

# **DEVELOPMENT AND PROBLEMS : A SURVEY OF ISO14000 IMPLEMENTATION**

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## **Abstract**

ISO14000 is created by the International Organization for Standardization (ISO), with the purpose of setting up the environmental management system that is beneficial to keeping sustainable development of the economy, improving the quality of the ecological environment and clearing up the non-tariff trade barriers. Since China began implementing ISO14000 in 1996, it has achieved big progress, but there are still some problems. The analysis in this paper is based on the survey of the corporations and other organizations ISO14000 certified and non-certified in Tianjin, summing up the good experiences of the ISO14000 implementation and putting forward the problems existed in Tianjin and in China.

## **Key words**

ISO14000; Environment; Administration; Sustainable Development

## **Summary**

ISO14000 is created by the International Organization for Standardization (ISO), with the purpose of enhancing the environmental administrative level of the firms and other social organizations. ISO14000 system would standardize the performances of the corporations, prevent and minimize the pollution in the producing process of the corporations, and guarantee the quality of ecological environment. Implementing ISO14000 will help corporations adapt to the requirement of the society, and maintain the sustainable development of the economy. The creation of ISO14000 regards overcoming trade barriers as its primary goals. It affords opportunities for the developing countries and it is beneficial for China to avoid non-tariff trade barriers and to accelerate the development of international trades.

From June to July in 2001, with the help of the Department of International Corporation and the Department of Science and Technology in Tianjin Environment

protection Bureau, we conducted a survey of ISO14000 implementation in Tianjin, China. 19 certified and 7 non-certified firms answered the questions. This paper analyzes the responses of the survey, trying to reveal the achievements and problems in the implementation of ISO14000 in China.

### **The View on ISO14000**

When being asked “what influence ISO14000 made on your trade”, most firms took removing the trade barriers as the most important one. They wrote that being certified with ISO14000 to some extent meant getting a travel permit to get involved in the international trade. Because it was fairly common for the corporations to implement ISO14000 in various countries all over the world, those firms who ignored the factors that concern with the environment in their producing process would face big obstruction when they dealt with international trade. The representatives of the corporations explained their ideas as follows.

Firstly, with the improved consciousness of environment protection, more and more people consider healthy and environmental factors and seek to choose better products and services provided by enterprises. Thus the firms which are certified with ISO14000 have a good image and priority in the market competition.

Secondly, there is an obvious trend of economic globalization in the world, so more and more firms are taking tragedies to match the global development. The ISO14000 certified firms try to purchase raw materials and components that are not harmful to the people and environment in order to avoid pollution. They will engage in environmental inspections and verifications to the materials or products providers. Sometimes they only receive the products of the firms that are ISO14000 certified. A reaction chain appears, which makes ISO14000 system an essential factor when dealing with trade.

Thirdly, at present time the World Trade Organization more and more thinks highly of the issue of the relation between trade and environment protection. WTO is cooperating with ISO and giving a special treatment to the ISO standard, which enhances the influence of ISO14000 system.

When being asked “whether or not ISO14000 can give benefit to the developing countries as much as to the developed countries, and how to make the process of ISO14000 certification more fair and more beneficial to the developing countries? ”, most firms showed worry about it. The representatives from the firms indicated ISO1400 did eliminate some trade conflicts, but due to the

present conditions of China, there remained some problems that were difficult to solve within a short period.

(a) Because of the low development level of the economy, technology and information, the developing countries fall behind in both speed and scale in implementing ISO14000. So it is difficult for them to compete with the developed countries and to enter the world market.

(b) There are more heavy-polluted industries in developing countries, which means they will invest huge amount of money to put ISO14000 system into effect. This is an obvious obstacle the developing countries face when they deal with the ISO14000 system.

(c) There are many small-scale and low-sales firms in developing countries. They are lack of funds and qualified engineers who make them more difficult to carry out ISO14000 system. For the reasons above, some people argue that the ISO14000 is a kind of excuse raised by the developed countries to restrict the goods and services of the developing countries from entering the world market. So they take ISO14000 system as a kind of trade protectionism from the developed countries.<sup>1</sup>

Even though there were some negative opinions, the firms being surveyed showed great interest in the ISO14000 system. They agreed that ISO14000 is a global standard, so it is inevitable to appear and spread in the world. The developing countries should participate in designing and improving the standard, and try to make the standard fairer instead of opposing it. Just because of the active participation of the developing countries, some special consideration and measures are taken for the interests of developing countries and their middle and small sized firms when designing the standard, although most of the designers are from the developed countries.

The most important rule which is advantageous to the developing countries is that ISO14000 doesn't include rigid demands, instead, it leaves a space for various countries to improve their administration, and to regulate their affairs on the basis of their own laws. ISO14000 becomes a kind of administrative software supplied to the developing countries. It guarantees the implementation of ISO14000 in the developing countries, makes the opportunities for them to enhance their competitive ability, and overcome trade barriers with the tool of ISO14000.

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<sup>1</sup> Shao Honghua, "The International Trade and Economic Cooperation Institute of Foreign Trade Department Takes and Active Part in the Research of the Relationship between ISO14000 and China's Foreign Trade Affairs."

### **Achievements of ISO14000 implementation**

When being asked “What benefits it does to your firm by implementing ISO14000”, all of the representatives illustrated their ideas with some data that showed the positive effects of carrying out ISO14000. The benefits are as follows.<sup>1</sup>

(a) It is good for both the environment protection and economical development. ISO14000 implementation lays stress on the whole-process regulation. For carrying out ISO14000, the enterprises are forced to speed up the adjusting process of the industry structure. Firms are encouraged to develop clean and nonpoisonous products and create new technology for saving energy and raw materials. All those measures are prerequisite for preventing pollution and setting up clean procedure of the production. Tianjin Dongyang Printing Ink Ltd. Corporation had reduced the energy cost of ¥2,000,000 (about \$250,000) since its certification in 1999. They made more effective use of water by establishing a cooling water circulatory system. By this way they saved 380 tons of water for per ton pigment production, and saved 380,000 tons of water per year. Tianjin Epson Ltd. Corporation launched an activity for saving electricity and saved 34% of electricity and 60% of duplicating paper in 2000. They won the first-prize honor for their efficient work. By Dec. 2000 Tianjin National Electronic Commodity Ltd. Corporation had saved about ¥60 millions (about \$7.5 millions) since they began to economize energy.

In brief, Carrying out ISO14000 can not only save energy and reduce the cost for the firms, but also lower the discharging volume of wastes, decrease the occurrence of environmental incidents and cut down the environmental risks and expenses. It forces firms to improve their producing environment actively and to push the environment protection and economic development forward together. Carrying on ISO14000 is favorable to realize the "9th Five Year Developing Program" and the "2010 Long Objective" of Chinese government. It is a key matter for China to keep sustainable development.

(b) The government pushes the work of ISO14000 certification forward and tries to advance the level of environmental management. ISO14000 is a code of conduct that guides the firms to stablish and improve the environmental administrative system. As a tool for standardizing business behavior, it helps firms to go into the process of self-improvement and self-restriction.

The implementation of ISO14000 and setting up of environmental management system require the firms to make a promise of obeying national laws or rules and to reach the standards of administration. The representatives from all of the 19 certified corporations being surveyed notified that they had been supported by the government during the process of building the ISO14000 and being certified. The technological

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《ISO14000 Information Web Journal》, 1998, Volume 1.

<sup>1</sup> The conclusions are drawn from the questionnaires made from June to July, 2001.

instruction, post-certification services and supervision by the government had all been of great help to push the environmental administration of the firms forward.

(c) It strengthens the firms' competition ability in the market and accelerates the international trade of the firms. Implementing ISO14000 can better the environmental image and the competition ability of the firms in both domestic and international markets. It stimulates the development and trade of the firms and reduces the expenses on environmental factors, for example, the environment problems caused by pollution or the cost paying for damaging the environment. It is good for improving the public relations of the firms. The products from ISO9000 certified firms demonstrate

that their quality are good, they are healthy for the people and pose no damage to the environment. Since the firms that implement ISO14000 system show the consumers that they contribute a lot to the society for protecting environment, people believe that whoever cares for the environment protection must be ones who are responsible for the consumers. By carrying out ISO14000, the quality of the products is sure to improve. This is beneficial to advance the image of the firms, to keep the superiority of their products in the domestic and international market and to achieve the economic benefits for the firms at last.

(d) It can wake up the awareness on environmental protection of the public. Environment protection is a difficult engineering that must have wide-ranging participation by the people. Therefore, it is very important to arouse the public's environment protection awareness. Carrying out ISO14000 system requires that the administrators and workers in the enterprises be systematically trained in this field, then there will be some transformation in their ideology and behavior. Administrators and workers should be conscious of the environmental problems they

faced to and realize how to change the situation. The representative from Tianjin Ridian Electronic Engineering Ltd. Corporation said that since they carried out ISO14000 system, the company

had improved its image in both Tianjin and its community and had been awarded several prizes. The personnel of the company were aware of the importance of protecting the environment, and they suggested that one-time chopsticks no longer be used.

In recent years, Chinese government has thought highly of the development of the international standard systems and propoled the work of implementing ISO system forward strongly. It is in big progress and has gained great achievement.

### **Some Problems**

ISO14000 system implementation in China began in 1996. The updated data shows that by Feb.26, 2002, the firms of ISO14000 certified total 327.<sup>1</sup> And many

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<sup>1</sup> <http://www.ccems.com.cn/news/mylnl.html>. The data don't include the certified governmental departments and government affiliated organizations.

firms are setting up the environmental administrative systems and applying for being certified. However, there remain some problems that hinder the implementing process.

(a) The firms certified gather in some industries and are rare in other industries. It appears in an unbalanced way. ISO14000 is an advanced system of environment management, it is suitable to any kind of enterprise. However, in the process of its implementation in China, it happens that there are different attitudes in different firms, especially the firms in different industries. The ownership and characteristic variation of the corporations to some extent make such unbalanced distribution.

We draw the conclusion from the survey that the ownership is an important factor that influences the distribution of the firms certified. 15 of the 19 certified firms are foreign companies or joint ventures. It is the case throughout the whole country. Now more than 60% of the certified firms are foreign corporations or joint venture firms in China.<sup>1</sup> Besides, those who are reported actively toward ISO14000 are mostly large-scale units, such as some joint ventures, export-oriented enterprises, state-owned corporations and so on. Products from such firms are sold in both domestic markets and international markets. The reality of the serious competition makes them attach much importance to the quality of their products and pay much attention to the firm's image in the markets. Some large-scale corporations or contractors have to implement ISO14000 because of the requirement of their clients. And some state-owned corporations regard the certification of ISO14000 as an entrance permit to the international market.

However, many middle or small-scale state-owned firms hold a negative attitude toward carrying out of the ISO14000 system. Due to their lower administrative level and lacking of qualified technical personnel, they don't think it is possible to reach the international management standard. Some of such enterprises have had very serious problems of discharging the polluted wastes for a long time, it makes them more unconfident to change the status quo. Such middle or small firms have no enough funds to adjust or renew their facilities for setting up the new administrative and productive procedure. Another factor is that such firms haven't met very big pressure when they are involved in the markets. They can still live without reform in the Chinese market at present.

Of the 19 certified firms, 6 are from electronic industry, 6 are from environment engineering industry, the others are from biochemistry industry and the departments affiliated to the government (see chart). This is also the case all over China. By the data, now in China about 70% of the certified firms are from the electronic, electricity and household electrical appliances industries.<sup>2</sup> The firms from such industries have

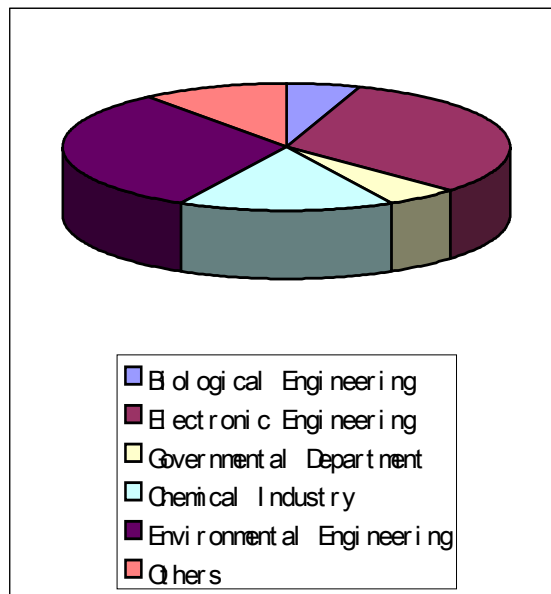
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<sup>1</sup> 《ISO14000 Information Web Journal》 1999, Volume2.

<sup>2</sup> Shao Honghua, "The International Trade and Economic Cooperation Institute of Foreign Trade Department Takes

less pollution factors, so have less influence on the environment. They have had higher administrative level, so it's easier for them to implement ISO14000 system. Their products are sold in both domestic and international markets, so getting ISO14000 certified would help them obtain the entrance permit to the market, show good images of the firms and strengthen the competitive abilities for themselves in the market. Acquiring certification is good for such firms to popularize their products to the consumers. For the reasons above, the firms from electronic and electricity equipment industries have been the active part in carrying out ISO14000 system.

**The Industrial Distribution Chart**  
**The Firms and Departments getting ISO14000 Certified**  
**(Being Surveyed)**



Due to the complex factors in the producing process, there exist very serious pollution and waste-discharging problems in some corporations in metallurgy, chemical or pharmacy industries. Even though, the administrators in such industries are still eager to change the status quo. Furthermore, they have some strong technology personnel and funds so that it is possible for them to get they have some strong technology personnel and funds so that it is possible for them to go on along with the reform. Also, they have made great efforts to establish new and strong mechanism for preventing pollution, and to set up a comprehensive environmental management system for keeping the sustainable development of their industries. Such corporations show great interest in implementing ISO14000.

Compared with the firms mentioned above, some small-scaled firms, especially some introverted ones that are backward in management, will encounter more difficulties in implementing ISO14000. Their lacks in environment protection

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and Active Part in the Research of the Relationship between ISO14000 and China's Foreign Trade Affairs." *«ISO14000 Information Web Journal»*, 1998, Volume 1

awareness, low administrative

level, and shortage of funds have all detained their carrying out the international standard systems. Actually, such firms are in badly need of setting up scientific standard systems to clear away the pollution factors and to make use of energy and resources perfectly. Just because of this, some people suggest to lower the standard of waste discharge or to relax the restriction in the process of standard certification, so that the small enterprises can gain confidence and participate in carrying out ISO14000 actively. People put forward such suggestion argue that lowering the controlling standard can enhance the level of environmental management, make perfect use of energy and resources, thus speed up the pollution control in China. According to them, it will be beneficial to solve the problems in small enterprises and the whole society. How should we evaluate such suggestion? Is it right? This is a serious question that concerns with the quality of implementing the international standard systems in China. Should we relax the pollution or wastes discharge restriction in the period of global governance? We should think this question over and go forward instead of retreating backward.

(b) There are some wrong ideas during the ISO14000 implementation process. The first improper idea is that taking obtaining ISO14000 certification as the most important objective of the corporations or the enterprises. Now some firms are willing to get the certification from foreign agencies. Such foreign agencies just take a haste inspection of some documents and spots, <sup>1</sup>so it is fairly easy for enterprises to get through the standard system inspection, and then obtain the certification. It is dangerous. The enterprises certified in this way will become the victims at last.

Certainly, ISO14000 is a certificate for proving the firms' establishing and maintaining the environmental administrative system. As a "green pass" in trade, the certificate demonstrates that a firm has met the standard of ISO14000. This is why so many enterprises show great interest in it. However, the significance of implementing ISO14000 is much more than obtaining a certificate. ISO14000 is a set of integrated, practical standard system based upon the experiences of the environmental administration in many developed countries. The purpose of it is to establish the systematic administrative mechanism through rational way to improve the environmental administrative management of the firms and to clear the pollution factors in the process of the production. The objective for setting up such system must be realized by hard work and real reform. Just a single piece of certificate cannot mean everything. The certificate-orientation ideology reflects the deviation in implementing the ISO14000 system, which may cause cheating or behavior for instant success. So taking obtaining the certificate as the main objective is a dangerous idea, it must be cleared up.

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<sup>1</sup> Chen Xiang, "Some Wrong Ideas Which Should Be Avoided By the Firms When Establishing and Maintaining Environment Management System." 《ISO14000 Information Web Journal》 1998, Volume8.



The second improper idea is that regarding being certified as obtaining a forever insurance. One important feature of ISO14000 is that it asks for continuous improving. It is a process of sustainable developing. The elements making up the system are also changing with the development of the society. So the relative laws and regulations should be revised, the requirement of environment protection should agree with the realities of the society. That means the firms should keep maintaining and improving the proper mechanism after they have got the certification, which is an even harder work than establishing the system. Only when the firms can develop continuously will it keep a high level of environmental management.

The third improper aspect in implementing ISO14000 is ignoring to adopt new technology and new materials by the firms in the process of their reform and establishing the standard administrative system.

At present, many firms are trying to lower the cost when they implementing ISO14000. They, especially some middle and small-scale enterprises, neglect adopting new technology and new materials to keep clean environment. They just take some measures to save water, electricity, paper and other materials. The reforms of many firms surveyed just ceased on this phase, so the results of their reforms could not gain great achievement, even without obvious effects on saving resources. The enthusiasm of implementing ISO14000 will be cut down if such phenomena go on.

There are many middle and small-size firms in China. Such firms are simple in structure, their administrators focus on the process of manufacturing and selling. They are short of qualified experts and special organizations responsible for environment protection. And they lack the environment protection knowledge and have rare communications with the research institutes or the governmental departments of environment protection. Furthermore, because of financial limitation, they can not pay much for buying new facilities or new materials. They usually just pay attention to the short-term profits.

To settle this problem, on one hand, the leaders of middle or small-size firms should be required to renew their ideas. They should try to adopt new technology, new facilities or some new materials in the process of establishing qualified environment protection system, combining the firms' short-term profits with their long-term ones. On the other hand, government should make some favorable policies and give some assistance to the middle or small-size firms to encourage their reform. The government can afford the loan or give some financial assistance to such firms. The subsidy given to the first group who applied to implement ISO14000 by Shenzhen Environment Protection Bureau in Jan.1998 is a good example. Shenzhen

government offered 30%-50% of the counseling fee to the firms to show its support and assistance to the firms to implement ISO14000.<sup>1</sup>

### **Conclusion**

In brief, the creation of ISO14000 supplies the corporations and the governments all over the world with a good opportunity to enhance their environmental administrative level. It is advantageous to eliminate trade barriers in the world market. Now building up international standard systems becomes an essential requirement for the corporations or other organizations to enter the world market. Along with contemporary tendency of globalization, more and more people realize the important meaning of protecting environment. Since China began to implement ISO14000 in 1996, great progress has been achieved under the joint efforts of the firms and various environment protection branches of the government. The environment protection awareness of administrators and average people is greatly advanced. The enterprises have begun to restrain their own behavior and obey the rules of environment protection consciously. But there are still many problems in China. Both firms and government must pay much attention to such problems and make great efforts to solve the problems.

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<sup>1</sup> “Shenzhen Government provides environment protection subsidies as a support to implement ISO14000.”  
《ISO14000 Information Web Journal》 1998, Volume 4.