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TQC OF OKINAWA ELECTRIC POWER CO.



from "Total Quality Control," Vol. 45, No. 6 (June 1994) JUSE

Hirokazu Nakaima

Vice President of Okinawa Electric Power Co.

I started thinking about TQC when I was serving as assistant governor for the prefecture. This was at the time we were formulating the third program for promotion and development of Okinawa, which started FY1993. We were debating about what kind of measures to take to promote industry here and finally found what it was that Okinawa was missing. It was business management skills. We had the policy-making tools and we had the funds for proceeding with those policies. We also had 70,000 companies, though almost all small businesses, and a tremendous will to succeed among our managers. To promote industry, therefore, we needed to make effective use of the facilities and equipment already invested in. I studied what kind of management skills were required for that and as a result concluded that TQC, which was performing highly effectively in industry, was the most appropriate.

Okinawa has been tremendously stimulated by the economic development of nearby countries. Our neighbor Taiwan in particular has managed to achieve sustained high economic growth through vibrant business activity despite, like Okinawa, having started with a preponderance of small enterprises. I noted as well the dazzling economic growth achieved by other Southeast Asian countries in their drives toward industrialization.

Therefore, though I am by no means someone like Prime Minister Mahatir of Malaysia, I decided that Okinawa too should "Look East" and that the prefecture as a whole had to promote and encourage the use of TQC in industry and produce a Deming Prize winner as soon as possible.

Okinawa Electric Power Co. was, you can say, an American company up to the return of the prefecture to Japan. After Okinawa's return, the company was run as

a special corporation, but five years ago it was privatized. The company went through many difficult times business-wise during its history, including overhauls of technical standards, consolidations and closures of power generating and distributing companies, and the oil crisis.

I want, however, to go another step further now and consolidate and strengthen the business foundation of the company before its 10th anniversary of privatization. Toward that end, I believe we absolutely must introduce and promote TQC.

We have just as much business drive as other firms, but face numerous problems they don't.

The biggest problem is the strong demand being made by the people of the prefecture for lower electricity rates. They want the lowest electricity rates in all of Japan. So the biggest task on hand is how to realize that.

Okinawa Electric is a mini-sized power company compared with the other nine power companies in Japan. The power stations of the big companies produce in the millions of kilowatts. Ours produce one-sixth of that. Bigger systems have better capacities and can produce power cheaper. It is quite difficult for a company like ours with mini-size stations to achieve lower costs.

Our company has several other handicaps as well. Our market is small (though this is a problem common to everything else in Okinawa) and our typhoons are frequent. Salt corrosion is strong here as well. On top of this, how is a mini power company supposed to organize the 12 mini-mini power firms spread over more than 40 different islands and establish the same rates? This is something we have to do, however.

To achieve this goal, we have to thoroughly master TQC. We are now studying it in depth. ★

“IMPORTANT POINTS OF POLICY MANAGEMENT AT APA RESORT HAWAIIANS”(2)

from “Total Quality Control,” Vol. 44, No. 2 (February 1994) JUSE



Susumu YAMADA
In charge of TQC
Joban Kosan Corporation
Spa Resort Hawaiians

7. Policy deployment; the key to policy management

Policy management purposes to make the various divisions under the president take over this policies and actuate them in their respective domains, there by integrating the results of subordinate groups so that they become those of the entire organization. The important point here is how skillfully each division or department deploys and implements presidential policies, and how well each section in turn acts on policies presented from above.

The author believes that implementation of daily management is highly instrumental in policy deployment, since after annual management policies are revealed and departmental policies are resolved, the section chiefs can easily decide the control points his or her group is expected to improve upon when conducting daily management. As mentioned in Section Four of this treatise, reflections on the current year help resolve questions in specific terms.

SRH's annual policies embrace three levels: the president, the chief of our business headquarters, and the heads of departments. Some companies include the policy of section chiefs too. Even though the policies of lower echelons agree with those of the president and express them in specific terms, it only confuses employees when the policies of all levels are displayed at jobsites and rank-and-filers are ordered to comply with them all. That is why we see to it that only the policies of business headquarters stand prominent, there by enabling the workhorse to easily comprehend them.

The policies of the president and those of his business headquarters are so closely interrelated, however, that department managers and section chiefs can readily understand them per the written annual budget. The relationship between business headquarters policies and those of department managers is shown in the deployment table, which also shows the interrelation among departments. The activity program that each section devises to carry out policies is prepared in a standard format which makes it easy to grasp the relationship

between departmental policies and priority points to be implemented by the section (see table).

Departments and sections need not always determine priority points for implementation according to the policies of upper SRH strata if the policies do not relate to these subordinate groups.

It is important to find ways of effective policy deployment suitable for one's own company based on its scale and organization and the type of industry it occupies.

An excellent means of policy deployment is the “flag” method as developed by Komatsu, Ltd. Joban Kosan Corporation's group firms studied this method and some have made good use of it. But at SRH we have yet to sufficiently put it into practice. The author wishes to add that policies may be deployed by efficiently applying this method.

8. Pay strict attention to control points

In preparing activity programs, certain control points stand out as necessary to determine the progress of the activities undertaken.

Control points are synonymous with control items. Control points represent criteria for results, while check points and check items represent standards for factors.

At SRH we include in activity programs only the control points for criteria so as to preclude unnecessary confusion. It is important, though, to have a basic command of these terms, and to form a consensus regarding the usage of technical terminology.

The next question pertains to which control points - the criteria for determining the degree of progress achieved - should be chosen. Some criteria refer to the results of activities, other criteria correspond to factors. And there are always several factors, even if only the major ones are selected. But to try to control them all is much too complicated. Thus it becomes necessary to fully examine what should be picked as control points. At SRH we make it a rule to narrow them to from one to three points per activity. When doing this, information on management and the activities conducted over the past years

will prove helpful, and it enables selecting control points more effectively than when they simply come to mind. Many are the times when a person realizes the value of continuous activities.

9. Policy deployment and check-up (diagnosis) of the status of activities are effective in unifying intentions

After policy deployment has been completed within each section, top executives or department managers must determine whether each of the activity points agree with management policies, whether the control points of activity procedures that clearly show the results of activity points are appropriate, and if schedules as planned are suitable. For this reason internal diagnoses are made at jobsites immediately after and sometimes just before the beginning of each fiscal year. At such times reflections on the preceding year and methods for analyzing them, the content of business and jobsite problems surface for discussion. Meetings featuring such agenda for discussion become valuable chances for improvement. Department managers and section chiefs play a leading role in these diagnoses, and persons in supervisory positions or QC circle leaders are asked to take part, too, as long as doing so will not interfere with their work. Debates and examination at these diagnostic get-togethers afford employees superb opportunities to perceive the ideas and intentions of executives, and they give corporate directors good chances to visualize the actual situation and problematic points of the jobsites.

In this manner diagnostic meetings not only check the status of policy management progress, they also provide golden opportunities for enhancing communication between management and employees. So effective, in fact, are these meetings that it is no overstatement to say they are of major importance.

Subsequent internal diagnoses take place four to six months later, after activities based on the predetermined program have made substantial progress, or when results have started to appear.

The author believes it better to have these diagnoses conducted as frequently as possible if executive schedules permit. In actual practice, however, we cannot expect more than two or three per annum. Companies that have not had the experience are urged to initiate them, as it is certain that the directors of such firms will come to know personally just how vital and indispensable these diagnoses in fact are.

It is also believed that internal diagnoses constitute a form of on-job-training for persons occupying managerial and supervisory positions.

10. Activities result in business standardization and

the establishment of systems

Activities based on predetermined programs, when completed, should become improvement activities. In reality, though, not all such endeavors succeed as improvement activities. The reason for it is that something lacks with respect to the series of QC stories, including comprehension of actual conditions, the analysis of factors, and the examination of measures based on such analysis. Each department and section at SRH was asked to record all its activities, but in the end they could not.

Recording activities can provide valuable data on one's own job and may well come in handy at a later date. But considering themselves inept at keeping records, or feeling it burdensome, and sometimes hear workers complaining like, "Why is QC like this"

The reason activities fail to find their way into writing in line with QC stories is that workers want for skill in accomplishing their own activities. Thus they should make their very ineptness in that area the motivation for future improvement.

11. Conclusin

The author considers policy management as the most suitable way to deploy and implement the policies of top management and for securing favorable results therefrom. He also thinks that policy management success hinges on how well members of a concern understand and put the method in to practice, plus the number of persons the firm retains.

It is particularly essential that top management itself comprehends the method of policy management and takes the lead in tis deployment and implementation.

It stands as unreasonable to attempt an introduction of the policy management system used by predecessors to one's own enterprise from the very outset. Rather, it is advisable to start with basic policy management ideas which can be readily adapted to the needs of the company any gradually familiarize both workforce and management with them. It is important too that the policy management system introduced be appropriate for the quality of one's own firm.

President Suzuki demonstrated superb leadership by initiating TQC activities at Joban Kosan, but there arose differences among its employees concerning ideas and the perception of activities, and because of it TQC failed to evolve as a companywide exercise. The author sometimes thinks that this form of companywide endeavor may be what TQC is all about. The point is how effectively we apply QC methods according to the actual situation at one's corporation as grounded on basic TQC concepts. ★

31ST TOP MANAGEMENT QC CONFERENCE-SPEECH BY GUEST

“CONTINUOUS RESTRUCTURING AWARDED MANAGEMENT THROUGHOUT TECHNOLOGICAL INNOVATION AGE”(2)

from “Total Quality Control,” Vol. 45, No. 1 (January 1994) JUSE



Keizo YAMAJI
Vice-Chairman
Canon Inc.

Direction in our firm's transition

Next, I shall discuss our firm's case. Except for two subsidiaries in Kyushu, we have relocated all our camera-production operations to other Asian countries. Domestic plants that previously manufactured cameras have been switched to printer production.

However, because we also have printer plants in Thailand, where it is cheaper to produce, as soon as we switched our remaining domestic plants to printer assembly, we began planning to retool for other operations. As printing heads are a kind of device industry that requires operations similar to those involving semiconductors, we decided to switch to the production of printing heads at these plants.

Our earlier-mentioned attempts to teach employees about software have born fruit, and today 100 or more workers are capable of using the software on their own. In the future we plan to relocate assembly operations to Thailand and expand our device industry and software industry operations domestically.

However, this transition has so far taken five years, demonstrating the great amounts of time required to change one's operations while preserving workers' jobs at the same time. It is from this standpoint that I place such great emphasis on continuous restructuring.

Next, I shall discuss the concept of tripolar balance. We who now extol the virtues of symbiosis must also comply with international rules, which entails maintaining and expanding the system to which Japan belongs.

Broadly speaking, this is capitalism, democracy, and the free economic system. At the very least, it is our job to protect the free economic system, and to do this, Japanese exports must be kept from increasing too much. Unfortunately, at Canon exports still account for roughly 70% of the total, and so must be taken from a long-term perspective.

Until now it was usual to develop products in Japan

and then produce them overseas. Upon consideration, however, we concluded that this is an illogical strategy, that instead we should perform research and develop overseas, use these results to produce products there and then market these products worldwide.

Consequently, during the past five years we have built research institutions in Europe and United States, the purpose being not merely to design local versions of copiers developed in Japan, but rather to perform research on more basic themes. Each country has its own particular technological strengths that reflect its national character. The Japanese, for instance, are extremely adept at hardware-related technology, while one of America's strengths is computers. In Europe, the technology for telecommunications and audio devices is extremely advanced. We therefore decided to divide our research operations according to this tripolar arrangement.

Naturally, we must also continue research in Japan. Several years ago we stopped constructing production plants in Japan, where we would instead concentrate on building research institutions. In June we completed an ecological research institution in the Kansai region, and have also purchased a 330,000-square-meter site near the foot of Mt. Fuji, where next year or thereabouts we plan to begin constructing another research institution.

Let me now describe the results we have achieved in Europe in developing special stereo speakers. In England we formed a company called Canon Audio and established the framework for producing products there and marketing them worldwide; we have slowly but steadily begun selling these products in Europe. Although these are still very limited results, we envision the establishment of a tripolar trade balance sometime in the 21st century.

Now I will move on to our five principles of research and development. The first is that we will not engage in any research for military purposes. Second, we will not

engage in any research that goes against the environment or the ecology. This naturally follows our belief that the objective of industrial technology is a return to the starting point.

The third principle is to create technological and product genres previously unknown to the world, which we believe is our mission as a manufacture. This also entails making maximum use of existing value. Tremendous research outlays will be needed to do this, which is why we intend to take out as many patents as possible in order to prevent competing manufacturers from entering our territory for a certain period.

Our fourth principle is a respect for other company's original products. This entails allocating separate niches in accordance with each firm's original technology and products -- for instance, providing other companies with our original products and, in exchange, being allowed to purchase their products to sell.

This fifth principle concerns the internationalization of research and applying the results of research to developing local business operations, which have already touched on in my discussion of tripolar balance.

Lastly would to talk about diversification. The Japanese equivalent of the word "diversification" literally means creating multiple cores, which, in this case, entails greatly increasing the number of core businesses. Looking at Canon's corporate history, we see that roughly every six years we have succeeded in large-scale diversifications, each of which has resulted in expanded sales. Our laser printer business, for instance, took off in 1985, while 1991 saw our Bubble Jet printer technology take off.

This means that around 1997 we must begin showing signs of major technological breakthrough with the potential of becoming a new major business. Thus, the concept of diversification is an extremely important one to our company, and in accordance with the principle of symbiosis, we plan to diversify with emphasis on symbiosis among people, between people and machines, and between people and nature, in this order.

Symbiosis among people is something that we have been engaged in: Our camera division has promoted symbiosis by facilitating human communication through the visual image (in the form of photo graphs) and improving mutual understanding between people, while the products sold by our office equipment division facilitate communications by providing more information than photographs alone.

It follows that we must consider our past operations in terms of symbiosis between people and machines. The most important aspect of this is harmony between people

and machines, and we must steer our operations in a direction that leads to this harmony. To do so, we must develop ecological technology.

Hence, we have decided to develop an "ecological series" for each product category, including cameras and copiers. For instance, the ecological series of copiers now being developed incorporates noise reduction, energy conservation and ozone-free copier operation, problems to which we can all relate.

Next comes symbiosis between people and nature, a major part in which is played by ecological technology designed to achieve harmony. I shall discuss the three aspects of this: materials, processes and energy.

First, as a response to materials-related problems we have begun recycling operations. Roughly three years ago, for instance, we began recycling laser printers. This is because we had expected that in the future manufacturers would be required to recover and recycle the products they build.

This prediction was fulfilled in Germany, where beginning this year manufacturers of packaging materials are required to recover what they produce. The mandatory recovery of manufactured products will begin next year. The reason for our early approach to this issue is that we believed it would help us maintain our lean technology and patents, as well.

Concerning the subject of clean processes, we have already stopped using Freon and triethylenes. Also, our efforts to use existing technology to create clean processes include, for instance, operations now in progress involving textile-printing applications for our Bubble Jet technology.

Directions in future research

Lastly will discuss solar energy. We are currently wholeheartedly engaged in solar battery development, which was the first subject tackled by the Kansai Research Institute I mentioned earlier. We also plan to expand our research all fields of ecology.

Although I have used examples from Canon's operations in today's discussion of continuous restructuring, I am sure you see the great universality of these examples.

Let us strive for symbiosis through a global division of markets. In relationships between two industrialized nations or an industrial nation and developing nation, each should strive for a prosperous coexistence through an effective division of markets according to the original technologies possessed by each. Another strategy is symbiosis with nature through an ecological approach. Our firm sincerely hopes that more and more people and corporations decide to work together with us.

Thank you very much for your attention.



“THOUGHTS ON THE QC CIRCLE SELECTION CONFERENCE”

from “Total Quality Control,” Vol. 45, No. 2 (February 1994) JUSE

Tsuyoshi KANO

Sanyo Electric Works Co., Ltd.

In June 1993 our company’s entry “Naruhod (Indeed) the Circle!” was chosen at the QC Circle Grand Prize selection for Japan’s Gifu district to compete at the selection conference for the Tokai Chapter slated to take place the following month. This nomination marked our firm’s first QC circle triumph in more than two decades. I had never been so moved in recent years as on the day I heard the announcement.

During all the time we had practiced quality control our QC circle could never make a showing at the Gifu selection conference. Four or five years ago, following the Gifu conference, I spoke with the man who was president of our company then. “We failed again this time,” I sighed. “Why?” asked the president. “Maybe we’ve been too conservative,” I said. “What’s wrong with being conservative?” he answered. ‘Aren’t there any other reasons?’ I remember how hard it was to promote QC circle activities. Then one of our executives made a suggestion: “Why don’t we put more time and effort into preparing for our presentation next time? His advice failed to elate me as I’d felt sorry for having caused our QC circle members so much trouble as it was. Reviewing our QC Circle General Principles made me all the more anxious about what to do.

At Sanyo Electric Works some sixty QC circles are grouped into eight divisions, each of which has a promoter who, was picked from among our department managers and their deputies, supports companywide QC circle activities. I consulted with these promoters in search of bright ideas but drew a blank. Just about at that time, our company was getting ready to draft its three-year plan for the period 1990 through 1992, and during our discussions regarding this, a proposal emerged: “Sanyo Electric declares its intention to introduce a presentation on progress at our corporate QC circle conference three years hence, and we urge our QC circles to conduct progress-oriented activities under their own three-year plan.” The proposal won acceptance and was included in our firm’s blueprint for QC

circle activities 1990 through 1992. Actually it produced better results than expected. At our QC circle conference three years later, it came to light that the proposed progress-oriented QC circle activities had made circle members more independent and enabled them to recognize the importance of personal growth, there by enriching the nature of their activities even more.

That, then, is how Sanyo Electric’s QC circle entry came to be nominated at the Gifu QC Circle Grand Prize selection conference. Undoubtedly our QC circle members had an easier time than before when preparing for their presentation at the conference. Unfortunately they failed to emerge victorious at the Tokai Chapter’s selection conference. Still, some of the judges remarked, “Your QC circle members made an excellent presentation.” At hearing such happy words, we grew convinced that probably we were right in having made a presentation that was “conservative” It left us with high hopes for the future.

Sanyo Electric has been stressing continuity in QC circle activities, and corporate policy has made us devote ourselves to positive and rewarding uniform QC circle activities. In addition our firm has made it a principle to make conservative, unembellished presentations at the selection conference. I wish to continue pursuing this principle.

The provisions of the QC Circle Grand Prize stipulate that “All materials for presentation (OHP, slides and charts) must be prepared by the QC circle members concerned,” and that “QC circles should not make their presentations too showy or gaudy.” I sincerely hope that one of our company’s QC circles will make a good showing at the Gifu selection conference and go on to win at the Tokai Chapter’s conference. Looking forward to it with great expectations, I wish to proceed with our QC circle activities in earnest with our circle members.

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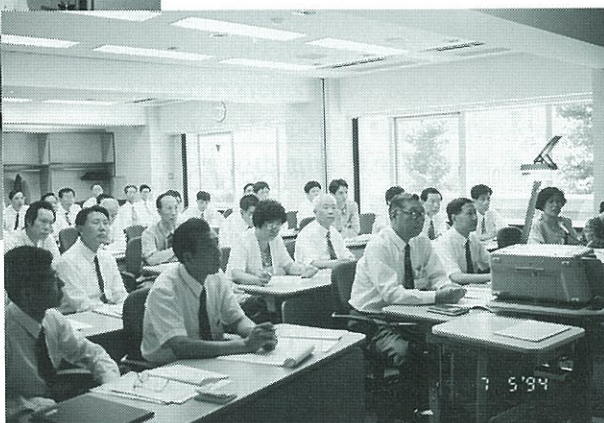
Visitors from Abroad



International Seminar for Top Management
June 13 to 23, 1994
Number of Participants : 18



TQC Seminar for China Top Management
July 5 to 14, 1994
Number of Participants : 39





**International Convention on
QC Circles 1995 Yokohama
October 18 - 20**

“QC Circles
toward the 21st Century”

CALL FOR PAPERS

All papers offered for presentation would preferably be related to the following subjects.

1. Case Reports of problem solving implemented in the workplace by QC Circles.
2. Reports on the promotion of QC Circle activities.
 - A) Characteristics and problems of QC Circle promotion.
 - B) Education and Training of the QC Circle facilitators, leaders and members.
 - C) Nationwide review on the QC Circle activities.
 - D) QC Circle activities based on TQC/TQM

250 words English abstract with the Application Form (given in the circular) should be submitted to the ICQCC '95-Yokohama Programme Committee not later than January 31, 1995.

All authors will be advised by February 28, 1995 if their papers have been accepted or not. The final papers, written in Japanese or English in the typing format paper provided by the secretariat, should be submitted by June 30, 1995.

Speakers (one person for one presentation) will be entitled to a 50% reduction of the registration fee.

ICQCC '95-Yokohama Secretariat
Union of Japanese Scientists and Engineers (JUSE)
5-10-11 Sendagaya, Shibuya-ku, Tokyo 151, Japan
P h o n e : 81-3-5379-1227
F a c s i m i l e : 81-3-3225-1813

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