

Step-by-step training manual for foreign enterprises exporting machinery to China

1. The machinery industry in China

1.1 The Structure and Definition of the Machinery Industry in China

The machinery industry is an important equipment industry in the national economy, the basic industry of national defense construction and an industry that provides consumer-oriented mechanical and electronic products which improve people's living standards and quality of life. Its products cover a wide range of fields.

According to the *Classification of National Economic Industries* (GB/T4754-2002), the machinery industry in China covers **7 major categories, 37 medium categories and 126 small categories**. These include:

- non-metal mineral products industry
- metal products industry
- general-purpose equipment manufacturing industry
- special equipment manufacturing industry
- transportation equipment manufacturing industry
- electric machinery and equipment manufacturing industry
- instruments and meters
- cultural and clerical machinery manufacturing industry.

In 2007, there were over 70,000 enterprises above designated size in the machinery industry and the total number of employees in China numbered 13.91 million.

1.2 Standards in the machinery Industry

1.2.1 National and Industrial Standards

The different scales of standards in China are defined in the *Standardisation Law*. '**National standards** shall be formulated for the technical requirements that need to be unified nationwide. Where, in the absence of national standards, technical requirements

for a certain trade need to be unified, **industrial standards** may be formulated. Where, in the absence of both national and **industrial standards**, safety and sanitary requirements for industrial products need to be unified within a province, an autonomous region or a municipality directly under the Central Government, **local standards** may be formulated. Where, in the absence of both national and trade standards for products manufactured by an enterprise, **standards for the enterprise** shall be formulated to serve as the criteria for the organisation of production. Where national, trade or local standards have been formulated, the enterprises are encouraged to formulate their own standards, which are more stringent than the national, trade or local standards, to be used in these enterprises.'

The standards of the machinery industry consist of three levels: the **national standards**, **industrial standards** and **enterprise standards**. The enterprise standards have no impact upon market access.

1.2.2 Compulsory and voluntary Standards

The national and industrial standards of the machinery industry are either compulsory or voluntary.

According to the Standardisation Law in China: 'Those which safeguard human health and ensuring the safety of people and property and those for compulsory execution as prescribed by laws, administrative rules and regulations shall be compulsory standards; others shall be voluntary standards.'

Compliance with compulsory standards is mandatory for all product's on the market in China.

In recent years, the number of compulsory industrial standards in China has been reducing. As of September 2008, out of the total number of 8,447 industrial standards in the machinery sector, there are only 90 compulsory industrial standards. The enterprise standards have no impact on market access.

1.2.3 The Standard Code for the Machinery Industry

National standard code: GB —— compulsory national standard code
GB/T —— voluntary national standard code

The code for the technical guidance document of national standardisation: GB/Z —— the code for the technical guidance document of national standardisation

The standard code for the machinery industry: JB —— the compulsory standard code for the machinery industry

JB/T —— the voluntary standard code for the machinery industry

1.3 Standards classification and scope of the Machinery Industry

1.3.1 The Standard Classification of the Machinery Industry

According to different standardisation targets, the standards of the machinery industry fall into seven categories:

- basic standards
- methodical standards
- product standards
- management standards
- safety standards
- environmental protection standards and other standards

1.3.2 The Standard Classification of the Machinery Industry

The Chinese standards system adapted the use of the International Classification for Standards (ICS) system in 1997. Before the adoption of ICS code, standards were classified by the Chinese Classification for Standards (CCS) code. Although it was required by the national standards administrative authority that all the national, industrial and local standards formulated or modified after 1 January 1997 shall give clear indication of the ICS code, the actual implementation varied from industry to industry. *In order to ensure the completeness of the information, it is better to search for standards both through ICS code and CCS code.*

The relevant ICS code and CCS code of machinery sector is as below:

ICS code:

- 21 MECHANICAL SYSTEMS AND COMPONENTS FOR GENERAL USE
 - 21.020 Characteristics and design of machines, apparatus, equipment
 - 21.040 Screw threads
 - 21.060 Fasteners
 - 21.080 Hinges, eyelets and other articulated joints
 - 21.100 Bearings
 - 21.120 Shafts and couplings
 - 21.140 Seals, glands
 - 21.160 Springs

- 21.180 Housings, enclosures, other machine parts
- 21.200 Gears
- 21.220 Flexible drives and transmissions
- 21.240 Rotary-reciprocating mechanisms and their parts
- 21.260 Lubrication systems
- 25 MANUFACTURING ENGINEERING
 - 25.020 Manufacturing forming processes
 - 25.040 Industrial automation systems
 - 25.060 Machine tool systems
 - 25.080 Machine tools
 - 25.100 Cutting tools
 - 25.140 Hand-held tools
 - 25.160 Welding, brazing and soldering
 - 25.200 Heat treatment
 - 25.220 Surface treatment and coating

CCS code

J Machinery

J 00-09 Machinery general

J 10-29 General components and accessories

J 30-39 Machining engineering

J 40-49 Machining equipment

J 50-59 Cutting tools

J 60-69 General machining machine and equipments

J 70-89 General machine and equipment

J 90-99 Internal combustion engines and other power equipments

1.4 The standards development plan

There are a total of 526 revised standards of the machinery industry that were first implemented in 2008 (see Attachment 4).

The sources for information about the establishment of machinery industry standards are:

The Ministry of Industry and Information Technology: <http://www.miit.gov.cn/>

The Standard Office of the China Machinery Industry Federation (CMIF): <http://www.cmif.org.cn/> (search engine is available in the column of "standard service" on the homepage)

www.standardcn.com (under the former Industry Department of the National Development and Reform Commission): <http://www.standardcn.com/>

1.5 Machinery Industry Standards and International Standards

There are a total of 41 ISO/TC, 133 ISO/TC/SC, 44 IEC/TC and 43 IEC/TC/SC standards corresponding to the machinery industry.

The international standards corresponding to the machinery industry are mainly revised into the format of national standards. There are less than 200 revised into the format of machinery industry standards (see Attachment 5). However, this batch of machinery industry standards is being gradually adjusted to national standards, which will be included in the recent national standard revision plan.

At present, there is no item adopting the international standards into the compulsory machinery industry standards.

2. The Standardisation Management System of the Machinery Industry (the management system has not yet been determined due to the reform of government bodies). The present situation is as follows:

China's standardisation work is subject to the management system of unified management and division of labour with individual responsibilities. Authorised by the State Council and supervised by the General Administration of Quality Supervision, Inspection and Quarantine of China (AQSIQ), the Standardisation Administration of the People's Republic of China (SAC) centralised the administration of national standardisation work. The relevant competent department under the State Council manages the standardisation work of its own department and industry.

2.1 The Management of National Standards of the Machinery Industry

The national standards of the machinery industry are under the management of SAC, who are responsible for the establishment, examination and verification, numbering and publication of national standards. Entrusted by the Standardisation Administration of China, CMIF has undertaken the following work: the application for the national standards of the machinery industry, technical examination and verification, reporting for approval, international standardisation work of the machinery industry, specific management and business direction for the technical committees of standardisation at the national level in the field of machinery industry.

2.2 The Management of Trade Standards of the Machinery Industry

The trade standards of the machinery industry are under the management of the Ministry of Industry and Information Technology (MIIT). Entrusted by MIIT, CMIF has undertaken the following work: the application for the trade standards of the machinery industry, technical examination and verification, reporting for approval, numbering, submitting for record, publication of the trade standards and specific management for technical committees of standardisation in the fields of machinery industry.

2.3 Administrative Organisations of National Standards and Trade Standards of the Machinery Industry

2.3.1 Administrative Departments of National Standards

Standardisation Administration of China

Address: No. 9, Madian East Road, Haidian District, Beijing, 100088

Tel: 0086-10-82262609

Website: <http://www.sac.gov.cn/>

2.3.2 Administrative Departments of Trade Standards:

Science and Technology Department, MIIT

Address: No. 13, West Chang'an Street, Beijing, 100804

Tel: 0086-10-66024113

Website: <http://www.miit.gov.cn/>

3. The Technical Committees of Standardisation in the Field of the Machinery Industry

3.1 Introduction to the National Technical Committee of Standardisation

Established upon approval by the SAC, the National Technical Committee of Standardisation is a technical organisation engaging in national standardisation work in a certain professional field.

115 national technical committees of standardisation in the machinery industry have been

established. See Attachment 7 for information about the professional scopes and contacts.

3.2 Brief Introduction to the Trade Technical Committees of Standardisation in the Machinery Industry

Established upon approval of the relevant competent department (the National Development and Reform Commission) under the State Council, the trade technical committee of standardisation in the machinery industry is an organisation engaging in industrial standardisation work and are responsible for the centralised management of the standardisation technology of a certain professional field.

28 trade technical committees of standardisation in the machinery industry have been established. See Attachment 8 for the information about the professional scopes and contacts.

3.3 The Means to Participate in the Technical Committee of Standardisation

3.3.1 The Constitution of the Technical Committee of Standardisation

A national technical committee of standardisation or trade technical committee of standardisation, with the enterprise as its main body, consists of representatives from enterprises, scientific and research institutions, inspection organisations, colleges and universities, related departments, industry associations, consumer group, and certification organisations. They cover the areas of production, usage and distribution.

The technical committee of standardisation shall possess employees working in enterprises or institutions within China with the intermediate technical title or above (or the corresponding year of service needed to obtain the intermediate technical title). The experts shall not hold office in more than five technical committees of standardisation.

The consultant of a technical committee of standardisation, who can be a 'not-in-service expert', will be a reputable expert or scholar from the corresponding business area.

In terms of the totally open areas, foreign-funded enterprises are allowed to participate in the activities of the technical committee of standardisation as observing members.

3.3.2 The Collection of the Members of the Technical Committee of Standardisation

The preparatory unit of the technical committee of standardisation shall issue

correspondence letters, which will be published on the website of this unit or the SAC, to relevant units to recruit members. The relevant units may organise or recommend the experts, especially those from the leading or backbone enterprises, to join the technical committee of standardisation.

The chairman of the technical committee of standardisation, should be a domestic authoritative expert in principle in the relevant field and shall be recommended to the preparatory unit by the relevant unit.

The vice chairman of the technical committee of standardisation, should be an expert recommended by the relevant competent department of the State Council, industry associations and leading enterprises, shall be recommended to the preparatory unit by the relevant unit.

The Secretary-General of the technical committee of standardisation, should be a technical expert from the secretariat undertaking unit, shall be recommended to the preparatory unit by the secretariat undertaking unit.

The Vice Secretary-General of the technical committee of standardisation should be a technical expert recommended by leading enterprises and the relevant competent department of the State Council or industry associations shall be recommended to the preparatory unit by the relevant unit.

The members and observing members of the technical committee of standardisation are recommended to the preparatory unit by the relevant unit.

3.3.3 The Rights and Obligations of the Members of the Technical Committee of Standardisation

The members shall actively participate in the activities of the technical committee of standardisation on behalf of their units, will have their right to obtain the data and documents of the committee and should exercise their right to vote.

Consultants, who offer professional instructions to the work of the technical committee of standardisation, may participate, without the right to vote, in the meetings of the technical committee of standardisation, put forward advice and suggestions, and have the right to obtain the data and documents of the committee.

Observing members may participate, without the right to vote, in the meetings of the

technical committee of standardisation, put forward advice and suggestions, and obtain the data and documents of the committee.

In case a member who fails to perform his/her duties, fails to participate in the activities of the committee twice, or is not suitable for holding the position for the change of work or other reasons, the technical committee of standardisation may require the member unit to make a re-recommendation and report to the competent department of standardisation under the State Council for re-appointment.

4. The Formulation Procedure for Machinery Industry Standards

4.1 The Division of the Stages of the Formulation Procedure

The formulation procedure for national standards and trade standards of the machinery industry is divided into nine stages: the preliminary stage, initiation stage, draft stage, suggestion solicitation stage, examination stage, approval stage, publication stage, re-examination stage and the annulment stage.

Under the following circumstances, a quick procedure can be adopted in establishing the national standards and trade standards:

The standard and revised items that are adopted on the basis of modifying international standards or foreign advanced standards as well as the items changed from trade standards into national standards may skip the draft stage and directly enter the suggestions solicitation stage from the initiation stage.

The existing revised items of the national standards and trade standards may skip the draft stage and suggestions solicitation stage and directly enter the examination stage from the initiation stage.

4.2 The Establishment of the Standards

The Standardisation Commission of the People's Republic of China is responsible for the formulation of national standards for the machinery industry. The Ministry of Industry and Information Technology is responsible for the establishment of trade standards for the machinery industry.

All government bodies, industrial organisations, enterprises, institutions, and individuals are allowed to apply for the establishment of national standards and trade standards of the machinery industry.

The establishment application shall be accepted by the technical committees of standardisation at the national or industrial level from the fields of the machinery industry and submitted to the SAC and the MIIT after the examination and verification by the CMIF.

The plan for the national standards project of the machinery industry will be issued by the SAC and the plan for the trade standards project of the machinery industry by the MIIT. Both shall be forwarded and published on the relevant websites by the CMIF.

4.3 The Draft, Suggestion Solicitation and Examination of the Standards

The technical committees of standardisation at the national and industrial levels shall be responsible for the organisation of the draft, suggestion solicitation and examination of the national and trade standards of the machinery industry.

4.4 Standards Reporting for Approval

In terms of the approval of the standards, the CMIF is responsible for the examination and verification of the national standards and trade standards of the machinery industry, the numbering of the trade standards as well as handling the “reporting-for-approval” procedures.

4.5 The Approval and Publication of the Standards

The national standards of the machinery industry are approved and published by the SAC. The trade standards of the machinery industry are approved and published (including on relevant websites) by the MIIT.

The means to obtain the information about the publication of national standards:

Website

Standardisation Administration of the People's Republic of China:
<http://www.sac.gov.cn>

The Standards Office of China Machinery Industry Federation: <http://cmis.mei.gov.cn/>
or <http://www.cmis.org.cn/>

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China Standardisation

The means to obtain the information about the publication of trade standards:

Website

The Ministry of Industry and Information Technology: <http://www.miit.gov.cn/>

The Standards Office of China Machinery Industry Federation: <http://cmis.mei.gov.cn/>
or <http://www.cmis.org.cn/>

www.standardcn.com (under the former Industry Department of the National Development and Reform Commission): <http://www.standardcn.com/>

Magazine

Machinery Industry Standardisation & Quality

4.6 The Publication of the Standards

4.6.1 The Publication of National Standards

The national standards of the machinery industry are published by China Standards Publishing House.

Contact: For information on the publication of the standards or purchase relevant standards, please contact the China Standards Publishing House.

Address: No. 16, Sanlihe North Street, Fuxingmenwai, Beijing, 100045

Tel: 0086-10-68532852(Online store)

0086-10-68517910(Office and Fax)

0086-10-68517112(Publishing Office)

Website: <http://www.spc.net.cn/>

4.6.2 The Publication of Trade Standards

The trade standards of the machinery industry are published by the Mechanical Industry Publishing House entrusted by CMIF.

Contact: For information on the publication of the standards or purchase relevant standards, please contact the Mechanical Industry Publishing House.

Address: No. 22, Baiwangzhuang Street, Xicheng District, Beijing, China, 100037

Tel: 0086-10-88379779(Editing Office)

0086-10-88379693(Sales Office)

0086-10-68351729(Fax)

Website: <http://www.cmpbook.com/>

5. Machinery Industry Standardisation and Industrial Development

5.1 National Promoted Technology Standards Strategy

It is explicitly stated in the *National Guideline on Medium- and Long-Term Program for Science and Technology Development (2006-2020)* that in order to implement the technology standards strategy, technology standards will be formed as the important goal of the national program for science and technology development. The competent government departments and industry associations will:

- strengthen the guidance and coordination in formulating the important technology standards
- promote the construction of technical regulations and technical standards system
- encourage the combination of the standards formulation with science and research, development, design and manufacturing
- ensure the advancement and effectiveness of the standards
- Guide the production, teaching and research to promote the research, formulation and prior adoption.
- Actively participate in the formulation of international standards and promote national technical standards to become international standards.

5.2 Standardisation has become an important measure to Revitalise the Machinery Industry

It is explicitly stated in the *Several Opinions of the State Council on Accelerating the Invigoration of Equipment Manufacturing Industry* that we must pay full attention to the role of standardisation in invigorating the equipment manufacturing industry, raise the level of national standards, trade standards and enterprise standards and improve the

standards system of China's equipment manufacturing industry in order to create conditions for China's equipment products to participate in the international competition.

5.3 The Focus of the Revision of the Standards System in the Machinery Industry

Centering on the 16 fields which the priority has been given to in the *Several Opinions of the State Council on Accelerating the Invigoration of Equipment Manufacturing Industry*, we must carry out the standard research to provide the standard support to important technical equipment and products which enter the market.

We must accelerate the formulation of the standards on energy conservation, water conservation and materials conservation in the machinery industry and provide technical measures in order to save resources, raise the comprehensive utilisation rate of resources, reduce the discharge of wastes and protect the environment.

We must focus on the enhancement of the ability of independent innovation and formulate the standards on products and technologies with independent intellectual property rights and promote the industrialisation of the independent innovation results.

We must strive to eliminate out-dated products and technologies, promote the updating of export products and increase international competitiveness by formulating and implementing advanced standards with high technical requirements.

We must establish the relevant management standards and technical standards to protect the legitimate rights and interests of operators and consumers and provide technical means to regulate the order of the market economy.

We must establish the standards on the safety of mechanical and electronic products to avoid major safety accidents and provide technical guarantees to human safety and health.

6. The Conditions to Enter the Mechanical Product Market

6.1 Import Management

It is explicitly stated in the *Interim Provisions on Promoting Industrial Structure Adjustment* to be promulgated by the State Council that importing advanced technical equipments and resources which are in short supply in China should be encouraged. At the same time, the State will issue the *Guiding Catalogue of Industrial Structure Regulation* (seen on the website of the National Development and Reform Commission: <http://www.ndrc.gov.cn>)

under the section of the “publication of policies”.

The three catalogues within the *Guiding Catalogue of Industrial Structure Regulation* is the basis for the government to guide the investment direction, manage the invested projects, stipulate and implement the policies on finance and tax, credit, land and import & export.

The three catalogues within the *Guiding Catalogue of Industrial Structure Regulation* are: **Encouraged, Restricted, and To-be-eliminated**. Those that do not belong to the three catalogues and conform to relevant State laws, regulations and policies fall into the category of allowance and shall not be included into the guiding catalogue.

The mechanical and electronic offices of the relevant local departments shall issue the Automatic Import License in time (see Attachment 10) for importing the mechanical and electronic products of the Encouragement category.

The mechanical and electronic offices of the relevant local departments shall not issue the Automatic Import License for newly-built projects importing mechanical and electronic products within the Limitation category. The mechanical and electronic offices of the relevant local departments shall give support to enterprises importing the mechanical and electronic products for the purpose of transformation and upgrading of the existing production capacity.

The mechanical and electronic offices of the relevant local departments shall not issue the Automatic Import License for importing the mechanical and electronic products of the Elimination category.

For information relating to the national policies on the import of mechanical and electronic products, such as the *Measures for Administration of Import of Specified Used Mechanical and Electronic Products*, *Administrative Measures for the Import of Key Used Mechanical and Electronic Products* (see Attachment 11), *Administrative Measures for the Import of Mechanical and Electronic Products*, *Measures for the Implementation of Automatic License for Import of Mechanical and Electronic Products*, and the *Catalogue for the Automatic Import License of the Mechanical and Electronic Products*, please visit the “Foreign trade management in the policy publication” section of the Ministry of Commerce website (<http://www.mofcom.gov.cn/>).

6.2 The Compulsory Certification of Products

The compulsory certification of products is to carry out compulsory inspection and examination on the products included in the *Catalogue* by formulating the compulsory product certification catalogue and implementing the compulsory product certification procedure. Those products included in the compulsory product certification catalogue that have not obtained the certificate of the designated certification organisation and the certification mark according to the regulation are not allowed to be imported, sold out of the factory and used in business premises.

For information on the national policies on the certification of compulsory mechanical and electronic products, such as the *Regulation for the Compulsory Product Certification*, *Regulations for Compulsory Product Certification Mark*, and the *First Catalogue of Products Subject to Compulsory Certification*, please visit the “on-the-scene service of the compulsory product certification” section of the nationally recognised supervision and management committee website (<http://www.cnca.gov.cn/>).

See Attachment 12 for the mechanical and electronic product catalogue for the implementation of the compulsory product certification.