

# Bag Standards and Bag Industry Upgrading

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**Abstract:** Bag standards at home and abroad were firstly introduced in this article, including quality standards, testing method standards, management system standards and technical trade barriers. Standard has key and optimistic effects on industry upgrade, brands construction and technical innovation. Furthermore, the optimistic effect of standards on promoting the upgrade of leather industries in Shiling was illustrated.

**Key words:** standard; bag; Shiling

## Introduction

With the development of society, economic and technical culture, the living and consumption level of people in China continuously rises, and bag become the indispensable daily necessities and fashion accessories showing image and charm.

China is the biggest country producing and exporting bag in the world. The amount of bag supplied by China accounts for 25% of the global aggregate in the international market, while the amount of bags outputted by China accounts for 33% of the global aggregate, and 50% of yearly production<sup>[1]</sup>. And 52% of the bags in the domestic market are made in Shiling, the Chinese Capital of Leather products, of which 70% are outputted. In the other word, two bags in four all over the world are made in China, while one of them made in Shiling. According to customs statistics the total industrial output value of China's large-scale bag enterprises still has maintained a growth trend, in the international environment of the financial crisis in 2008. With the continuous speeding up of the globalization process of trade and the integration process of the world economy, bag standards, as technical language of international exchanges and technical basis for international trade, will become the criteria that the production, trade, services and management and other social activities and parties should abide by. Meanwhile, promotion of standardization is significantly favorable for upgrade of bag industry.

## 1 Bag Standard

### *1.1 The difference between chinese standards and international and foreign standards<sup>[2]</sup>*

Chinese standards are classified to national standards, industry standards, local standards and enterprise standards. Compared with international standards, the important difference is that there are two types of national and local standards, mandatory and recommended standards. Mandatory standards equals to the international technical regulations.

As for products' security and health properties, regulations, directives and other legal forms of the standards are usually used in foreign countries, and test method standards are main forms. But the major forms in China are mandatory standards to reflect the specific requirements of products, and regulations are less used.

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ISO international standards and the standards of other countries, mainly based on the criteria, focusing on the unity of terminology, test method, assessment tool to enable the parties to provide comparable and general data. Hence, the standard system is formed, regarding primary standard as main body, together with product standards. Product standards only reference the performance indicators and test methods standard. As for many kinds of products, foreign countries have no national standards.

Generally, product specifications, performance indicators, inspection rules, packaging and other contents are set forth in the contract or agreement between enterprises and purchasers, in accordance with the granting of use or price.

Open standards in national level are used as the technical basis for acceptance and delivery of products in foreign countries, which are formulated in order to guide users to purchase products and meet their need. People call them as trade standards. On the contrary, product standards in China are stipulated to guide enterprises to produce, which are named production standards.

Because the standard function is different, the technical contents of standards at home and abroad have certain difference, such as the establishment of inspection projects and the level of performance index. Furthermore, overseas takes the product security, health performance, and unceasingly proposed new testing methods and examination request with advanced equipments. If China cannot track the development tendency of the international standards, the disparity between China tannery industry's standardized work and the international standardized work will become bigger and bigger.

## ***1.2 China's bag industry standard***

### ***1.2.1 The categories of bag product***

In the International Harmonized Commodity Description and Coding System (HS), bag products have been clearly classified into plastic surface bags (plastic film or textile material for the surface), leather (leather, regenerated leather or patent leather for the surface) and other fabric bags. And the Customs and Inspection and Quarantine in China have bag inspection according to this classification.<sup>[1]</sup>

There is no direct bag standard in China's national quality standards. The leather industry lists "bag" in the "leather" category, according to industry standards. From the perspective of use, bag products are divided into travel bags, back bags, home suitcase, briefcases and brief bags. The main standards are also classified into these 5 kinds.<sup>[3]</sup>

### ***1.2.2 Quality standards of bag product***

The quality standards of bag product are mainly divided into the appearance performance, mechanical properties, bags' safety and environmental performance.

#### ***1.2.2.1 Appearance performance of bag***

The major requirements of appearance quality for bag products are multi-sensory requirements. The experimental methods of testing projects mainly use artificial means, such as overall appearance, fabric requirements, suture, suture stitch, zipper, accessories, installation and sign.

#### ***1.2.2.2 Mechanical properties of bag***

The mechanical properties of bag mainly refers to the bearing weight, the intensity of the suture, friction colorfastness, hydrostatic pressure resistance and impact resistance of the bag body, as well as the bonding strength, the aridity of the respective hardware fitting, and the operational performances of box lock, tension bar, handbag and straps, including the bearing weight, friction resistance, shock resistance and impact resistance.

#### ***1.2.2.3 Safety and environmental performance of bag***

The raw material of bag mainly includes plastic, leather and other materials, the auxiliary material including hardware, adhesive and related chemistry material. The production process of these materials needs many chemistry agents and assistants, in which there are some harmful substances that will destroy the natural environment and have negative effect on consumer's health. Therefore, bag standards referring to environmental protection and health are mainly about raw material and auxiliary material.

At present, most of the compulsory standards about bag product in China relate to the security of textile and leather. There are four standards which will be presented in detail as below.

(1) Basic Safety technical specification of Chinese Textile (GB18401-2002)

This technology standard stipulates that bag belongs to the product with no direct contact with skin with pH in the range of 4.0-9.0 and no smell. The limit value of free formaldehyde content is 300mg/kg. The product shall not contain these dyes which have decomposition of 23 kinds of aromatic amine under reduction conditions. Water resistance (discoloration, staining), acid perspiration resistance (discoloration, staining), alkaline perspiration resistance (discoloration, staining), and colorfastness to dry friction should not be less than third class.

In addition, the standard of HJ/T307-2006 has more stringent requirements about formaldehyde, heavy metals, toxic dyes, and the release of volatile substances in Ecological Textiles.

(2) Limit of Harmful Substances of Leather and Fur (GB20400-2006)

GB20400-2006 also stipulates that bag belongs to the product with no direct contact with skin, and the product shall not contain these dyes which have decomposition of 23 kinds of aromatic amine under reduction conditions. But the limit value of free formaldehyde content is more stringent, 30mg/kg.

(3) Limit of Harmful Substances of PVC artificial leather (GB21550-2008)

In this standard, the limit values of harmful substances, aqueous plumbum, aqueous cadmium and other volatile substances are 5 mg/kg, 90 mg/kg, 75 mg/kg and 20 mg/kg, respectively.

(4) Adhesive Used in Making Shoes and Bags (GB19340-2003)

This standard formulates that the peel strength should be higher than 2.0 N/mm, and the limit values of the content of benzene, toluene plus xylene, N-hexane, total volatile organic substances, halohydrocarbon (including dichloromethane, 1,2-dichloroethane, 1,1,2-trichloroethane and trichlorethylene) in adhesives used in bag making are 5.0 g/kg, 200 g/kg, 150 g/kg, 750 g/kg, 50.0 g/kg, except for those used in bag positioning. The limit content of free toluene diisocyanate in polyurethane adhesives is 10.0 g/kg.

It needs to supplementally mention that the State Environmental Protection Agency has developed a recommended standard HJ/T220-2005 named by "technical requirements for environmental labeling products of adhesive", which is mainly used when adding certification marks. The limit values of harmful substances in this standard are more stringent, which are 0.1 g/kg, 5 g/kg, 100 g/kg, 700 g/kg, 2.0 g/kg and 5.0 g/kg, respectively.

### **1.2.3 Testing method standards of bag**

In China bag standards, product standards account for a considerable proportion. Product standards include standard test method standards, and there was no separate testing method standard until 2007. Domestic bag detection methods have only a small number of specific criteria. Hence, detection methods of most projects directly used the standards for textile, leather and plastic raw materials. The detection methods of some projects were stipulated in the above-mentioned products and accessories standards.

China has 6 testing method standards for bag products, which are falling weight impact testing method, test method of fatigue resistance of rod, walking test method, method of drop test, test method of shock impact, test method of drum.

#### ***1.2.4 Management system standards of bag***

The fact that one enterprise passed the standard of Management System can effectively confirm that this enterprise is capable of stably providing products meeting the requirements of clients and applying to laws and regulations. Effective operation system is benefit for the continue improvement and better benefits of enterprises. Every management system certification has its own integrity management system standards, which is the base of the foundation and the implementation of appropriate management for enterprises. There are several management system standards about bag manufacturers all over the world, that is, quality management system standard, environmental management system standard, occupational health and safety management system standard as well as the social accountability management system standard.

##### ***1.2.4.1 Quality management system standard of ISO9001: 2008***

ISO9001: 2008 certification, is issued by ISO (International Organization for Standardization) and IAF (International Accreditation Forum) in August 20, 2008, which gives more clear expression of ISO9001: 2000 requirements and enhances the compatibility with ISO14001: 2004. ISO9001: 2008 is the core standard of ISO9000 standards, including quality policy, the duties and powers, the quality of staff training, the exchange of quality and information, the control of quality document, no conforming action, corrective and preventive action, quality records, internal audit, management review and so on.

##### ***1.2.4.2 Environmental management system standard of ISO14001***

The series standards of ISO14001 are the leading standard, and the only standard which can be used for third-party certification. These standards include environmental policy, organization and responsibilities, staff environmental training, the exchange of environmental information, the control of environmental document, emergency preparedness and response (partly similar with the fire safety require), no conforming action, corrective and preventive action, environmental records, internal audit, management review, and so on.

##### ***1.2.4.3 Occupational health and safety management system standard of OHSAS18000***

The standard of OHSAS is the Occupational Health Safety Assessment Series, announced by the British Standards Institution, Det Norske Veritas and the other 11 organizations. OHSAS18001 is the Criterion of Occupational Health and Safety Assessment System. OHSAS18002 is the implementation guide of OHSAS18001. These standards require enterprises to establish management system to control performance, adopt PDCA cycle, take prevention as primary, continuously improve, dynamically manage, comply with legislation. The contents of these standards refer to scope, normative reference document, terms and definitions, factors of occupational safety management system, general requirements, policy of occupational health and safety, planning, implementation and operation, inspection and corrective measures, management review, and so on.

##### ***1.2.4.4 Social accountability management system of SA8000***

SA8000 is the first social accountability management system standard in the world, which is a new standard regulating the ethical behavior of organizations. The main contents of SA8000 are about child labor, forced labor, health and safety, freedom of trade union organizations, right of collective bargaining, discrimination, disciplinary measures, working hours, wages and management system.

#### ***1.3 Technical trade barriers of foreign bag industry<sup>[2]</sup>***

Technical Barriers to Trade (TBT) refers to that a country takes some mandatory or non-mandatory technical restrictions, such as technical regulations, standards, conformity assessment procedures, in order to safeguard the country's basic security, the protection of human health and safety, protect ecological environment, guarantee the quality of products, and prevent fraud. It has become an important form of

non-tariff barriers in international trade. One of the major reasons why foreign countries take TBT is that a large number of low-priced Chinese products enters foreign markets. And emergence of TBT will be followed by trade sanctions and anti-dumping cases.

At present, most of the technical barriers come from the European Union, Germany, Belgium, Spain and other countries. These barriers mainly directed against some chemicals and materials, such as azo dyes, Chlorinated Phenols Pentachlorophenol (PCP), heavy metals, flame retardants, products containing ethoxylated nonylphenols (NEP) and nonylphenols (NP), chlorinated paraffins (CPs), plasticizers (phthalic acid esters (salt)), Perfluorooctanesulfonates (PFOS), formaldehyde, dimethyl fumarate (DMFu), packaging materials and packaging waste. And these barriers stipulate clear usage restrictions of these chemicals and materials. Hence, the materials used in making bag and bags, including leather textile and synthetic leather, plastic raw materials, adhesives, hardware, plastic accessories, packaging materials and mildew inhibitors, must comply with the requirements of the directive. The requirements in EU REACH regulations of "Legislation about Chemicals Registration, Evaluation and Authorization and Restrictions" have dramatic effect on the production, processing, R & D and export of Chinese bag made from plastic and leather materials. This is because many chemicals need to be used in the bag manufacturing process, such as dyes, finishing agents, stabilizers, adhesives, inks, softeners and metal coating. Therefore, if the total content of chemical substances contained in bags exported to the EU each year is more than one tons, the enterprise needs to register chemicals Authority in EU.

## **2 Standard promotion industry**

The strategic position and the function of standard in the modern international competition's highlight day by day. And after product competition and brand competition, the standard competition already became the level to be higher, to affect the bigger competition form.

The level of standardization reflects the level of the national technology and economic development, as well as the management level of a country and enterprise. Especially in today's information society, it directly affects the competitiveness of enterprises. Standardization has become an important tool for market competition, with the expansion of international trade and development. Therefore, it is meaningful to strongly advocate the standardization of bag, strengthen the sense of standardization, profoundly understand the meaning and role of standardization, implement standardization at internal and external enterprise.

### ***2.1 Relationship of standardization and standard***

Standardization is actually the process of stipulation, issue and implementation of standards. That is, in order to obtain the optimal order in certain scope, stipulate some common and repeatable activities against the actual or potential problems.

As for bag business, the demand of customer is the requirement having standards. First of all, it is a comprehensive requirement of product quality, design quality and service quality, while quality firstly bases on standards. The essence of standardization is scientific, normalization, and economization. Therefore, highlight of standardization is really benefit for taking customers, quality, economic benefit as the center. In addition, standardization is a process.

The process of stipulation, implementation and constant improvement of standards is the process of continuously improving quality, management level and economic benefit, the process of shaping the soul of business, continuous optimizing, continuous improving targets and themselves, as well as the process making enterprise sustainable develop, social harmoniously evolve. Therefore, taking the

standardization as the center of bag enterprise management is the inevitable result of the social development.

## **2.2 Standardization and brands construction<sup>[4]</sup>**

Brand is a market behavior and whether it is good or bad is determined by the market. So when we stipulate a standard, we should not only consider the technical advancement, but also respond to the needs of the market. Enterprises rely on the standards to standardize quality, service and production management, in turn to improve the applicability products, production processes and services, to build market credibility, establish reputation, create their own brand.

The core of brand is Quality, Character and Behavior, in which Character refers to the uniqueness, Behavior refers to the culture, integrity and social responsibility. These three areas are closely linked with the standardization. Quality complies with industry and the international quality standards. As for Character, enterprise can draw up their own standard on the base of the properties of their own products and the demand of the advanced technology and market. With regard to Behavior, enterprise can provide services to customers and society through adopting domestic management system standard and service system standard. Therefore, standard is a strict regulation for brands construction. As the technical basis of production, product testing, commodity trade, technology exchange, quality supervision and management, and commercial arbitration, standard plays an important role in product design, quality management and marketing activities.

## **2.3 Standardization and technical innovation<sup>[5]</sup>**

Enterprise standardization and technological innovation have the relationship of interdependence and mutual promotion. According to their own characteristics and strength, enterprises make clear the position, develop innovation combining with technology standardization, promote the digestion, absorption and imitation of introduced technology through standardization, integrate self-innovation with imitation innovation, promote the technology industry by using standardization, accomplish the maximal efficiency of innovative technology. Standardization can consolidate and popularize the fruits of technological innovation, promote the product quality, which thereby translates into the actual social and economic benefits.

In the process of development, technology firstly shows up, then standard, and then the formation of the industrial chain. According to innovative technological achievements, standards can be regulated and formed. Through the implementation of standards, economic and social benefits can be achieved. Continuous technical innovation is benefit for the revision of standards. The stipulation of standards require the maturity of technology, which can reduce or even avoid the risks of the application of innovative technologies in the beginning period, and make the results of technological innovation obtain very tangible benefits. Hence, the standards and technological innovation are complementary to each other. They are processes with continuous mutual promotion. In these processes, standards have greater vitality, and technological innovation can really form an industry, achieve the market and social benefits through standardization.

Therefore, brand-driven and technological innovation are the most important factors for the development and upgrade of industry, which are closely linked with the standard.

Through the use of standards, enterprises can improve the applicability of products, processes and services, prevent trade barriers, and promote technical cooperation. Through the implementation of standards, they can increase the degree of ordering, play the best effects of standard system, produce desired results and best benefits.



### **3 Effect of standard on upgrade of industry in Shiling**

As “the Chinese Capital of Leather Products Library”, Shiling is the largest production and sales center of leather goods and distribution place of raw and auxiliary materials for leather goods in China, with 6000 enterprises producing leather goods and more than 11000 businesses. At present, Shiling is in a crucial period of industrial upgrading. Like the so-called "industrial upgrading, the standard first," Shiling Town Party Committee and Government attaches great importance to the implementation of standardization strategies, in order to enhance core competitiveness of Shiling leather industry. The main measures include the following four aspects.

#### **(1) Promotion of standards**

Through cooperation with District Quality Supervision Bureau, Shiling Town Party Committee and Government positively publicizes the existing industry standards and national standards to enterprises, and release standards of the target marketing countries for some enterprises. They also guide enterprises to adopt management system of ISO9001, ISO14001, OHSAS18000 and SA8000 in production processes. This measure is favorable for determining the direction and purpose of production and technological transformation, promoting technological progress of enterprises, followed by improving product quality and technical level, promoting quality management level closer to international standards, and receiving good reputation in the international market.

#### **(2) Promotion of "One Village One brand"**

Cooperation with the Leather Industry Association of Guangdong Province, the Party Committees and Government of Shiling Town integrates the power of small and medium enterprises in the village, guiding them to co-registrate and manage brands, to create their own brand, settling the problem of lack of economic strength for a single enterprise and forming number scale and quality management. Gradually standardize the operation of enterprises, rise the value-added products to help businesses grow in scope and strength, and even enhance the competitiveness of industries in international market. Form a modern leather industry cluster with innovative ideas, international competition, great vitality and distinctive feature. At present, Hecheng village, Yiqun village and Lianhe village has registered three collective trademark applications, Hebao, Qunda and Baige. These applications have been accepted. Three according "regional brand trade mark" management standards were regulated. The implementation of these standards have preliminarily guided small and medium enterprises to integrate resources, production capacity around the collective trademarks, which promote regional economic and social development to some extent. Furthermore, through pilot and guide, brand awareness of small and medium enterprises has been enhanced to a certain degree, the operation and production management of enterprises have been regulated step by step.

#### **(3) Strategy of sustainable development**

Since the most enterprises in Shiling are export-oriented, the most effective measure to face foreign trade barriers is developing environmental product, optimizing the structure of export products, followed by expanding international marketing. To achieve sustainable development of export trade, Shiling sticks to the path of quality through cooperating with domestic universities to research novel products, new technology, and implementing clean production by starting from the source to ensure the quality processing of raw materials. At the same time, Shiling Government implements the work of “the Green Environment Marks”, responding to the request of the State Environmental Protection Department. At present, there are five enterprises taking part in the drafting and formulating of the standard named “bag technical request in environment marks products” proposed by Environmental Protection Department of People's Republic of China State.

#### (4) Line with the domestic standardization

To go through financial crisis, expanding domestic demand and improving brands of Shiling's leather products are the best measures for enterprises in Shiling. Firstly, the government encourages enterprises to participate in formulating and modifying national standards and industry standards. So far, one of the local enterprises of Shiling, Feigao bag Company, has accomplished the formulation and modification of industry standard of People's Republic of China State, "travel bag". Secondly, organize enterprises to formulate "Shiling Union Standard". As previously described, the most enterprises in Shiling are export-oriented. Hence, enterprises must abide to national or industry standards, and they should formulate their own standard higher than domestic industry standard, according to the request of international marketing and clients. As a supplementary of national standards and industry standards, Shiling Union Standard has local characteristics of Shiling, conforming to the standards of the local environment and safety and highlighting the brands of Shiling's leather products.

#### (5) Establishment of early warning mechanism

Through establishing the Guangzhou Shiling Leather and its Products Investigation Center, the Party Committees and Government of Shiling Town keep in close touch with the standards-related associations and research institutions, for establishing information platform of standards, comprehensively understanding the laws and regulations of bag products in international markets, timely tracking the changes of foreign product standards and laws, concerning about the notice announced by foreign Consumer Commission, establishing early warning mechanism, providing right guide to enterprise, helping enterprises to adopt optimistic measure to face technological trade barriers.

Shiling's standardization work has been orderly carried out with some achievements. It is effective to use standard to organize production, encourage enterprises to conduct technical research and innovation, improve the quality of leather goods. Finally accomplish the change from "Shiling manufacturing" to "Shiling creating" through constructing the brand and promoting the upgrade of industries with high quality.

## 4 Conclusion

As China's market mechanism, laws and regulations have been continuously improved, and the connection to international economic and trading system been continuously strengthened, the importance of standardization is increasingly reflected. Domestic standards positively keep in line with foreign standards. China has become the sixth permanent member of international organizations ISO, except of the United States, Germany, Britain, France and Japan. The standardization process in China has become more international.

In recent years, the standardization of bag has also made some progress with the times.

Product standards, methods standards, safety and environmental standards become close to international standards and foreign advanced standards. And industry standards have been continuously updated and revised, based on market and customer demand. At present, sub-standard bag has been approved to build, which will greatly promote the standardization process of bag. As one member in this process, Shiling must take action boldly before others, promoting standardization strategy to enable enterprises to truly become the subject of standardization, and to make the "Shiling Union Standard" become the booster for promoting "leather Shiling" brand and upgrading domestic bags industry.



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