

Success Story (4):

“As a Bridge, We Have Travelled a Long Way under High Responsibility”

by Dalian AOTS Alumni Society / China

After the initiation of economic reform in 1978, China embarked upon an all-out corporate reform which formed the core of the urban reform from 1984. Dalian's manufacturing industries had long suffered from mismanagement of plants, low productivity and inferior quality of products, and it was advocated to introduce the advanced and scientific management methods from the developed countries. Under these circumstances, Dalian City Corporate Management Association, AOTS and JMA Consultants Inc. (JMAC) took concerted actions to implement the “IE Training” in three terms since 1985 and the “Model Plant Training” since 1989, where the Dalian AOTS Alumni Society (established in 1986) offered a substantial support. The IE Training brought significant fruit to factory managers in Dalian who mastered IE in line with many Dalian-based companies that adopted its techniques as the pillar of their corporate management

and achieved remarkable improvement in productivity. The “Model Plant Training” produced three model plants that effectively improved the management level of the entire plants in the city. Thus these series of trainings achieved successful results and attained high remarks from the Dalian City government and respective companies. The number of participants in the management trainings in Japan who had been recommended and sent by the Dalian Alumni Society exceeded 1,000 in the last 20 years, and the returned trainees, being the core of the companies, have contributed in development of the home companies and the local economy of the city of Dalian. The Dalian AOTS Alumni Society has played the role of a bridge when the advanced business management is introduced from Japan to Dalian industrial circles, and it is determined to carry on the same important role for the coming future.

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Past experience of AOTS training:

None, because she is on the staff of the society.

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1. Historical background

Next year, AOTS will mark the 50th anniversary of its establishment. The Dalian AOTS Alumni Society is one of the Chinese Alumni Societies that was established comparatively early on, and has worked alongside AOTS for more than 20 years. This society was established in 1986 (Social Group Registration Number: Social Certificate No.0001), and the purpose of the group is “Let’s go overseas. Welcome to China.”

“Let’s go overseas” is one of the priority issues for this society’s activities, and already forms a major component of the society’s everyday duties. The number of trainees that have participated in the AOTS Training Programs in Japan through this society over the last 20-odd years is now in excess of 1,000. The vast majority of them have already become core figures in their companies as middle and senior managers and engineers, and are making a remarkable contribution to the progress of companies and social development in Dalian. Moreover, this society feels proud to have turned out so many outstanding trainees like these.

“Welcome to China” is another one of the issues that has been a priority for this society for many years. In 1985, with the economic support of AOTS, the “China-Japan Joint Training Course for Cultivating Managers and Instructors at Industrial Companies in Dalian” (“IE Training” for short), which was held on three occasions, was established; subsequently, a follow-on course entitled “Dalian China-Japan Collaborative Training Course on Cultivating Workplace Management Consultants” (“Model Plants Training” for short) was created. At the end of 1985, as part of the process of preparing for the establishment of this society, we dispatched personnel to participate in the duties of the leadership group for these two courses, as well as participating in all processes, organizational coordination and day-to-day management duties in relation to such matters as the selection and dispatch of participants, comprehensive on-the-job training, the setting of assignments and the grading of the results. The outcome of the IE Training, which was held three times over three years, was not only that personnel in the IE field were cultivated. As a result of this course, our perspectives have broadened, we have seen a great deal of life, we have learned the specifics about how to provide guidance in practical matters involving the utilization of IE technology in the process of modernizing corporate management, and we have been able to formulate benchmarks and models for the business community. Through practice in these duties over several years, the AOTS Alumni Society has shouldered an important responsibility as a bridge in the introduction of Japan’s advanced management experience; moreover, we have become acutely aware that whether or not we

are able to link Japan's advanced management techniques with Chinese practice will have a direct impact on whether or not we are able to establish the advanced management experience of other countries in our own companies, and make it bloom and bear fruit. Here today, we would like to look back on the implementation status of IE technology at the time in Dalian and provide an overview, and seek effective, viable methods for AOTS to provide training for Chinese companies, using examples of success from previous year.

2. Joint Implementation of the Training Course for Managers and Instructors at Industrial Companies and Popularization of IE Technology

After the economic reform was initiated in 1978, China first of all experienced great success in its rural areas, and then embarked upon the economic reform in urban areas from 1984. With regard to the important constituent elements of the reform, at the time, there were hardly any theories within China about how to reform companies and how to make a start on this, and there were no practical examples of success. In order for participants to learn about and refer to the advanced, scientific management methods and experience of developed countries, we focused on the actual situation of companies in this city, where workplace management was chaotic, worker productivity was low and product quality was poor, and we introduced personnel from overseas, in order to try to reform the situation and help the city catch up in terms of its management level. From 1985, Dalian City Corporate Management Association held the Training Course for Cultivating Managers and Instructors at Industrial Companies in partnership with the Association for Overseas Technical Scholarship (AOTS) and the JMA Consultants Inc. (JMAC), and the Japanese side of the partnership dispatched highly experienced management experts to Dalian in order to give lectures about Japan's advanced corporate management methods. Mr. Masatoshi Shida, one of the Japanese leading expert in corporate management who was senior consultant at JMAC, visited a number of Chinese plants and conducted a great deal of research into the current status of management at Chinese industrial companies before formulating a well-thought-out training plan, compiling training materials that were appropriate to the actual situation, and determining the main content of the course. To be more specific, based primarily on the management of production workplaces, this content introduced the utilization of IE technology and improvements in workplace management.

On 4 October 1985, the opening ceremony of the first China-Japan Joint IE Training Course took place at Dalian Railway Institute. Around 30 participants from 15 companies in Dalian became the first engineers in Dalian to receive systematic training in IE technology. The first IE course lasted seven months and was divided into two stages. The first stage lasted a month and involved lessons given mainly by Japanese experts, featuring lectures about IE technology and its application, as well as training in the workplace, with associations being drawn between theory and the actual situation, in order to enable participants to gain an elementary understanding of IE technology. The second stage was the comprehensive practical training stage lasting six months, during which production workplace management improvements were implemented using IE technology at the production sites of seven factories, including Dalian Electric Machinery Factory, Dalian Locomotive Factory and Dalian Heavy Plant Factory. At each factory, participants selected the issues that they wished to

improve, taking into consideration the problems that existed in the production workplace of that organization and the key points that would have an impact on the efficiency of production. This included content relating to product quality, capacity utilization, and the solution of problems relating to a lack of ability in important processes. After the practical training ended, participants were not only required to submit a written report on the practical training, but also organized the implementation of a plan under the guidance of the factory to which they were assigned, increasing the specific implementation effect (for further details, please refer to appendix 1), while at the same time implementing 4S management activities (specifically *seiri*, *seiton*, *seiketsu* and *seiso*: sorting, organizing, standardizing and cleaning) at the plant where they underwent their practical training. The trainees who participated in the comprehensive practical training utilized the IE management techniques that they had learned, and became deeply involved in the production workplace, conducting research and gaining a lot of data and primary materials; they then quantified the problems that existed in the management of the production workplace at the factory and conducted analytical research that combined the quantitative and qualitative aspects of those materials and data, in order to identify striking inconsistencies in corporate management that must be resolved, and to provide a scientific basis for improving the management of companies' production workplaces.

Soon after this, in 1986 and 1987, the second and third IE Training took place, in which 82 participants from more than 30 companies in Dalian took part, becoming key figures in the utilization of IE technology in this city. The third IE Training in particular was a great success and yielded tremendous results. The main results were as follows:

- i) A group of personnel in the field of management were cultivated in the city of Dalian. Through these personnel, IE technology was disseminated widely, thereby improving the management level of companies.
- ii) A number of first-class workplaces were constructed in Dalian. In the process of promoting 4S management, a scientific, effective management system was established, orderly production was promoted, the mentality of workers was changed, the volume of goods-in-process was reduced and production efficiency was increased. The appearances of the Third Worksite of the Locomotive Factory, the Small-scale Worksite of the Electrical Machinery Factory, and the Second Metal Processing Worksite of the Dalian Freezer Factory were renovated. The Japanese experts lauded these changes, saying "This was a tremendous success and had completely unexpected results", while the Chinese side also praised it, saying, "Personnel have been cultivated and it has had great results".
- iii) In the comprehensive practical training, the themes were chosen seriously, from among the issues relating to the actual situation of the plants. As a result, after the completion of the practical training course, remarkable outcomes were achieved in terms of quality improvements, reductions in material consumption and increases in worker productivity.

After the end of the third IE Training in May 1988, AOTS and JMAC jointly presented 100 cherry trees to Dalian City, and the Dalian City Government constructed a China-Japan Friendship Cherry Garden in the Dalian Labors' Park.



*Monument of the
China-Japan IE Training
built in China-Japan
Friendship Cherry
Garden, Dalian City*

3. Utilizing IE Technology and Building Model Plants for Improving Workplace Management

After the end of the third IE Training in May 1988, the former Mayor of Dalian, Wei Fu Hai, asked The late Mr. Nagaaki Yamamoto, then Director General of AOTS, and Mr. Tatuski Mikami, Chairman of JMAC, to support the implementation of management consulting of companies in Dalian based on the Japanese corporate management model, and the construction of a number of pilot plants. As a result of these efforts, the following agreement was reached between the parties in September 1989. “For 18 months from December 1989, Japanese experts would provide specific guidance and consulting would be carried out at Dalian Number Two Electrical Machinery Plant, Dalian Industrial Machinery Accessories Plant, and Dalian Clothing Machinery Plant, with managers being cultivated in order to support improvements in the management level of companies, and pilot plants (model plants) for worksite management improvements using IE technology would be constructed. At the same time, with improvements in management being practiced in these three plants, the Japanese consultants would cultivate for us a group of personnel who could conduct workplace management consultations, and provide support for increasing the management level at industrial companies in Dalian.”

In implementing the “model plants” project, AOTS and JMAC firstly sent three highly experienced experts to Dalian to hold lectures and provide guidance and consulting services. The three model plants selected a total of 20 managers of various types (including work site foremen and those in positions of responsibility in related divisions) and dispatched them as participants on the Training Course on IE Technology and Workplace Management Consulting Techniques, as well as giving them responsibility for duties relating to the construction of the model plants as core figures in improving the management of company workplaces, with the cooperation of the Japanese experts.

On 15 December 1989, the opening ceremony took place at Dalian Number Two Electrical Machinery Plant and intensive lectures took place concerning the talents and abilities that consulting personnel should acquire, and the specific content of IE methods and their application. Moreover, lectures also took place concerning the steps and procedures involved in quality analysis, the utilization of various diagrams and methods in quality management, the improvement of product quality, and effective measures for reducing defective items to zero. Participants were also provided with a detailed introduction to 5S (4S + *shitsuke*: discipline) management methods, and round-table discussions were held for middle and senior managers at each of the three pilot plants; in addition, a special study concerning problems in the workplace management of the plants of those companies was carried out. Participants were provided with guidance in IE utilization methods and conducted on-site inspections at production workplaces, as well as conducting analytical research into the results of the study and identifying key aspects that have an impact on the productivity of the companies, before determining the issues for improvement in partnership with the plant managers of each of the model plants. The main focus of these activities was 5S management, quality management and the capacity utilization rate. Moreover, improvement standards were stipulated for the three model plants. Model workplaces for 5S management were constructed at each of the three model plants and it was decided that those aspects showing excellent results would be disseminated further in order to improve the management level of the plant as a whole.

4. What we acknowledged as a result of the Dalian IE Technology Utilization Training

(1) Whether or not the leader places value on this is a key point for utilizing IE technology and achieving the improvement targets

“The key point in whether or not a company succeeds is the leader” and whether or not IE technology is utilized well is similarly determined by the degree to which the leader is aware of and emphasizes it. In propagating the utilization of IE technology, leaders’ consciousness of management and increasing their awareness of IE technology were emphasized as important points. Moreover, in holding the IE training course, leaders from Dalian’s Economic Committee participated in the leader group and were themselves involved in the academic lectures and comprehensive practical training, gaining and understanding of the current situation and level of progress, and actively providing support in resolving difficulties relating to utilization. At each practical training workplace, one plant manager and leading manager were commissioned to work on these matters full-time.

In constructing the model plants for workplace management improvements, the city government established leadership groups with major leaders functioning as group leaders. The implementation groups in which the management bureau of each company participated, along with the Dalian City Economic Committee, the Dalian City Scientific Committee and the Dalian City External Personnel Introduction Office, had the plant managers of each of the three plants as their group leaders, and these groups strengthened the guidance provided in relation to these duties. In order for the leaders at each of these model plants to understand the theory and methods of IE technology, we asked Japanese experts to give special lectures for leaders among the middle and senior management at the

three plants, thereby increasing their awareness of the utilization of IE technology. By emphasizing this, these leaders steadily expanded the work on factory workplace management improvements and began to achieve good results. Amidst a situation in which finances were tight, all possible measures were formulated to provide Dalian Clothing Machinery Plant with support in relation to personnel, materials and finances, and a certain amount of funding was raised, thereby guaranteeing the steady implementation of improvements.

(2) Providing broad-based encouragement and utilizing IE technology in order to change the subjective behavior of employees

IE technology is a “science for practice” and it is necessary for all employees to be involved and make efforts together. In the process of spreading the utilization of IE technology, we made approaches to employees and society as a whole, and strove to provide them with education and training in relation to knowledge concerning IE in various forms. The layout of each trial production workplace at each company had changed significantly compared with the situation before the 1983 cleanup, but the problem of the fact that products were neglected and the whole of the production site was in disorder had not fundamentally been resolved. At the time of inspections, everyone worked without a break, but when the inspection finished, the situation returned to how it had been before. In order to change the traditional customs of many years, maintain order in the production workplace and ensure that production work was carried out methodically, it was necessary for all employees to increase awareness, act subjectively and strive together.

At the production workplace at the Dalian Number Two Electrical Machinery Plant, a terrazzo passage of more than 800m² was constructed within a short space of time; furthermore, permanent signs were placed in the passage, the roof and terrace, which had not been painted since the construction of the plant, were painted white, and 52 high-pressure mercury lamps were installed, thereby improving the lighting. Moreover, 40 new steps for machine tools, more than 100m² of access platforms, and 17 automatic slanting scrap iron boxes were manufactured, all the scrap iron was moved underground from the workplaces, almost 20 tons of waste and articles that had not been used for a long time were tidied away, and standard toolboxes for all operators were distributed, thereby changing the appearance of the workplace significantly. The workers became able to work comfortably in a completely new workplace, so their eagerness doubled and efficiency improved.

(3) Charging participants with the mission of being persistent in working on IE technology and its utilization in the long term

IE technology was created in an elementary form at the beginning of 20 century and over the decades has promoted the development of various management systems and improved production efficiency. In Dalian, participants were charged with implementing IE technology continually in the long term, constantly improving and developing the technology while utilizing it, and it came to be utilized in a variety of industries, including machinery, electronics and light industry. The priority area was the machinery sector and it got started comparatively quickly, achieving comparatively significant effects.

The Dalian Locomotive Plant began to utilize IE technology from 1985, and in three years, it had improved the Number One Machine Workplace, the Number Three Machine Workplace, and the Diesel Engine Workplace, constructing three first-rate workplaces in all of its plants. As a result of this, not only did the environment of each workplace change, but also the quality of product improved, collisions decreased and production efficiency increased. The representatives who participated in the Department of Railways Affiliated Company Management Duties Conference toured the site and gave high praise to the workplace management at the locomotive plant. These played a significant model role in promoting workplace management.

In Dalian Electric Machinery Plant, after conducting improvements in its small-scale production site, they formulated a comparatively well-ordered system of rules and constantly reinforced this, with screening of the economic responsibility system being introduced and linked to the award of bonuses. The Dalian City Machinery Bureau convened a worksite conference at the plant and widely disseminated the experiences of the Dalian Electric Machinery Plant, giving the workplace management of plants affiliated with the Machinery Bureau an advanced position. In the small-scale production site of the Dalian Electric Machinery Plant, IT technology was used consistently from 1985 and the workplace was kept in good condition. In March 1990, the Japanese expert who had originally provided them with guidance relating to improvements visited the plant. After seeing it, he gave the thumbs up and was unstinting in his praise.

(4) Linking the study of IE technology utilization with the unceasing creation and formation of management methods with unique characteristics

Based on the actual situation in the plants, taking the study of IE technology utilization as the foundation, Dalian linked learning, using as a reference and creating uniqueness, and sought new methods of corporate management that suited the characteristics of the individual companies concerned. Over the course of many years, effective new management methods that have unique characteristics have emerged in Dalian, such as fixed management methods, total control management methods and engineering project management methods.

Dalian Number Two Electrical Machinery Plant focused on its actual problems, such as the fact that the factory buildings were low, the layout inside the production workplaces was irrational, and articles often collided, creating many scratches. The main content was special management in relation to the components in the production workplace and by ensuring that the site was kept neat, a fixed management method was compiled in which scratches resulting from collisions between components were reduced, product quality was assured, and efficiency increased. Through this method, for example, it was not only that a fixed general chart for the machinery workplace as a whole was designed, with everything being placed in accordance with the chart, from apparatus at each post to electrical machinery components and toolboxes, and articles within the toolboxes, the relationships between numbers and components, and numbers and the diagrams were clarified, and the articles in the production worksite were fixed to correspond with the diagrams, numbers and

articles. At the same time, fixed management of the technology development center building of the plant took place, with more than 40 work desks and trial appliance platforms being broadly classified into six categories, and materials and document cabinets were also categorized. Through this fixed management, plant production became orderly, scratches resulting from collisions between electrical machinery components decreased, and quality was stabilized. Furthermore, space and time came to be utilized efficiently, and the level of workplace management improved.

In 1985, the Dalian Cathode Ray Tube Plant introduced a production line and know-how from Toshiba Corporation of Japan. Of the 22 black and white cathode ray tube manufacturers in China, this is the plant that began production last of all, but it is the most profitable plant in the country and has the highest quality level. The secret of its success is the fact that participants created a total control management method suited to their company's characteristics. The total control management method is a new model for consolidated management focused on increasing worker productivity and economic profit, by integrating new corporate management methods from within China and overseas, setting production management targets as standards and prioritizing control management within the production workplace, with the cultivation of consciousness of self-control and the ability to set restrictions oneself at the core of activities. The total control management method is an integrated all-round control management method for all corporate production management activities that are constantly sought from among current practice, formed as required and which were incomplete, and focuses on the series of production management activities in the form of individual – work group – workplace – specialist division – plant headquarters. By implementing the total control management method, the production effects of the Dalian Cathode Ray Tube Plant grew year by year, and in the 23 months after beginning operations, the plant had paid back all of the loans it had taken out to introduce equipment. Moreover, pre-tax profits in the 33 months after it began operations were equivalent to an amount that would enable it to recover the investment required for two cathode ray tube plants of a similar scale.

Introducing advanced management techniques, assimilating them as one's own, and absorbing them as well as constantly developing them and making innovations has been proved through practice to be the path that must be followed by all companies in order to achieve results. Through the outcomes of the three tIE Trainings and the three model plants, we were able to receive praise and approbation from the Dalian City Government and companies at all levels. In 1993, the Dalian City Government bestowed on The late Mr. Nagaaki Yamamoto, former Senior Managing Director of AOTS, the title of "Honorary Citizen of Dalian City", in light of his outstanding contribution to the progress of society in Dalian and its economic development, and the award ceremony was held in Tokyo on 5 October 1993.

Today, in the 21st century, if we look back more than 20 years, we can see that all of the companies referred to in this essay have undergone great changes. Some have merged, while some have undergone institutional reforms. However, most of the 82 personnel cultivated as a result of the IE course are even more active in the front line of corporate management. The IE technology that they

learned at the time has already completely penetrated the management ethos of those companies, and as well as complying with the quintessence of IE technology, the companies are devising new innovations based on their actual situation. For example, following institutional reforms, Dalian Clothing Machinery Plant is now the Dalian Daifuji Machine Company, and IE technology is specifically utilized in all aspects of the company's day-to-day running. The QC group activities within the workplace are conducted correctly and in an orderly fashion and 5S management is linked to employee pay, so the motivation of the company's employees to work has been sparked and the efficiency of the company is improving. The performance of this company within its industry is outstanding. In March 2006, Prof. Seiichi Kubota, who was Vice-chairman of the AOTS Screening Committee, visited this company and praised it highly.

This essay has been compiled on the basis of materials from contemporary round-table meetings concerning the IE course and the model plant project, interim overviews and final overviews. If we look at work memos and materials from more than 20 years ago, we can imagine vividly the situation at the time, and it seems like a completely different era. The cherry tree garden with the "China-Japan friendship cherry trees" is already becoming a popular place for a walk among sightseers. The secretariat of Dalian AOTS Alumni Society was responsible for duties relating to the IE Training and model plants at that time, and has fulfilled a superb role as a bridge between the two countries. Furthermore, there are still companies today that wish to receive, through those of us who form this bridge, introductions to Japanese consulting firms with experience of involvement in workplace management, as well as requesting training and consulting services. This society wishes to continue to play a part as a bridge for them, utilizing our influence to construct a forum for management technology exchange between Japanese and Chinese companies, and further supporting the development of companies.

And in relation to this, AOTS Alumni Societies are being formed in dozens of developing countries and the social systems of those countries differ, as do the situations and levels of economic development in those countries, but we hope that this essay will be a useful reference material for other AOTS Alumni Societies in implementing their projects, when trying to introduce advanced management experience to companies.

We have presented this essay to commemorate the 50th anniversary of the establishment of AOTS; next year, AOTS will begin a new half-century. We would like to express our heartfelt wish that AOTS will develop and progress further, and through bridges in the form of the Alumni Societies, will turn the friendly private sector relationships between Japan and China into an even more sparkling future.