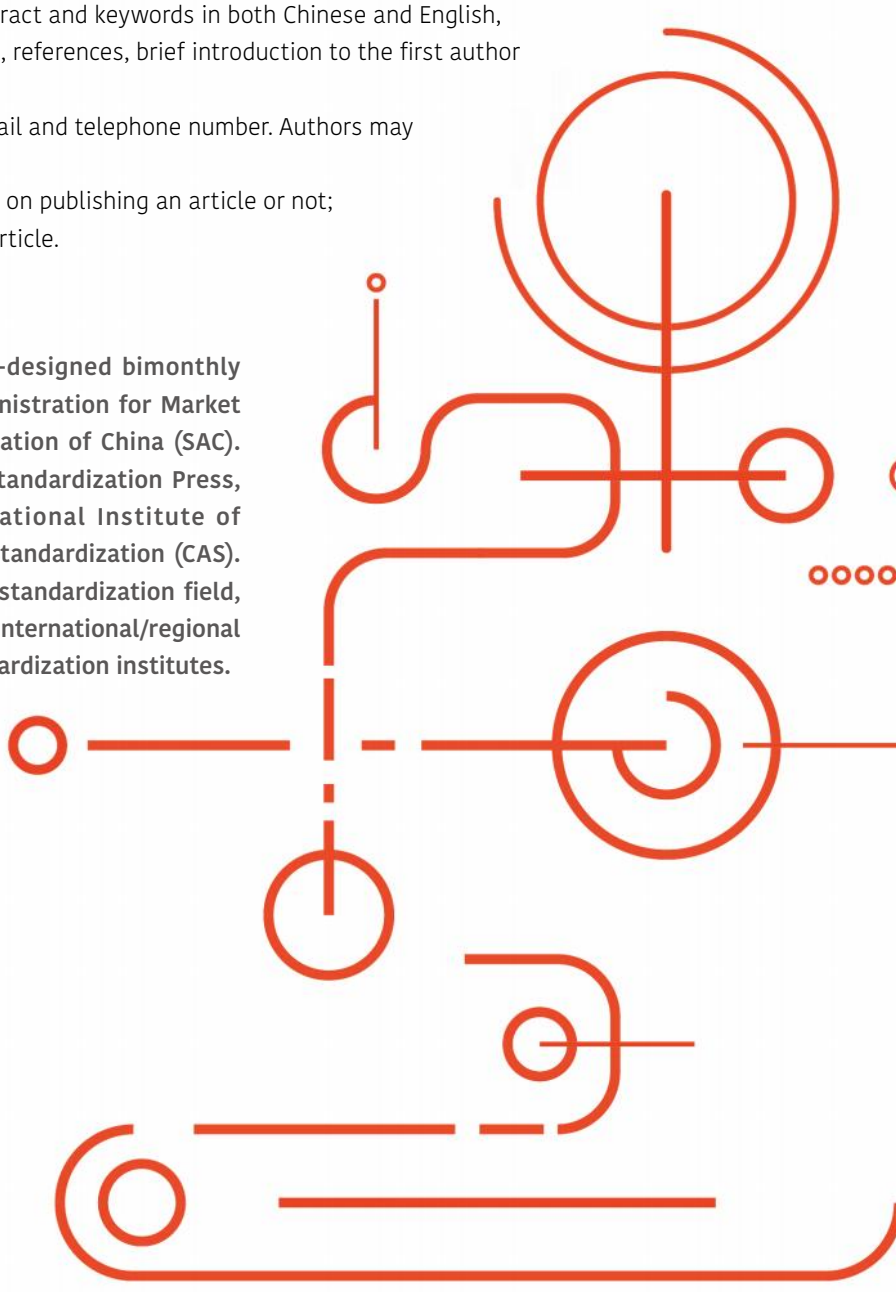

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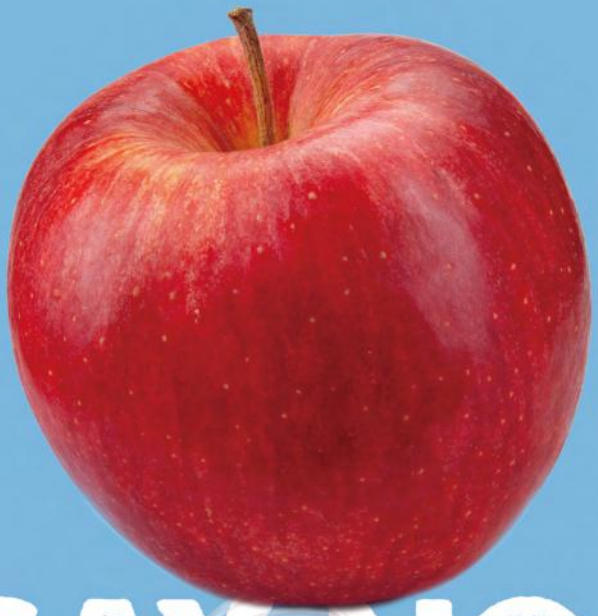

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