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# FINAL REPORT

UNIDO Contract No.92/160/VK
Project No.US/RAS/92/122

*Seminars on "Pomotion and Application of ISO 9000 - Tokyo,
Japan" and on "Promotion and Needs Assessment on
Standardization and Quality Control - Maniia, Philippines"*

September, 1995
Japanese Standards Association

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## 1. Preface

With reference to the UNIDO Facsimile dated October 29, 1992. Japanese Standards Association (hereinafter referred to as JSA) was awarded the subcontract (No. 92/160/VK) to execute the Project No. US/RAS/92/122.

The services required for the subcontractor consist of the following 3(three) works:

(1) to organize a seminar on "Promotion and Application of ISO 9000 Series" in Tokyo, Japan,

(2) to organize a seminar on "Promotion and Needs Assessment on Standardization and Quality Control" in cooperation with the host organization in Manila, the Republic of the Philippines, and

(3) to develop a volume of audio-visual training material related to the project.

All of them have already been completed as scheduled in accordance with the Terms of Reference of the subcontract.

This draft final report describes the result of execution of all of the duties includ -ing the evaluation.

## 2. Background Information

In order to improve the quality of products of a country which will eventually lead to enhancement of its exports and international competitiveness, promotion of standardi- zation and quality management is indispensable.

Japan has consistently been making efforts to encourage its industry through develop- ment of Japanese Industrial Standards (JIS), effective application of JIS Making System as well as promoting companies' total quality control, and as a result, a firm basis for industrialization has been established.

More recently, Japan also pays particular attention to the world wide trend on the prevalence of quality system through ISO 9000 Series as a quality improvement tool.

UNIDO, which is well aware of the needs and importance of industrial development in a more integrated fashion for developing countries, is activity carrying out implementation

ofits extensive programmes in the pertinent fields.

This joint technical cooperation of UNIDO and Japan is expected to contribute to acceleration of the process of establishing an industrial basis and infrastructure in the field of standardization and quality management in developing countries.

## 3. Scope of Work

The Terms of Reference for Subcontracting Organization describes the scope of work of the subcontractor as follows:

A- Subcontractor will be responsible for coordinating with local authorities and the Philippine counterparts in connection with substantial and organizational matters of both seminars.

B- Preparation of documents on ISO 9000 and other working material for the 10 participants of the Tokyo ISO 9000 seminar.

C- Preparation of working material according to the agreed programme, to be mailed two weeks in advance to the 120 participants of the Manila Seminar, with specific information on the Japanese experience on promoting a firm basis for industrialization through standardization and quality control techniques.

D- Selection of lecturer(s) for the Tokyo ISO 9000 Seminar and other administrative preparations.

E- Five lecturers (experts) from Japan, selected according to project objectives and programme, qualified to promote the importance of rationalizing production processes in developing countries through standardization.
The subcontractor must provide travelling and DSA costs.

F- Preparation of a fourth volume of audio-visual training material, including a video tape in three international systems (PAL, SECAM, NTSC). There will be a specific lecture in the seminar on the utilization of this material on a permanent basis, by Government and regional bodies in developing countries to support their industrialization efforts through the transfer of Japanese technology, know-how and experience in this field.

G- For the Manila Seminar : Travel and DSA for five persons as support staff, which could be divided as follows:

- Two persons to concentrate on advance preparations, including negotiations with Philippine authorities.

- Three persons to support direct seminar activities.

H- Logistics and technical services including interpretation, assuring availability of local administrative support personnel.

In addition to the above, the following provision of facilities is required in cooperation with local authorities concerned:

- Conference room with sitting accommodations for 150 people
- Interpretation services (English - Japanese)
- Translation of materials (English - Japanese)
- Photocopying services
- Typing or word-processing services
  (including secretaries or clerks)
- Microphones
- Audio-visual material: projector, movie screen, video-tape player, etc.
- Tape recorders
- Podium for lecturers
- Registration desks and ID card distribution
- Catering services
- Hotel reservations- Transportation services
  (hotel-Conference location-Hotel)
- Miscellaneous services

It is to be noted that the preparation of a volume of audio-visual material(video tape)is to be intended not only for special or exclusive Seminar use but for general use; promotional activities by UNIDO in the field of standardization and quality control. This point has been agreed between UNIDO's substantive section and the subcontractor at the beginning stage of Project implementation.

## 4. Activities and Achievements

### 4.1 The ISO 9000 Seminar

Please refer to the attached interim-report(ANNEX-1)
which was submitted to UNIDO on 30th July, 1993.

### 4.2 Seminar in Manila, Philippines

#### 4.2.1 Seminar Objective

The Project objectives described in the Project Document are as follows:

The immediate objectives of the project are to promote modern concepts of standardization and quality control in Manila and other ASEAN countries by:

- Acquainting representatives of the Governments and industry with the significance and real meaning and benefits of standardization and quality control as support activities for their industrial development, the rationalization of production, of import process that must be included in national policies and plans, of the strategies and programmes, along with human and financial resources;

- Developing introducing audio-visual training aids to promote and expand the knowledge regarding practical techniques and means for standardization and quality control;

- Assessing the needs of developing countries (principally in the ASEAN region) and mapping out actions for standardization, metrology, quality control and other related disciplines to serve as engines of industrial growth.

Immediately after completion of the 3rd UNIDO Seminar held in Jakarta, Indonesia, on the way back to Japan, two MITI officials and two staff members of JSA (subcontractor) visited Manila, the Philippines form January 30th to February 3rd 1993, to discuss the direction and preparatory work with the Bureau of Product Standards (BPS) , the host orgnization, and investigate some proposed venues and accommodations concerning the forthcoming UNIDO Seminar.

As a result, the details of the seminar programme and related arrangements were finalized as shown below.

1) Title of the Seminar
"Meeting Global Market Challenges with Total Quality Control and ISO 9000"

2) Direction of the Seminar:
        A.   Total Quality Control (TQC)
        B.   ISO 9000 series
        C.   The harmonic integration of TQC and ISO 9000

3) Date and duration of the Seminar:
        from 28 to 30 September 1993

4) Venue: Philippine International Convention Center (PICC)
        Add.   CCP Complex, Roxas Blvd.
        Metro Manila, Philippines

5) Responsibility
   Japanese side:   - Preparation of interpretation facilities based upon a recommendation by EPS
                   - Printing of program and materials
                   - Japanese speakers arrangement
                   - Interpretor(s) arrangement
                   - Transportation service for the speakers
   Philippines side: - Invitation of local participants
                   - Secretariat services
                     (reception, copy, I.D)
                   - Nomination of an appropriate local speaker

6) Expected number of the participants: Appx. 120

7) Invited guests from ASEAN countries: one from each
   country

8) Others:

A. Mr. Navarrete, Director of BPS proposed one speaker from the Philippines and one from Japan for each topic. JSA, in principle, agreed with this proposal.

B. Preparation to beg'n immediately. Any other details and progress of prepar -tory work to be communicated by facsimile or international telephone.

9) List of textbook prepared (Full text attached as Annex-4)

For General Seminar

① Keynote Messages

② Importance of Human Aspect in Company-Wide Quality Control

③ TQC-It's Impact on Yazaki-Torres Manufacturing Inc.

④ UNIDO Presentation

⑤ Significance of the Introduction and Utilization of the Quaity System based on ISO 9000

⑥ ISO 9002- Pilipinas Shell's Strategy for Market Competitiveness

⑦ TDK's 4 Steps to ISO 9001 Registration and TQC Activities

⑧ TQC and ISO 9000 - Are They in Conflict ?

1 0 ) Schedule of the programme

| DATE & TIME | | CONTENTS |
|---|---|---|
| 9/28 | 8:30 - 9:30 | Registration |
| | 9:30 - 9:35 | - National Anthems: Philippines |
| | 9:35 - 9:45 | - Welcome Address |
| | 9:45 - 10:15 | Keynote Messages |
| | 10:15 - 10:45 | Coffee/Tea Break |
| | 10:45 - 12:15 | Importance of Human Aspect in Company-Wide Quality Control |
| | 12:15 - 14:00 | Luncheon |
| | 14:00 - 15:30 | TQC-It's Impact on Yazaki-Torres Manufacturing Inc. |
| | 15:30 - 16:00 | Coffee/Tea Break |
| | 16:00 - 17:00 | UNIDO Presentation |
| 9/29 | 9:30 - 11:00 | Significance of the Introduction and Utilization of the Quality System Based on ISO 9000 |
| | 11:00 - 11:20 | Coffee/Tea Break |
| | 11:20 - 12:50 | ISO 9002- Pilipinas Shell's Strategy for Market Competitiveness |
| | 12:50 - 14:20 | Luncheon |
| | 14:20 - 15:50 | TDK's 4 Steps to ISO 9001 Registration and TQC Activities |
| | 15:50 - 16:10 | Coffee/Tea Break |
| | 16:10 - 17:40 | TQC and ISO 9000 - Are They in Conflict ? |
| | 17:40 - 18:00 | Summary of Proceedings |
| 9/30 | 9:30 - 11:00 | Country Report Presentation( ※- 1) |
| | 11:00 - 11:20 | Coffee/Tea Break |
| | 11:20 - 12:50 | Panel Discussion : TQM and ISO 9000 series ( ※- 2) |
| | 12:50 - 13:00 | Closing Ceremony |
| | 13:00 - 14:30 | Luncheon |

The number of participants of the General Seminar amounted to 170 for each day of the three consecutive sessions. All participants were observed to be an attentive audience having interest in most of the subjects, especially in the case of the Joint Venture, and participation of the panel discussion was very active.

On the last day of the seminar, questionnaires which had been prepared in cooperation with BPS staff were distributed to the participants in order to collect their reactions

and opinions about the seminar.

An evaluation report compiled in cooperation with BPS including analysis on the participants replies to the questionnaire was attached as ANNEX-2.

## ※-1 Country Report Presentations

Acquiring the ISO 9000 firm registration does not directly relate with improvement of the quality of products. Maintaining fruit of efforts, which were exerted to improve the culture and attitude of the corporations, aiming to obtain the ISO 9000, and furthering positive quality improvement activities based on established quality system, will lead t increase the competitiveness in the market.

In order to establish the quality system, improvement of consciousness concerning quality from top-managements to general workers is indispensable. In this direction, provision of training and education concerning quality control is of primary importance.

In the country report presentation, current situation and present problems concerning TQM and ISO 9000 series taking place in ASEAN countries were presented based on the position papers by the speakers, respectively.

(INDONESIA)

Mr. Syarif Husen
Center for Standardization - LIPI/DSN Secretariat

Paper : International Cooperation to Achieve Competitive Quality of Products and Services. (See ANNEX-4)

(MALAYSIA)

Mr. Lim Teng Chee
Director of Standards & Quality
Standards and Industrial Research Institute of Malaysia

Paper : Achieving International Competitiveness through Quality Implementation of the ISO 9000 Standards in Malaysia (See ANNEX-5)

(THE PHILIPPINES)

Ms. Melba M. Valdez
Assistant Director
Bureau of Product Standards (BPS)


Paper : International Cooperation to achieve Competitive Quality of Products and Services
- Implementation of the ISO 9000 Standards in the Philippines(See ANNEX-6)


(SINGAPORE)

Mr. Yu Tek Ming
Principal Engineer,
Cerification Department
Standards & Quality Division of
Institute of Standards and Industrial Research (SISIR)


Paper : International Cooperation to achieve Competitive Quality of Products and Services
(See ANNEX-7)


(THAILAND)

Ms. Kanya Sinsakul
Deputy Secretary-General
Thai Industrial Standards Institute (TISI) /MOI


Paper : Implementation of TQM and ISO 9000 in Thailand (See ANNEX-8)


(JAPAN)

Mr. Kunio Inoue
Director for International Standardization Affairs,          AIST. MITI.


Paper : Case study on results achieved by implementation of TQC in Japan / Effects obtained
through introduction of ISO 9000 series in Japan (Main Points)
 - General effects obtained from becoming a registered firm-      (See ANNEX-9)

## ※-2 Panel Discussion on TQM and ISO 9000 series

Panel Leader : Mr. K. Inoue

Panelists     : ASEAN Representatives

                 Dr. :. Kondo (Japan)

                 Mr. G. Appelgren (UNIDO)

The Panel Discussion was proceeded in such manner that Mr. Inoue, Panel Leader, summarize the Country Report Presentation and made questions to each Panelist concerning following items and they answered :

@ What is necessary for establishment of mutual recognition for the smooth international trade.

ⓑ How to apply TQM and 9000 series.

### 4-3 Video Tape Production

We made Vol.4 on a subject "Statistical Methods" as the third of particular subjects.

Volume 4 introduces the contents of the frequently used statistical methods necessary for effective quality control on a manufacturing process and the detailed information concerning its application techniques.

More specifically, cases dealt in this volume show how problems were solved and how quality was improved by use of the following seven tools for quality control.

         ①    Check Sheet

         ②    Pareto Diagram

         ③    Cause and Effect Diagram

         ④    Stratification

         ⑤    Histogram

         ⑥    Scatter Diagram

         ⑦    Control Chart

As in the cases of Vol.1, Vol.2 and Vol.3, we held meetings 7 times of the video production committee consisting of specialists in the fields of electricity and electronics. precision machinery as well as professor of university(specialist for statistical methods) and officials of relevant government offices. with Yozo Mukawa, honorary professor at Chuo University as the chairman. The company which had cooperated in filming on the spot also joined the committee as a temporary member to express its concrete opinion.

Through repeated revision, we finally made a scenario consisting of the following seven chapters:

1) Prologue
2) There is a Number of Faults in Defective Products
3) What Causes Defects
4) A Comparison Study by Stratification
5) Solving Problems Concerning Variables
6) The Weight of the Bottle in Relation to the Amounts of Contents
7) Utilizing the Control Chart

The video tapes are available in all three video formats:
VHS-SECAM, VHS-PAL and VHS-NTSC in English.

Furthermore, we recorded white mother tape with no commentary·no music/effects and music/effects on separate tracks to enable dubbing of the English Version in French and Spanish so that the video tapes might be effectively used in various countries. At the request of the UNIDO Head Office we made the above only in the format "BETACAM SP(PAL)."

## 5. Remarks

### 5.1 Seminar in Manila , The Republic of the Philippines

The UNIDO seminar on Industrial Standardization and Quality Control has been held thr[ee]
times in ASEAN countries.

The outline of the each UNIDO seminar is shown below:

|  | The First seminar | The second seminar | The third seminar |
|---|---|---|---|
| Venue | Bangkok, Thailand | Kuala Lumpur, Malaysia | Jakarta, Indonesia |
| Date and Duration | 23rd-25th, January 1990 | 29th-31st, October 1991 | 26th-28th, January 1993 |
| Title | Symposium on Industrialization through Standardization and Quality control | Seminar on acheving competitive Quality through Standardization and Quality control | Seminar on achieving compe[t]itive Quality through Stan[d]ardization and Implementat[ing Quality System |
| Number of participants | 150 | 120 | 120 |
| Host organization | TISI Thai Industrial Standards Institute | SIRIM Standards and Industrial Research Institute of Malaysia | DSN Standardization Council of Indonesia |

As mentioned in each final report, all the seminars were completed successfully, and
appreciated by the participants reflecting the needs of ASEAN countries in the field of
Industrial Standardization and Quality Control.

The 4th UNIDO seminar was held for three days from 28th to 30th September, 1993 in the
capital of The Republic of the Philippines, Manila, in cooperation with three organization[s]

which were Bureau of Product Standards(BPS)/ Department of Trade and Industry. Philippines Institute of Chemical Engineers (PICHE) and Philippine Exporters Confederation. Inc (PHIL-EXPORT).

We organized the seminar with a theme of " Meeting Global Market Challenges with Total Quality Control and ISO 9000 Series, for the top and senior level managers who are directly responsible for promoting and implementing standardization and quality management in their factories or governmental agencies in the Republic of the Philippines and ASEAN countries.

It is to be noted from the result of evaluation of the seminar that the content of the seminar was favorably accepted by the audience.  This time, the questionnaire were collected, tabulated, and compiled by BPS, and the result are shown in ANNEX 3.
The number of respondents to the questionnaires were 115 out of the 170 participants in the General Seminar, and the recovery rate was 67.6%. The responses of participants to " Seminar content", "The usefulness of the seminar", "The quality of presentation", "Seminar programme", "Interpreters", etc. were very favorable. 90% of the respondents to "Overall satisfaction" were "very good" or "good", and the other 10% were "average", but "poor" was zero.

We think that the 4th seminar was completed successfully this time also , and wish to express our thanks to the cooperation of BPS, PICHE, and PHILEXPORT.

ASEAN countries are positively committing to quality control on the opportunity to have to be in compliance with ISO 9000 Series.
At present, Japanese technical cooperation with ASEAN countries in the field of quality control has been made in keeping the bilateral cooperative relation such as between Japan and Thailand, and Japan and the Philippines.
On the other hand, between EC and ASEAN, a cooperative relation between regions through the implementation of a project sponsored by EC has been set up in the field of industrial standardization and quality control since three years ago.  As a result of these activities, the ASEAN Consultative Committee in Standard and Quality(ACCSQ) has been established, and this Committee will act representing entire ASEAN in the technical cooperation inside and outside ASEAN.
In view of the importance of the subjects, ACCSQ has also proposed Japan to give the assistance for introduction of TQM into ASEAN industries such as:

- Training of industries' business owners on Total Quality Management and ISO 9000 in Japan and ASEAN Countries.

- Training of Trainers of industry associations or trade societies, etc.

In the development of this situation, it is expected that the UNIDO project in the future including seminar organization will play important role for the promotion of standardization and quality management as a series of regional technical assistance for ASEAN to be implemented through the sphere of above mentioned ACCSQ.

## 5.2 Video Tape Production

Our objective for developing the video is to introduce seven tools for quality control a basic technique for statistical quality control, to people of developing countries in a comprehensible way. The senario of the video focuses in what cases and for what purposes the seven tools should be used, and how the results should be utilized, respectively.

Specifically, glass bottles for cosmetics have been chosen as a subject of the senario and an occurance of a trouble of the glass bottles unfolds.

In order to emphasize the importance of solving problems, we have allocated majority of time of the senario on explanation of subjects such as, "application of check-sheet", "management priority by use of a Pareto diagram", "pursuit of cause by use of a cause and effect diagram", "comparison study and activity effect by stratification" and "understanding and coping with quality by use of histogram", followed by appearance of a factory manager, who put stress on significance of exercising daily control with use of "scatter diagram" and "control sheet". At the very end of the senario, the main character convinces herself with how significant effects various statistical techniques exert upon manufacturing procedure and improvement of quality.

To help people of developing countries feel sympathy with the overall contents of the senario, we have asked a Filipino woman to act as a trainee. In the video, she learns how to solve problems by using statistical tools from a Japanese trainer through OJT.

Due to limited time of a video, detailed explanation concerning how to develop a Pareto diagram, a cause and effect diagram, a scatter diagram, are given in the sub-texts.

complementary texts. with an aim to deepen understanding of the subjects.

The series of the video are comprised of the outline of industrial standardization and quality control (first volume). and explanation of related subjects in the following volumes.

We sincerely hope that the series of video. together with actual education on each subject. will give people of developing countries a synergy effect to help dissemination and recognition of the subjects. which are expected to promote industrialization and economical development of the developing countries.

# INTERIM-REPORT (II)

UNIDO Contract : 92 / 160 / VK

Project No. US / RAS / 92 / 122

Seminars on "Promotion and Application of ISO 9000 - Tokyo, Japan"
and on "Promotion and Needs Assessment on Standardization and
Quality Control - Manila, Philippines"

July 30, 1993

Japanese Standards Association

# Contents

1. Background Information

United Nations Industrial Development Organization ( UNIDO)
informed Japanese standards Association ( JSA) by its facsimile
transmission No.5606 dated 2 October 1992 that UNIDO selected
JSA as "the subcontractor" for the execution of services for
the UNIDO Project No. US/RAS/92/122 ( UNIDO Contract
No.92/160/VK) at total all-inclusive cost US DLRS One Hundred
Sixty Eight Thousand Two Hundred ( US$ 168,200) payable in that
currency.

2. Objective of the project

Objective of the project is the promotion of the most
important element of standardization and quality management
among ASEAN countries, aimed at needs to achieve competitive
quality through standardization and quality management and to
be prepared for the export process with the adequate
application of ISO 9000 Series ( International Standards for
Quality Assurance).

3. Outline of the project

The services required for JSA ( subcontractor) consist of the
following three ( 3) duties:

(1) to organize a seminar on "Promotion and Application of
ISO 9000 Series" in Tokyo, Japan,

(2) to organize a seminar on "Promotion and Needs Assessment
on Standardization and Quality Control" in cooperation
with the host organization in Manila, the Republic of the
Philippines, and

(3) to develop a volume of audio-visual training material
related to the project.

4. Scope of work

In accordance with the Article 3 "Scope of Work by Subcontracting Organization" in the Terms of Reference for Subcontracting Organization, ANNEX II of the Project Document dated 10 June 1992, the scope of the work of JSA is as follows;

A- JSA will be responsible for coordinating with local authorities and the Philippine counterparts in connection with substantial and organizational matters of both seminars.

B- Preparation of documents on ISO 9000 and other working material for the 10 participants of the Tokyo ISO 9000 Seminar.

C- Preparation of working material according to the agreed programme, to be mailed two weeks in advance to the 120 participants of the Manila Seminar, with specific information on the Japanese experience on promoting a firm basis for industrialization through standardization and quality control techniques.

D- Selection of lecturer(s) for the Tokyo ISO 9000 Seminar and other administrative preparations.

E- Five lecturers (experts) from Japan, selected according to project objectives and programme, qualified to promote the importance of rationalizing production processes in developing countries through standardization.
The subcontractor must provide travelling and DSA costs.

F- Preparation of a fourth volume of audio-visual training material, including a video tape in three international systems ( PAL, SECAM, NTSC). There will be a specific lecture in the seminar on the utilization of this material on a permanent basis, by Government and regional bodies in developing countries to support their industrialization efforts through the transfer of Japanese technology, know-how and experience in this field.

G- For the Manila Seminar: Travel and DSA for five persons as support staff, which could be divided as follows:

- Two persons to concentrate on advance preparations, including negotiations with Philippine authorities.

- Three persons to support direct seminar activities.

H- Logistics and technical services including interpretation, assuring availability of local administrative support personnel.

5. Progress of the project

This Interim Report is for the execution of the first part of the duties mentioned in item 3.

( 1) The Tokyo ISO 9000 Seminar
It was successfully completed on 21 to 24 July, 1992. (See attached APPENDIX 1 as the result of the seminar)

( 2) The Manila Seminar
We are now in the preparatory stage to hold the Seminar in the last part of September from the 28th to the 30th, 1993. Further, this Seminar was scheduled in May 1993 at the

beginning, however, because of the request by the host organization ( Bureau of Product Standards : BPS) , it has been postponed to the above mentioned period accordingly.

Discussion with the host organization

Immediately after completion of the 3rd UNIDO Seminar held in Jakarta, Indonesia, on the way back to Japan, two MITI officials and two staff members of JSA (subcontractor) visited Manila, the Philippines from January 30th to February 3rd 1993, to discuss the direction and preparatory work with the Bureau of Product Standards ( BPS) , the host orgnization, and investigate some proposed venues and accommodations concerning the forthcoming UNIDO Seminar.

The following conclusions have been reached :

① Date and duration of the Seminar :
    from 28 to 30 September 1993
② Venue : Philippine International Convention Center ( PICC)
        Add.  CCP Complex, Roxas Blvd.
        Metro Manila, Philippines
    Tel.  + 63 2 832 0309
③ Direction of the Seminar :
        A. Total Quality Control ( TQC)
        B. ISO 9000 series
        C. The harmonic integration of TQC and ISO 9000
④ Expected number of participants : Appx. 120
⑤ Invited guests from ASEAN countries : Two from each country
⑥ Others :
        A.  Mr. Navarrete, Director of BPS proposed one
            speaker from the Philippines and one from Japan
            for each topic. Japan, in principle, agreed with
            this proposal.

B.    Preparation to begin immediately. Any other details and progress of preparatory work to be communicated by facsimile or international telephone. The contact person for Japan will be Mr. Yawara Tomiyama, JSA, · · · and for the Philippines will be Ms. Lourdes V. Navia, BPS.

Recent developments

We have had several communications with BPS by international calls and facsimiles, and the following has recently developed:

①  Title of the Seminar

Mr. Renato Navarrete, Director of BPS proposed the title of the Seminar in his facsimile transmission of May 20th, 1993, as "Meeting Global Market Challenges with Total Quality Control and ISO 9000", and we accepted his proposal.

②  Program of the Seminar

Seminar program brochure including names of speekers and their topics has been completed, and 700 copies of the brochure have been sent to BPS. (See APPENDIX 2)

BPS sent confirmation by facsimile on 28th July, 1993.

③  Number of guests from ASEAN countries to be invited to the Seminar

Due to limited financial resources of UNIDO, at a discussion meeting with MITI officials, we decided to invite 1 (one) representative from each ASEAN country (Indonesia, Singapore, Malaysia and Thailand) .

( 3) Development of Audio- Visual Training Material

We have been preparing a volume of audio-visual training material (video tape: forth volume) in three international systems (PAL, SECAM, and NTSC) concerning the application of

statistical methods in quality management activities. We have organized a committee for preparation of this UNIDO video, this effort will bear fruit by this coming September.

## 6. Activities and Achievements

### The Tokyo ISO 9000 Seminar

In accordance with the UNIDO Contract No.92/160/VK, for the UNIDO Project No. US /RAS/92/122, JSA held a seminar ( UNIDO ISO 9000 Tokyo Workshop) aimed at development of effective implementation system of ISO 9000 series in ASEAN countries through deliberation of the present situation and existing issues, in Tokyo from the 21st to the 24th of July,1992.

Preparatory work

Before the Workshop, JSA organized a committee concerning this in consultation with AIST. MITI, and carried out the following substantial and organizational activities as the preparatory works :

Substantial activities
① Preparation of provisional program including technical visit
② Preparation of draft agenda
③ Preparation of the necessary volume of documents
④ Preparation of appropriate number of simultaneous ( English-Japanese) interpreters
⑤ Preparation of all necessary equipment
   ( Photocopy machines, word-processors, microphones and receivers, interpretation facilities, OHP etc.)
⑥ Permanent coordination with UNIDO Headquarters by facsimile and telephone

⑦ Communication with the representatives of ASEAN countries requesting submission of their country reports and questionaires

⑧ Preparation of documentation in coordination with speakers and participants

⑨ Coordination and preparation of technical visit

⑩ Other miscellaneous services concerned


Organizational activities

① Decision of venue

② Hotel booking for the guests from ASEAN countries

③ Other miscellaneous services concerned


At the Workshop

  JSA in consultation with AIST. MITI, carried out the following activities during the Workshop:

① Provide local Japanese expertise

② Registration work for the representatives from ASEAN countries at the Shiba-Park Hotel at 20:00-22:00 on Tuesday 21st July,1992

③ Technical tour to the Murayama Plant of NISSAN Motor Co. on Wednesday 22nd July,1992

④ Secretary services, such as transportation, information, copying and distributing documents and minutes reporting etc.

⑤ Other miscellaneous services concerned


  In this Workshop 8 representatives from 5 ASEAN countries (Thailand, Malaysia, Singapore, the Philippines and Indonesia) , 1 representative from UNIDO Headquarters and 7 Japanese representatives, starting with Mr. T. Mukai, Director General of Standards Dept.,AIST.MITI, participated.

They exchanged views and had a series of discussions concerning the mutual recognition based on the " Quality System Assessment and Registration Scheme " of ISO 9000.

As the result of the Workshop, we would like to herewith attach the relative documents as APPENDIX 1.

## Report on UNIDO/ ISO 9000 Tokyo Workshop

### 1. Outline of the Workshop

The UNIDO/ISO 9000 Tokyo Workshop was held on 23 and 24 July 1992 at the International Conference Room in MITI. Tokyo.

Representatives from 5 ASEAN countries and Japan attended the workshop and are shown in the participants list attached as ANNEX 1.
The workshop proceeded in accordance with the agenda shown in ANNEX 2.

#### 22 July 1992

The factory visit to the Murayama Plant, the NISSAN Motor Co. Ltd. was prepared as the technical visit. Participants observed the way of the implementation of Total Quality Management System in Japan directly.

#### 23 July 1992

The workshop commenced with the welcome speech by Mr. Tamotsu Mukai. Director-General of the Standards Dept., AIST. MITI and was followed by the address from the representative of UNIDO. Mr. Keiki Fujita.

Mr. Kunio Inoue. Director for International Standardization Affairs. AIST. MITI was appointed as the chairman and called upon the representative of each country in order to introduce the present conditions concerning ISO 9000 series in their countries.

SESSION I    REPORT FROM EACH COUNTRY ON THE PRESENT CONDITIONS
             CONCERNING ISO 9000 SERIES

(1) Report on present conditions in Japan

Mr. Mikio Hattori reported on the present situation of the quality system. assessment and registration scheme in Japan as follows:

At present. no accreditation body exists in Japan. However, the establishment of the body on a private sector basis is under consideration. No specific name of the body has been decided yet.

On the other hand. although not yet authorized in Japan due to
lack of accreditation body. assessment bodies such as JMI
Institute and Lloyd's are currently working in the assessment
field. Number of firms and Lloyd's and 37 by JMI Institute.
Towards the establishment of the accreditation body. we consider
it necessary to adopt ISO/IEC Guide 40 as the base for quality
system. ISO/IEC Guide 48 for the registration and ISO 10011-2 for
qualification of assessors. The registration of assessors is
expected to be put into force after establishment of the
authorizing agency.

(2) Report on present conditions in Indonesia

Mr. Suryadi H. reported on the same topics in Indonesia as
follows:

Pursuant to the Government Regulation #15/1991 and the
Presidential Decree #12/1991. the Government of Indonesia is
proceeding with the preparation for establishment of a
accreditation body under the name of "National Accreditation Body
(NAB)".

(3) Report on present conditions in Malaysia

Mr. Lam Teng Chee reported on the same topics in Malaysia as
follows:

SIRIM (Standards and Industrial Research Institute of
Malaysia) is actively implementing the quality system assessment
and registration activities as the sole Institute of not only the
accreditation body but also the assessment body in Malaysia. In
accordance with the assessment and registration scheme by IQA.
SIRIM has registered 120 firms. SIRIM has negotiated with BS and
UL. for mutual recognition scheme.

(4) Report on present conditions in the Philippines

Ms. Melba N. Valdez reported on the same topics in the Philippines
as follows:

Pursuant to the Ministerial Regulation #3/1992. BPS (Bureau of Product Standards) is implementing the quality system assessment and registration scheme as the assessment body in the Philippines. Achievement at this present time is just 1(one). however. BPS intends to be an accreditation body.

(5) Report on present conditions in Singapore

Mr. Teo Nam Kuan reported on the same topics in Singapore.

In Singapore. no accreditation body exists. however. the following 3(three) assessment bodies have implemented the quality system assessment and registration scheme ; SISIR (Singapore Institute for Standards and Industrial Research) . Lloyd's and Yaresly. Number of firms and factories registered by the three bodies exceed 160.

(6) Report on the present conditions in Thailand

Mr. Somruay Harinasuta reported on the same topics in Thailand.

In Thailand. TISI (Thai Industrial Standards Institute) is the assessment body and registered 1(one) company. IQA or ISO 10011 have been adopted for the assessment of factory registration and criteria of qualification to be an assessor

The summary of each report is shown in ANNEX 3.

24 July 1992

SESSION Ⅱ   REPORT OF VIEWS AND EXCHANGE OPINIONS WITH RELATION TO MUTUAL RECOGNITION

(1) Considerations for effective management of assessment and registration system - Guideline for the application of ISO 9000 Series to the steel industry

Mr. Tomiya Koyama reported that as the ISO 9000 Series stipulates the establishment of quality systems in a systematic manner. it is quite applicable as the basic standards for all types of industries. In an actual assessment. therefore. cases may occur

where the action taken by the company does not meet an assessor's request because of the difference in interpretation between the two parties.

The companies really feel the necessity of establishing a guide-line for the implementation of quality systems which would be acceptable to the parties concerned..

He reported the "guideline for the quality systems in the steel industry" on the basis of the ISO 9000 Series by organizing a working group within the Japan Iron and Steel Federation which was aimed at effective management of the assessment and registration systems.

(2) Harmonization of quality registration system

Mr. Chikafumi Morita reported that the present situation of JMI activity about the Quality Assurance System Registration Service and the experiences of BSI/JMI joint registration.

(3) Educational requirements for the candidates for quality auditors

Mr. Masanobu Kawamura reported on the educational requirements for the candidates for quality auditors.

The Japanese Standards Association set up a study group on the quality system assessment and registration of the quality auditors.

He pointed to the proposed characteristis for the education of quality auditors who are required to have a certain level of education in TQC.

(4) Views and exchange of opinions on mutual recognition

Mr. Juichi Nagano reported views and opinions on mutual recognition based upon the presentation of the ISO 9000 Forum Symposium which was held in Tokyo in April. 1992.

When we promote the mutual recognition between assessment bodies or between accreditation bodies. it is necessary to avoid duplication of the assessment and to keep a reliabl assessment and registration scheme.

And also he emphasized the necessity for harmonization of the technical level of the auditors and the quality system assessment.

## SESSION Ⅲ  COOPERATION PROGRAMME BETWEEN JAPAN AND ASEAN ON THE PROMOTION OF QUALITY MANAGEMENT AND QUALITY SYSTEM ASSESSMENT

(5) Mr. Kunio Inoue presented the cooperation program for promotion of quality control between Japan and ASEAN countries.
For the purpose of establishing the infrastructure for the quality system assessment and registration scheme. MITI will make a survey to grasp present situations in each ASEAN country to see the needs for training assessors and instructors of the quality system and for making manuals and guidelines which are the basis of the scheme and at the same time to propose cooperation programs between ASEAN countries and Japan in this field.

## SESSION Ⅳ  REPORT OF THE PASC XV TOKYO MEETING AND DISCUSSION ON PASC-NET

(6) Mr. Toru Watanabe reported on the selected resolutions concerning the system of ISO 9000 series at the PASC Tokyo meeting which was held in April. 1992.
Subsequently. he requested opinions from each participant about what the substance of PASC-NET should be.

## 2. Main discussions

(1) Guidelines classified by the types of industry can be produced at various levels such as trade circles. countries. regions or the ISO (the world level). But it was emphasized that the proper approach to the development of guidelines should be made dependingon the types of industry and they should be made international voluntary guidelines in the end.

(2) Concerning harmonization of the quality system assessment method. it was recognized that arrangement in the form of a matrix of the contents of check items classified by the types of industry is useful. and that this would be a subject for discussion in the future.
It was indicated that there is only one system. IOA of Britain.

open to the world as a means to become auditors and therefore other systems with easier access is strongly required.

(3) Many participating countries showed their interests whether the education and training system for the prospective auditors would be opened to overseas participants. Furthermore. they touched upon the problem that the EN 45000 series still remains a regional standards at present.

(4) Concerning the concept of mutual recognition it was discussed besides the form introduced by Japan. there could be some other ways of mutual recognition. such as between a region and countries outside the region. and among regions. It was also stressed that mutual recognition at the highest possible level is useful from the viewpoint of keeping the cost of mutual recognition low.

(5) At the discussion about the report on the Tokyo meeting of PASC and about PASC Net. opinions were expressed that the local characteristics of PASC Net should be stressed and the PASC Net should be developed to something like a working group because the scope of the PASC Net was similar to that of the ISO 9000 Forum.

(6) ASEAN countries expressed their expectations on the JAPAN-ASEAN cooperation program for promoting quality control: Japan would help them in the assessment of quality system and would prepare guidelines introducing Japanese TQC.

This kind of workshop for ISO 9000 series in Tokyo organized by UNIDO seems to be useful for the activity of standardization of each developing country.
Especially this workshop furnished useful opinions for the Seminar which will be held in Manila in 1993.
Also. much important information concerning experiences and opinions which were shown by participating ASEAN countries throughout this workshop and the factory visit will be reflected at future UNIDO seminars.

Mr. Kunio Inoue. as the representative of Japan. delivered a speech to thank all delegates for their efforts and cooperation.

# Praticipants List
## UNIDO/ISO 9000 Tokyo workshop

| | Name | Country | Title |
|---|---|---|---|
| 1 | Mr. Suryadi Hadiwinarso | Indonesia | Head of Standards Reseach and Development Div. DSN |
| 2 | Mr. Indrajana Mochtar | Indonesia | Engineer, Center for Industrial Standardization, MOI |
| 3 | Mr. Lam teng Chee | Malaysia | Director of Standardization, SIRIM |
| 4 | Ms. Rozanah Abdullah | Malaysia | Deputy Director of Standardization, SIRIM |
| 5 | Ms. Melba Valdez | Philippines | Assistant Director, BPS |
| 6 | Mr. Teo Nam-Kuan | Singapore | Executive Director, General Manager of NOVO - Quality Servuces, SISIR |
| 7 | Mr. Wu Tek-Ming | Singapore | Principal Engineer, Standards & Quality Div. SISIR |
| 8 | Mr. Somruay Harinasuta | Thailand | Director of the Certification Div. TISI |
| 9 | Ms. Kanya Sinsakul | Thailand | ASEAN - EC Project Leader, TISI |
| 10 | Mr. Tamotsu Mukai | Japan | Director-General of Standars Department, AIST, MITI |
| 11 | Mr. Kunio Inoue | Japan | Director, International Standardization Affairs, AIST, MITI |
| 12 | Mr. Mikio Hattori | Japan | Director, Material Standards Division, AIST, MITI |
| 13 | Mr. Juichi Nagano | Japan | Deputy Director, International Standards Office, AIST, MITI |
| 14 | Mr. Masanobu Kawamura | Japan | Exective Director, JSA |
| 15 | Mr. Tomiya Koyama | Japan | Manager of Quality Audit and Inspection Department. JSA |
| 16 | Mr. Chikafumi Morita | Japan | Director of Quality Assurance Center. JMI |
| 17 | Mr. Keiki Fujita | UNIDO | Director, IPCT/TP |

MITI
Mr. Kazuyoshi Seto
Mr. Masahiro Fukui
Mr. Makoto Aoyagi
Mr. Msahiro Sato

Secretariat
Mr. Kanji Kakinuma : JSA
Mr. Toru Watanabe  : JSA
Mr. Yawara Tomiyama: JSA
Mr. Katsuhisa Nagai: JSA

Draft Agenda

## UNIDO/ ISO 9000 Tokyo Workshop

**Tuesday. 21 July:**

20:00- 21:00    Arrival and Registration/Information at the Shiba Park
                Hotel, Annex, 2nd. Floor, Iris Room

**Wednesday. 22 July:**

10:00- 17:00    Technical visit to the Murayama Plant of Nissan Motor
                Co. Ltd.

18:00- 20:00    Welcome Party at the Toranomon Pastral, Annex. 3rd.
                Floor, Rindo Room

**Thursday. 23 July:** Workshop(International Conference Room, 17th. Floor of MITI)

10:00- 10:10    Welcome Speech by Mr. Tamotsu Mukai, Director-General of
                Standards Department, AIST, MITI

10:10- 10:15    Address by the Representative of UNIDO, Mr. Keiki Fujita

10:15- 17:00  I . Report from each country on the present conditions
                concerning ISO 9000 series, including question and answer

(10:15-10:50) 1. Report on the present conditions in Japan

(10:50-11:10)    Coffee Break

(11:10-11:45) 2. Report on the present conditions in Indonesia

(11:45-12:20) 3. Report on the present conditions in Malaysia

(12:20-14:25)    Lunch

(14:25-15:00) 4. Report on the present conditions in Philippines

(15:00-15:35) 5. Report on the present conditions in Singapore

(15:35-15:55)    Coffee Break

(15:55-16:30) 6. Report on the present conditions in Thailand

(16:30-17:00) 7. Question and answer and discussion in general

Friday. 24 July: Workshop(International Conference Room. 17th. Floor of MITI)

10:00- 15:40 II. Report of views and exchange of opinions with relation to mutual recognition

(10:00-10:50) 1. Considerations for effective management of assesment and resistration system - Guideline for the application of ISO 9000 Series to the steel industry -

Mr. Tomiya Koyama : Manager of Quality Audit and Inspection Department of JSA

(10:50-11:10) Coffee Break

(11:10-12:00) 2. Harmonization of quality registration system

Mr. Chikafumi Morita : Director of Quality Assurance Center. JMI

(12:00-14:00) Lunch

(14:00-14:50) 3. Educational requirements for the candidates for quality auditors

Mr. Masanobu Kawamura: Executive Director of JSA

(14:50-15:10) Coffee Break

(15:10-15:40) 4. Views and exchange of opinions on mutual recognition

Mr. Juichi Nagano : Deputy Director. International Standards Office. AIST. MITI

15:40- 16:10 III. Cooperation programme between Japan and ASEAN on the promotion of quality management and quality system assessment

Mr. Kunio Inoue : Director for International Standardization Affairs. AIST. MITI

16:10- 16:40 IV. Report of PASC XV Tokyo meeting and discussion on PASC-NET

Mr. Toru Watanabe : Director of International Standardization Cooperation Center. JSA

16:40- 17:00 V. Any other business and exchange of views in general


18:00- 20:00 Farewell Dinner at the Ryuen

Present situation of the quality system assessment and registration schemes in ASEAN countries and Japan

| | JAPAN | INDONESIA | MALAYSIA | PHILIPPINES | SINGAPORE | THAILAND |
|---|---|---|---|---|---|---|
| 1.Does an accreditation body exist? | No.its establishment is now considered on a private sector basis | No, it is under process | Yes | No | No | No |
| 2.The name of the accreditation body. | Not applicable | National Accreditation Body (NAB) | SIRIM | (BPS) | Not applicable | Not applicable |
| 3.Does an assessment body (certification body, registrar) exist? | Yes | No | Yes | Yes | Yes | |
| 4.The name of the assessment body. | JMI. Lloyd's (They are not authorized in Japan due to the lack of accreditation body) | No | SIRIM | BPS | SISIR Lloyd's Yuresly | TISI |
| 5.What are criteria of accreditation of an assessment body for quality systems? | None yet. International standards like ISO/IEC guide 40 will have to be adopted as the base | Based on ISO Guide and EN45000 series | EN45012 | EN45012 ISO Guide 40 ISO 10011-1 | No | No |
| 6.By what means is an assessment for registration conducted? | No. It is conceivable that the method of assessment will be based on ISO/ IEC guide 48 | It is under process | - | ISO Guide 48 | Not applicable | Not applicable |
| 7.What are criteria of qualification for an assessor? | No. It is conceivable that the criteria will be based on ISO 10011-2 | IQA registered and under control of NAB. | EN10011-2 | ISO10011-2 | Experience for several years in the field of QA | IQA or ISO 10011 |
| 8.Registration methods of registered firms and factories. | It is conceivable that the registration of assessors will be put into force when an authorizing agency is established | No.It is under process | IQA | BPS | IQA | IQA |
| 9.A list of registered firms and factories (please attach) and/or the number of such firms and factories. | Lloyd's: 8 JMI : 37 Total : 45 | No | 120 companies | 1 company | More than 160 companies | 1 company |
| 10.The name of related regulations etc. | Not applicable | Govt Reg.#15/1991 Presidential Decree #12/1991 | 200 testing laboratories have been accredited | Ministerial Reg.#3/ 1992 | Not applicable | Industrial Products Standards Act:B.E.2511/ 1968 and the Royal Dcree |
| 11.Remarks | | | Mutual recognition scheme is under negotiations with BSI and UL | | Mutual recognition schemes are concluded into treaty with UL, SA, JMI, AFAQ and DS | |

# Summary of Seminar Evaluation

## (UNIDO Seminar)

## "Meeting Global Market Challenges with Total Quality Control and ISO 9000"

*28 - 30 September 1993 • Philippine International Convention Center, Manila, Philippines*

To enable the organizers to evaluate the success of this seminar and to plan future events, please complete the following questionnaire and return ' the Secretariat before the end of the Seminar.

Please provide the following information about yourself:

[16] Government & State Enterprises (6)'

[99] Private Sectors (43)'

Please specify industry/product group (Please see Annex A for details)

*Manufacturing - Plastic, Rubber, Packaging, Food, Garments, Appliances, Electronics, Semi-conductor, Chemicals, Paints, Cement, Furniture, Industrial Gas, Metals, Abaca, Sugar, Petroleum, Wires and Cables, Personal Care Products, Footwear, Services, Academe, Consultancy, Agriculture*

Are you knowledgable in standardization and quality control?

[64] Knowledgeable

[51] Some Knowledge

[0] None

## Seminar Content

For each session, did the presentation adequately cover the subject?

Please tick Yes or No. If your answer is NO, please explain.

| | YES | NO | |
|---|---|---|---|
| **SESSION 1 (28 September 1993)** | | | |
| ***"Total Quality Control"*** | | | |
| Paper 1 : Total Quality Control (I) (Importance of Human Aspect in Company Wide Control) | [113] | [2] | |
| Paper 2 : Total Quality Control (II) (TQC - It's Impact on Yazaki-Torres Mfg., Inc.) | [114] | [1] | • Funding for SMIs Implementations of TQM/ISO 9000 and its pay back period |
| Paper 3 : UNIDO Presentation | [103] | [10] | |

' *Did not submit seminar evaluation form*

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## 4. Seminar Programme

Are you satisfied with the following?  Please tick Yes or No.

|  | YES | NO |
|---|---|---|
| - Documentation and papers (What about the quality of the bag?) | 110 | 1 |
| - Seminar timing | 108 | 3 |
| - Seminar duration | 102 | 7 |
| - Time allocated per session | 101 | 9 |
| - Number of participants | 106 | 11 |
| - Reception | 100 | 4 |
| - Venue | 106 | 5 |
| - Hotel service | 94 | 6 |

## 5. Advance Information About The Seminar

Was there sufficient notice given about the Seminar?

97 Yes                              15 No

## 6. Interpreters

Are you satisfied with the simultaneous interpretation given?

102 Yes                             6 No

## 7. Please rate your overall satisfaction with the Seminar.

55 Very good                        43 Good

12 Average                          0 Poor

## 8. Other Comments

Please write below any further comments you may have wnich would help the organizers in the planning of similar events.

*Please See Annex C*

_____

_____

_____

_____

_____

_____

Please leave this evaluation form at the seminar reception desk on your way out.
Thank you.

# ANNEX A

## SEMINAR ON MEETING GLOBAL MARKET CHALLENGES WITH TOTAL QUALITY CONTROL AND ISO 9000

### *Names of Participants / Guests / Speakers / Delegates / Organizers*

### *I. Philippine Participants*

| Company<br>(Alphabetical) | | Name |
|---|---|---|
| • A.A. Export &<br>Import Corp. | 01 | Marilyn A. Monteverde |
| • ABS Industrial | 02 | Jun G. Gonzales |
| • Alegro Microsystem | 03 | Mercedita Babiera |
| | 04 | Ponciano Felipe N. Corsame |
| • Amkor Anam | 05 | Mel Pagaragan |
| • American Wire & Cable | 06 | Carmichael Domingo |
| • Atlantic Coating, Inc. | 07 | Danilo S. Domantay |
| • Bacnotan Cement | 08 | Alexander Alambra |
| | 09 | Hermogenes Urbiztondo, Jr. |
| • Benguet Corp. | 10 | Leonardo P. Josef |
| | 11 | Tito Cimafranca |
| • Benguet Mgt. Corp. | 12 | Honesto P. Oliva |
| | 13 | Renato C. Cardinal |
| • Caltex Philippines | 14 | Whitman Uy Matiao |
| | 15 | Leodegario Jacinto |
| | 16 | Edward Masakayan |
| • CIGI | 17 | Salvador Y. Funcion |
| • Country Export | 18 | Ronaldo A. Ricardo |
| | 19 | Fernando Lorico |
| | 20 | Evelyn Vargas Navia |
| | 21 | Monina Estores |
| | 22 | Romeo Pangilinan |
| • California Mfg. Co | 23 | Norma Agar |
| • Crown Asia Compounders | 24 | Ma. Gerly L. Porras |

| Company (Alphabetical) | | Name |
|---|---|---|
| • Crown Asia Compounders | 25 | Imelda M. Ramat |
| • Data General Philippines | 26 | Ricardo L. Sargan |
| • Delbros | 27 | Michael Olayta Concepcion |
| • Dermhaus | 28 | Lilma R. Mangubat |
| | 29 | Agnes Eva T. del Carmen |
| • DOST/Legaspi | 30 | Marilyn Arandia |
| • DTI/BDTP | 31 | Zenaida Cuison-Maglaya |
| • DTI BPS | 32 | Norma C. Hernandez |
| | 33 | Cirila S. Botor |
| | 34 | Emmaline C. Vitug |
| • DTI I | 35 | Florante O. Leal |
| • DTI III | 36 | Ricardo Naguit, Jr. |
| | 37 | Noel David |
| | 38 | Judith Angeles |
| • DTI IV | 39 | Richard A. I. Osmond |
| • DTI V | 40 | Manuel G. Imperial |
| • DTI VII | 41 | Nelia V. F. Navarro |
| • DTI VIII | 42 | Cynthia R. Nierras |
| • DTI IX | 43 | Nazrullah B. Manzur |
| • DTI X | 41 | Brielgo O. Pagaran |
| • DTI XI | 42 | Merly M. Cruz |
| • EEI | 43 | Hipolito P. Punzalan |
| • Empol Corp. | 44 | Emerita A. Revamuntan |
| | 45 | Wilbert Lim |
| • Euromed Lab. Phils., Inc. | 46 | Ma. Zenaida V. Torralba |
| | 47 | Ma. Elvira Alejo |
| • Fee Fil Mag Phils. | 48 | Janus Pagharion |
| • Fibertex | 49 | Susana B. de Dios |
| • First Holding | 50 | Andrei Domagas |
| | 51 | Banjamin D. Alviar |

| Company (Alphabetical) | | Name |
|---|---|---|
| • Foothaus Int'l. | 52 | Jose Luis L. Imperial |
| • Gemphil | 53 | Artemio Labtis |
| • Goldstar Collins | 54 | Eduardo Bagadiong |
| | 55 | Raleigh Yu |
| • Goodfit Mfg. Corp. | 56 | Rogelio Fernandez |
| • Green Cross Inc. | 57 | Wilma Avorque |
| • Hind Sugar | 58 | Natividad Yadao |
| • Inchcape | 59 | Ma. Theresa Marcelo |
| • Indocoil | 60 | Diosdado Leonardo |
| • Induplex Inc. | 61 | Dilano SJ Maghirang |
| • ITDI | 63 | Dulce M. Pilac |
| | 64 | Elizabeth Sanchez |
| • Jacinto Iron & Steel Sheets | 65 | Lodilyn Geronimo |
| • Laguna Rubber Co. | 66 | Alejo dela Torre |
| • Latex | 67 | Hernando C. Salazar |
| | 68 | Eddy B. Lee |
| • Longwell Phils., Mfg., Corp. | 69 | Godofredo Peñamante, Jr. |
| • Luzel inc. | 70 | Judith M. Jose |
| • Manila Rubber Co. | 71 | Johnny Miguel Chua |
| • Mabuhay Vinyl Corp. | 72 | Mario G. Andres |
| | 73 | Maurito C. Tarobal |
| | 74 | Raul Z. Bermundo |
| | 75 | Andrew Pancho |
| | 76 | Ramon S. Lapeña |
| • Manly Plastics Inc. | 77 | Jesus R. Amon, Jr. |
| | 78 | Wilfredo S. Pineda |
| • Matshushita Elect. | 79 | Jose Cesar Caguioa |
| • Meralco Foundation, Inc. | 80 | Marjorie Mendenilla |
| • Mitech Corp. | 81 | Ava Encarnacion |
| | 82 | Leni Diaz |

| Company (Alphabetical) | | Name |
|---|---|---|
| • Mitshuboshi | 83 | Anthony C. Ngo |
| • Nalco Chemicals | 84 | Romulo M. Cabral |
| • National University | 85 | Mariano T. Jhocson IV |
| • Nestle Phils., Inc. | 86 | Lauro Luz, Jr. |
| | 87 | Daniel Belbis |
| • Neville Clarke Phils. | 88 | Mary Anne Concio |
| • Occupational Safety & Health Center | 89 | Rhoda M. Noble |
| | 90 | Sharon S. Regoso |
| | 91 | Rosemary A. Lumbao |
| • Pasco Computer Mapping Corp. | 92 | Nelson Caparroso |
| | 93 | Alma Bingco |
| | 94 | Joele Corpuz |
| | 95 | Joselito Arcenas |
| | 96 | Cristina Castueras |
| • Petron Corp. | 97 | Wilfredo Toledo |
| | 98 | Rolando Navarro |
| • Philexport | 99 | Leonor D. Abella |
| | 100 | Regina Rosario |
| • Philips | 101 | Roberto C. Cristobal |
| | 102 | Renato De Leon |
| • Phil. Petroleum Corp. | 103 | Reynaldo Silva |
| • Philshire Ind'l. Corp. | 104 | Gilbert C. Gaw |
| | 105 | Carmelita S. Olid |
| • Polymer Chemicals | 106 | Marissa Tan |
| • Polyresins Pkg. & Inds. | 107 | Joevy Padrigo |
| • Plastic Group Corp. | 108 | Florencio Miraflor |
| | 109 | Lino T. Wong |
| | 110 | Evar del Pilar |
| • Plastimer | 111 | Cecilia Ignacio |

| Company (Alphabetical) | | Name |
|---|---|---|
| • Plastimer | 112 | Oscar de Joya |
| • Philacor | 113 | Alberto Magno |
| | 114 | Reynaldo Y. Dia |
| | 115 | Dante L. Sioson |
| • PRC | 116 | Norberto C. Crisostomo |
| • Purefoods | 117 | Martha Oliveros |
| • Rizal Cement Corp. | 118 | Dante Juanitas |
| • Rohm Electronics | 119 | Renato B. Omila |
| • Rosehall Mgt. | 120 | Rosario Delara |
| | 121 | Flor Narvacan |
| | 122 | Chona Saño |
| • San Miguel Yamamura Asia | 123 | Jose San Buenaventura |
| | 124 | Arnel Sarte |
| | 125 | Randy Luis Anastacio |
| | 126 | Anthony San Mateo |
| | 127 | Mario San Juan |
| | 128 | Mary Yrene Bengil |
| | 129 | Nerissa Bernal |
| • SCT Electro | 130 | Aida Simtoco |
| • Semigen Mircroassembly & Test Inc. | 131 | Manuel P. Reyes |
| | 132 | Ma. Corazon Morales |
| | 133 | Angelita Adona |
| • Shellmed Cottage Treasurer | 134 | Antonia Millares |
| • SGS Far East Ltd. | 135 | Estrella Tianco |
| • SM Foods | 136 | Marco Umali |
| • SPP | 137 | Ronaldo Pangilinan |
| | 138 | Marineth Montenegro |
| • SMC - Beer Division | 139 | Leo V. Montecillo |
| | 140 | Wilson C. Marino |
| | 141 | Jonathan Coronel |

| Company (Alphabetical) | | Name |
|---|---|---|
| • SMC - Beer Division | 142 | Raul V. Quiroga |
| | 143 | Carmencita Chan |
| | 144 | Pedro J. Duran |
| | 145 | Pauline Theresa Eusebio |
| | 146 | Antonio M. Fudolig |
| • SMC - San Miguel Packaging Products | 147 | Vincenzo S. Pacardo |
| | 148 | Alcio Tumulak |
| | 149 | Cynthia S. Jacinto |
| | 150 | Lisa P. Magtangob· |
| | 151 | Mario Q. Estrada |
| | 152 | Noe C. Flores |
| | 153 | Cresente Albano |
| | 154 | Bayani F. Garcia |
| • Swedish Match | 155 | Roberto Sulit |
| • Unson Faustmann | 156 | Luisa D. Unson |
| • UP Small Scale Ind. | 157 | Antonio Bravo |
| • UP Ind'l. Eng'g. | 158 | Victoria Ong |
| • Vera Wood Inds. | 159 | Gloria M. Mendiola |
| • Victoria Milling | 160 | Wilfredo Sta. Ana |
| | 161 | Enrico A. Espanueva |
| • Others c/o PICHE | 162 | Rosalie Tabiolo |
| | 163 | Bernardina Tabora |
| | 164 | Melanie Cabuso |

## II. Asean Delegates:

| | | |
|---|---|---|
| Thailand | - | Ms. Kanya Sinsakul |
| Singapore | - | Mr. Wu Tek Ming |
| Malaysia | - | Mr. Lam Teng Chie |
| Indonesia | - | Mr. Syarif Husen |

| Company (Alphabetical) | Name |
|---|---|

## III. UNIDO Delegates:

Mr. Goran Applegren

Mr. Octavio Maizza-Neto

Mr. Paal Aavatsmark

## IV. Japanese Delegates:

| | | |
|---|---|---|
| AIST -MITI | - | Dir. Gen. Tamotsu Mukai |
| JSA | - | Dir. Gen. Genichie Fukuhara |
| Kyoto Univ. | - | Prof. Yoshio Kondo |
| JSA | - | Mr. Tomiya Koyoma |
| TDK Corp. | - | Mr. Kirokatsu Shinoki |
| AIST-MITI | - | Mr. Kunio Inoue |
| AIST-MITI | - | Mr. Mashino Sato |
| JSA | - | Dir. Toru Watanake |
| JSA | - | Mr. Yawara Tomiyama |
| JSA | - | Mr. Takashi Nakakuki |
| JSA | - | Mr. Teiji Akiyama |
| Interpreter | - | Ms. Isako Yamazaki |
| Interpreter | - | Ms. Reiko Hinimo |

## V. Speakers (Philippines)

| | | |
|---|---|---|
| Yazaki Torres | - | Mr. Feliciano Torres |
| Pilipinas Shell Petroleum | - | Mr. Raul Mirasol |
| SMC-Packaging Products | - | Mr. Alcio Tumulak |

|                       Company                          |                       Name                          |
|--------------------------------------------------------|-----------------------------------------------------|
| (Alphabetical)                                         |                                                     |

## VI. Organizers

| Company     |   | Name                                              |
|-------------|---|---------------------------------------------------|
| DTI         | - | Mr. Ernesto M. Ordoñez<br>Undersecretary          |
| BPS         | - | Director Renato V. Navarrete                      |
|             | - | Asst. Dir. Melba M. Valdez                        |
|             | - | Ms. Ermelinda P. Andres                           |
|             | - | Ms. Clarissa M. Oracion                           |
| PICHE       | - | Mr. Alberto Villa-Abrille<br>President            |
|             | - | Ms. Baby Anota                                    |
| Philexport  | - | Mr. Sergio Ortiz Luis<br>President                |
|             | - | Mr. Ariel Bacatan                                 |
|             | - | Mr. Rica Glonga                                   |

# ANNEX B

*Please state any other subjects which you would like to be included in the program*

1.  How to motivate people in order for them to work effectively without much money involved.

2.  TQC in the government series so that TQC will not only for private sectors. Please invite speakers from government sector not from BPS.

3.  Elaborate Procedures on how to execute Total Quality Control and ISO 9000 series in a company.

4.  The Global Market Challenges were not discussed, except for demand for higher quality product and more extensive discussing on these challenges would have been helpful particularly from non-RP countries.
    *   presentation of an SMI engaged in TQM on ISO

5.  It is important to include the basic procedures for a more understanding in achieving certification of ISO 9000.

6.  Role of TQC/TQM/ISO 9000 in a certain manufacturing or firms which product is produced much done by sub-contractors rather than In-house production. How does it meet the requirement of ISO 9000.

7.  The participants need also some details regarding the particular presentation e.g., "Pilipinas Shell's startegy for market competitiveness". The presentor must discuss some important strategies (details).

8.  UNIDO should have also touched and discussed its programs in the far EAST (Philippines for example) and should have updated us with developments/status.

9.  Common reason why companies fail in the audit or assessment.
    *   Importance of traceability

10. Workshop and case study discussion should be inluded regarding problem in the plant.

11. How we can work out for accreditation (international).

12. World class manufacturing concept.

13. Elaboration of TQM/TQC in the western point of view and how they view TQM in relation to ISO 9000 series.

14. ISO 9000 and SME's

# ANNEX C

1.  Causes/Effect on companies on withdrawal of accreditation or failure to be accredited.
    *   Government assistance/support/subsidies on ISO 9000 implementation.
    *   Invite representatives from BSI, etc.

2.  Some of the lecturers should have rendered their lecture livelier to make the seminar more worthwhile.

3.  The topics of the seminar were discussed in a more general term. Please invite more speakers aside from SMC , Pilipinas Shell , coming from corporation who actually practice TQC and ISO 9000. Please have more video presentations on coporations who actually practiced TQC not only from Philippines but more specifically from Japan.

4.  Hoping that more topics will be taken. Speeches of the speaker should be direct to the point. Especially the Japanese, their interpreter should be more knowledgeable enough to explain carefully what the speaker wants to emphasize.

5.  I had thought that there would be presentations from companies of ASEAN countries who have pursued internationalization extensively. TDK, Shell and SMC presentations were useful but their global competitiveness thru ISO was not highlighted. More company-country papers would be very helpful.

6.  The host should also provide procedures and guidelines like what ISO 9000 is trying to promote or implement.

7.  More participants especially from government sector/enterprises.
    *   Additional visual specification/presentation.
    *   Presence of some customers/suppliers/consumers.

8.  Continue giving this quality activities to help our country improve.
    *   More participants especially in government sector not only private.
    *   Thanks for those very good opportunities. Please keep it up.

9.  This seminar was Good and the ISO 9000 was much introduced, but some procedures were not discussed well.

10. None, just keep it up.

11. There must be a continuous monitoring of ISO Registration particularly in the Philippines to meet the challenges set forth for "Philippines 2000" program. and later for global approach.

24. This would be good for top management; advance information of such would be better.

25. There should be an open forum so that the participants' questions would be clarified.

26. I just would like to congratulate you for a very organized activity. I hope you'll have more activities of this nature.

27. More sharing of actual experiences, if possible one or two visits of plants certified to ISO 9000.
    - ISO 9000 for small and medium enterprises.
    - Follow-up training with hands-on quality audit.

28. I would suggest that BPS come up with a seminar and/or training/education program which would involve SMEs more directly . In this connection, I would recommend a more simplified approach to the training/education program, particularly in the interpretation of ISO 9000 and making TQC/ TQM more understandable.

29. Actual model of SME engaged in ISO 9000

30. I think it would be better if one session was devoted on discussing national concerns, to be specific Philippines concerns, example role of Dept. of Labor and Employment in the promotion of ISO 9000 and TQC. I believe transformation going to total quality management should also start from the government using mass media as a means of communication, of course individual company has also its own important role.

31. I hope the government can utilize/optimize usage of PICC. This is such a good place to waste.
    - Proximity and accessibility.

32. It is like attending an international conference.

33. Please invite some SME representative to speak out their view on the effect of ISO 9000 on their business. Better still if we could invite those companies that have already received ISO 9000 certificate.

34. An ISO 9000 series seminar should also be organized for selected government agencies involved in servicing for government projects that have to do with manufacturing of both local and export products, especially so that they're the ones directly working with the SMEs and they can serve as the trainors/consultants on ISO 9000 of this SMEs, as it might be expensive for them to own one.
    - For local products to compete with imported products.

35. Slide presentation should later become supplementary hand-outs, material to participants.
    - If ISO 9000 quality awareness and values will be somehow integrated in the Educational System,

as well as primary education then SME has better or easier way and chance to adopt ISO 9000 or even a mandate that Public and Private Schools should be ISO certified within a reasonal period.

36. I would like to commend your good time management.

37. Emphasis on the importance in the implementation of TQC and TQM in relation to safety and environment.

38. More seminars on this important subject.

39. This seminar should have been given three /(3-4) four years ago. Please consider more the inclusion of SMEs as they are major factor that will help the country become an NIC by the year 2000.
   • Implementation of ISO 9000 requires millions of Pesos and for the SMEs, this means new investments which they may not afford.

40. Seminar which is technical such as this just did have the right treatment and appropriate "mix" of the theoretical and experiencial info and this made it not just enriching but also enjoyable.

41. The seminar was very much well thought of thus, in similar events same format can be used. However, if it is possible for speakers to use more visuals in presentation rather than reading their piece the more it is valuable.

42. The seminar was excellent. The forum was well conducted.

43. I think senior, top management would benefit highly from attending something like this. It will reinforce the understanding that quality improvement is a purposive push from decision makers, the magnified support of top management, and their belief that quality improvement is a must (exemplified in the shell, Japanese, TDK, SMC experiences will be the push for industry improvement, global competitiveness.

44. Hand-outs should only be the guide of the participants or summary of the paper of the speaker and not the paper to be read by the speaker.

# SEMINAR ON

# MEETING GLOBAL MARKET CHALLENGES WITH TOTAL QUALITY CONTROL AND ISO 9000

**UNIDO**

## Sponsored by
## United Nations Industrial Development
## Organization (UNIDO)
## and
## Ministry of International
## Trade and Industry (MITI), Japan

Hosted by
*Bureau of Product Standards,*
*Department of Trade and Industry*
*Philippine Institute of Chemical Engineers*
*Philippine Exporters Confederation, Inc.*

Organized by
*Japanese Standards Association (JSA)*

28th – 30th, September 1993
Philippine International Convention Center
Roxas Blvd., Metro Manila

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Significance of the Introduction and Utilization of the Quality System Based on ISO 9000

> Speaker:    Mr. Tomiya KOYAMA
> Director of Quality System Center,
> Japanese Standards Association

ISO 9002- Pilipinas Shell's Strategy for Market Competitiveness

> Speaker:    Mr. Raul M. MIRASOL
> Quality Improvement Manager,
> Pilipinas Shell Petroleum Corporation

## SESSION III:  TQC AND ISO 9000 SERIES

TDK'S 4 Steps to ISO 9001 Registration and TQC Activities

> Speaker:    Mr. Hirokatsu SHINOKI
> Manager, Product Safety Section,
> Quality Assurance Department,
> Power Electronic Product Mfg. Division,
> TDK Corporation

TQC and ISO 9000- Are They in Conflict?

> Speaker:    Mr. Antonio V. ENRIQUEZ II
> Asst. Vice-President and Account Director,
> San Miguel Packaging Products,
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## SESSION IV: INTERNATIONAL COOPERATION TO ACHIEVE COMPETITIVE QUALITY OF PRODUCTS AND SERVICES

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Director for International Standardization
Affairs, AIST. MITI.

Panelists:    Japanese Experts, BPS, Representatives of
ASEAN Countries, UNIDO

### Closing Ceremony

— Address by BPS
Mr. Renato V. NAVARRETE
Director

— Closing Address by JSA
Mr. Genichi FUKUHARA
Director General

# SEMINAR ON

# MEETING GLOBAL
# MARKET CHALLENGES
# WITH
# TOTAL QUALITY CONTROL
# AND ISO 9000



## Opening Ceremony

- Address by Ms. Magdalena F. SAVARAIN
  Chief, Appropriate Technology-Unit, UNIDO

## Keynote Messages

- Keynote Message by Mr. Tamotsu MUKAI
  Director-General of Standards Dept., AIST. MITI

- Keynote Message by Hon. Undersecretary Ernesto M. ORDOÑEZ
  Department of Trade and Industry

## SESSION I: TOTAL QUALITY CONTROL

### Importance of Human Aspect in Company-Wide Quality Control

Speaker: Dr. Yoshio KONDO
Professor Emeritus,
Kyoto University

### TQC-It's Impact on Yazaki-Torres Manufacturing Inc.

Speaker: Mr. Feliciano L. TORRES
President and General Manager,
Yazaki-Torres Manufacturing Inc.

### UNIDO Presentation

Speaker: Mr. Octavio MAIZZA-NETO
Industrial Development Officer,
Industrial Infrastructure Branch, UNIDO

**28th – 30th, September 1993**
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**Roxas Blvd., Metro Manila**

# Welcome Address

– Address by Ms. Magdalena F. SAVARAIN
  Chief, Appropriate Technology-Unit, UNIDO

## Keynote Message

## Current Situation and Prospect of Standardization and Certification Activities by the Government in Japan

by Mr. Tamotsu MUKAI
Director-General
Standards Department
AIST, MITI

I would like to express our sincere gratitude to the Bureau of Product Standards, the Department of Trade and Industry, the Government of the Republic of the Philippines, other Phillipines' organizations and UNIDO(United Nations Industrial Development Organization) for their efforts in holding the Seminar.

The Seminar is sponsored and organized by UNIDO and its purpose is to promote and enhance the industrial standardization, certification and quality control in the Asean countries. The first Seminar was held in Bangkok in January, 1990, the second in Kuala Lumpur in October,1991, the third in Jakarta in January, 1993 and the Seminar this week is the fourth. Recognizing the importance of the Seminar in the Asean countries, the Japanese Government made overall assistance to UNIDO including financial aid and the dispatching of lecturers to the Seminar.

During the next three days, we have a chance to hear the reports regarding the current activities on industrial standardization, certification and quality control and their effects on industrialization by distinguished experts. We will also have a panel discussion on the future direction based on

their experiences.

I sincerely hope that their reports and the discussion will present a picture of how standardization, certification and quality control activities are proceeding in their countries and help you to further promote these actitivities in both public and private sectors in the Republic of the Phillipines.

1. Outline of Industrial Standardization and Certification
   Activities in Japan

I as a first speaker would like to introduce to you the outline of industrial standardization and certification activities carried out by the Japanese Government.

The industrial standardization and certification activities carried out by the Government is based on the Industrial Standardization Law which was established in 1949.

I can summarize the main purpose of this Law as the following two points.

(1) To set up the Japanese Industrial Standards(JIS) as the technical specification to be used in production, distribution and consumption of the industrial and mineral products

(2) To manage JIS Marking System to indicate conformity with JISs.

Japanese Government ministries have overall responsibilities for JIS and JIS Marking system and the Japanese Industrial Standards Committee(JISC) is to review existing national industrial

standards and make necessary recommendation to the responsible
government ministries. The overall standardization system is
coordinated by the Standards Department, AIST, MITI which also
serves as the secretariate of the JISC.

To effectively promote the standardization and certification
activities carried out by the Government,"The long-lange plan for
industrial standardization promotion" is developed every five
years. The current plan, the seventh one was set up in 1991.

It has also added a number of laws establishing mandatory
technical regulations for protecting life, health, environment,
etc. such as the Electrical Appliance and Material Control Law
which provides technical regulations for household electric and
electronic equipment. These technical regulations augment and
often cite JISs according to the Industrial Standardization Law.

2. Development of JIS and Management of JIS Marking System

Now, I would like to go into a little bit of detail concerning
the JIS and JIS Marking System.

(1) Development of JISs

With regard to JIS, a total of ten ministries including MITI,
the Ministry of Transport, the Ministry of Health and Welfare are
ultimately responsibile for all major management decisions
affecting the development or revision of JISs: project
authorization; choosing an appropriate standards developing
organization; review and approval of standards; and finally,

after the JISC concurs, the reponsible ministry authorizes
publication and distribution.

The JISC is responsible for reviewing existing national
industrial standards and recommending development of new
standards, reaffirmation, revision, or cancellation to the
responsible government ministries.

Allow me to cite several figures.

 1)total number of JIS standards: 8,406

 2)number of newly established standards in 1992: 186

 3)number of revised standards in 1992: 762

(2) Management of JIS Marking System

With regard to JIS Marking System, the competent ministries can
designate the product among the JIS identified products as the
subject of JIS Mark. A JIS mark is a quality certification mark
which means that products with JIS mark satisfy the quality
level set by corresponding JISs. When manufacturers receive the
permission of a JIS mark for JIS designated product from
competent ministries for each factory, they can put a JIS mark on
the products made in their specified factories. Although a JIS
mark is not mandatory, it is recognized by Japanese consumers as
signifying good quality.

 1)number of designated products:        922

 2)number of permitted factories:       16,021

 3)number of factories permitted in 1992: 326

Here, I would like to mention that Japan has made the JIS
Marking System open to factories located in foreign countries
since 1980 for the purpose of equal treatment of foreign
factories' products to domestic products. Requests from foreign
factories has recently increased dramatically. We accept 20-30
applications each year.

 1)number of approved foreign factories:

                                   210 factories in 17 countries
 2)number of approved foreign factories in 1992: 29
Also, we have recently added the examination items and criteria
using the ISO9000 series to the examination items and crieteria
regarding the permission of JIS Mark since 1992.
3. International Standardization Actitvities
Recognizing the importance of international standardization
activities. Japan is contributing as much as possible to develop
the international standards and reflect them in JISs.
Japan is also cooperating with developing countries regarding
promotion of standardization, certification and quality control
which contributes to upgrading of the quality of industrial
products, promoting the industrialization and securing the
prosperity and welfare in respective countries.
 I would like to mention the following points concerning the
international standardization activities.
(1)Contribution to ISO/IEC

We are making efforts to propose drafts of international standards, to undertake as much as possible the role of secretariate of Technical Committees, Subcommittees and Working Groups and to ensure the harmonization between ISO/IEC standards and JISs.

(2)Promotion of Technical Cooperation with Developing Countries

Utlizing existing cooperative schemes such as JICA (the Japan International Cooperation Agency), we are carrying out technological assistance such as dispatching experts, acceptance of trainees, and the provision of testing equipment. Furthermore, in addition to these technological assistance measures, we are also cooperating in the type of project which provides several cooperation assistance means in the package. One example is the ISTTC(the Industrial Standardization, Testing and Training Centre) project which is the cooperative project betweeen the Thai Industrial Standards Institute, the Thai Ministry of Industry and JICA. Also recently, the Agreement on Standardization, Certification and Quality Control and Certification Testing in the Electric Field project was signed between the BPS, the Phillipines Department of Trade and Industry and JICA.

4. Future Directions

Now, I would like to describe the future direction of industrial standardization and certification activities carried out by the Japanese Government.

The JISC and the Standards Department recognize that with a background of a changing social structure, diversity of human needs and an activation of international transactions, standardization, certification and quality control activities are expected to play a more and more important role. Among the several issues which are important for the future of standardization, certification and quality control activities, I would like to mention the following points.

(1)Promotion of Development of JISs and Efficient Implementation of JIS Marking System

Although 8,406 JISs exist as of the end of March, 1993, the standards in which the contents fail to match the current situation or which no longer meet the role as national standards should be revised or abolished in order to properly maintain the standardization activities. Furthermore, changing social structure and diversification of human needs request to accomodate these changes to develop standards. To respond properly to these changes, it is necessary to secure the basis of development of standards such as analysis of information on changes in life-styles and systematic collection of technological information and we established a new R&D fund concerning the standardization in 1993.

As for new technology, standards still well serve as the catalyst for product development or technology implementation and

we will continue our efforts also in this area.

With regard to a JIS mark, in addition to implementing effective examination and maintenance of the JIS Marking system, we will also conduct diligent studies on the relation between the certification system in other countries and the JIS Marking system.

(2) Issues Concerning ISO9000 Series

ISO9000 series and the assessment and registration scheme based on the ISO9000 series is already adopted in more than 50 countries and is becoming the international quality control scheme. In Japan, there are presently about 300 factories which were registered for ISO9000 series and more than 500 factories are preparing to apply for the assessment.

However, although there are about 15 certification bodies in Japan such as JMI, JSA and LRQA, which are performing the assessment and registration activities based on such as the contract with the foreign certification bodies, so far there is no accreditation body in Japan. However, according to the proposal by the JISC, we are planning to establish a certification body which is a public foundation and tentatively called "The Japan Accreditation Board for Quality System Registration (JAB)" early this November. We expected that the number of registered factories will increase to more than 1,500 in a couple of years.

(3)International Activities

 As for the international activities we are trying as much as

possible to undertake the role of secretariate for TC/SC/WG in

ISO/IEC, propose new TC/SC and submit the drafts.  We also

continue the effort to harmonize JISs with international

standards, based on the "GATT Standards Code".

 The technical cooperation with developing countries is expected

to become a more and more important area for Japan's

international standardization activties. We are very willing to

transfer our experiences and knowledges in the field of

standardization, certification and quality control according to

the needs of developing countries. In addition to the efforts to

increasing the number of dispatching experts and acceptance of

trainees and the provision of equipment, currently we are

proposing to the Asean countries a proposal called "Asean-Japan

Standardization, Certification and Quality Control Network" as a

new cooperative activity. The proposal is aiming to assist the

Asean countries topgrade and improve the level of understanding

and implementation of the quality concepts and TQM(Total Quality

Management) of the industries through training and consultancy.

After the completion of a survey for one or two years to evaluate

the needs of the Asean countries and finalize a concrete proposal,

we would provide them the assistance on the training of industry

people on TQM, training of trainers of industry assocation,

provision of consultants in the firms to assist in the

implementation of TQM and provision of training materials according to their needs. I understand that during the Seminar it is scheduled that the representatives from the Asean countries and my colleagues will elaborate on this proposal.

As the first presentator, I have explained the present and future direction of industrial standardization and certification activities carried out by the Government of Japan. Although it is really hard to carry out timely and proper standardization and certification activities which cover very wide issues , I believe that everybody and every organization can directly benefit from it. I will now close my presentation and hope this three day Seminar will be of great interest and help you to promote industrial standardization, certification and quality control activities in both public and private sectors in the Republic of Phillipines.

Thank you for your attention.

1-2-11

I-2-12

1-2-14

# Keynote Address

– Address by Hon. Undersecretary Ernesto M. ORDOÑEZ
  Department of Trade and Industry

1-3-3

# SESSION I: TOTAL QUALITY CONTROL

## Importance of Human Aspect
## in Companywide Quality Control

by **Dr. Yoshio KONDO**
Professor Emeritus
Kyoto University

## Abstract

As described in the previous paper [13], careful consideration and deep under-
standing about the human aspect are important and indispensable for the promo-
tion of companywide quality control. The emphasis in the present paper is laid
on human motivation: not only diminishing human dissatisfiers, but also provid-
ing human satisfiers are the key for motivation. The elements of the joy of
sports suggest the precious hints, and the three elements of human work,
creativity, physical activity and sociality are the essence. The relationship
between creativity and work standardization is not contradictory but complemen-
tary to each other.

## Introduction

Whatever type of work we are concerned with, motivating the people
engaged is the most vital condition. Among the so-called four m's, man, machine,
method and material, man is known as the most important element in performing
good work. However, the more effort a company devotes to the development of
revolutionary new-products and technology and to the associated quality as-
surance in order to cope with the competition in the global market, the greater
the scale of these cross-functional activities becomes and the more areas they
affect inside the company and the outside organizations it works with. Then,
emphasis is laid on organizing, systematizing and standardizing the work. It
is often feared, on the other hand, that if work is highly organized in this way,
the people in the organization might become apathetic and lose their motivation.
What we must do is to clarify and put into practice the type of organization and
operating methods which will preserve the positive and challenging attitude of
the people directly or indirectly engaged in the task and stimulate their desire
to work.

Almost half a century has passed since the concept and methods of modern
quality control was introduced from the U. S. A. to Japan. It became immediately

Note : The numbers in brackets indicate reference numbers.

clear that quality control is effective and indispensable for the reconstruction and development of Japanese industries. Japan dose not have abundant natural resources, and for the Japanese people to survive and develop, they should manufacture industrial products of superior quality, export them to foreign countries to earn foreign currency and purchase energy and raw materials from abroad. In order to create and repeat an upward spiral of this kind in industrial development, the revolution in product quality was essential. Japanese industries were at the "bottom" after World War II: there was no way to further descend, and the only remaining trail was to climb the wall. Statistical quality control which involves plan-do-check-act cycle has provided Japanese people with important and powerful ways to perform this.

It will be described in the present paper that the human aspect is very important and indispensable for the promotion of companywide quality control in the industries, that quality improvement is the most appropriate and acceptable way to strengthen the corporate performance and that the display of humanity in our work is the essence of human motivation.

## Development of Companywide Quality Control

During the first decade after World War II, the application of concept and techniques of statistical quality control was limited in the fields of manufacturing and inspection. Although these activities yielded remarkable results, many Japanese managers and engineers started to feel that they were reaching a dead end and that a breakthrough was needed; only with these efforts in the narrow fields, they thought, it is extremely difficult to attain the final goal of quality control, customer satisfaction and the strengthening of corporate performance.

Dr. Juran visited Japan in 1954, when JUSE held QC courses for top and middle management personnel. His lectures stimulated and accelerated the expansion of the QC concept to the operations in almost all branches of the company. Following and digesting the path shown in Juran's courses, JUSE opened QC middle management course in 1955, and the QC top management course in 1957. These courses have continued very successfully [1], [2].

In the companies which won the Deming Application Prize since the early 1960s, the quality control activities were defined broadly to include marketing, design, manufacturing, purchasing, inspection, sales and administration departments and subsidiaries in order to assure the quality of products and service for the customers. As a result, they achieved outstanding – even epoch-making – effects for which the prizes were awarded. Their success stimulated other Japanese companies, providing them with a powerful incentive to broaden their quality control activities.

Quality control activities in Japanese industries were thus expanded in the 1960s [3] into

1.  Establishing the top management policy on quality and the long-term QC plan of the entire company to realize the policy,

2.  Introducing the QC concept and techniques into new-product development,

3.  Establishing the quality assurance system, which covers the whole company including the subsidiaries,

4.  Conducting QC audit, and

5.  Expanding QC activities to include sales and marketing activities of the agents, the trading firms, the stores and shops, etc.

Another feature of Japanese QC is the willing participation of all employees in the QC activities of the company. (QC circle activities are the typical example.) In Japanese companies, QC activities are not restricted to professional QC staff but include all employees of the company, from the president to the first-line workers and sales persons.

Among them, the leadership of top management is indispensable. In the companywide QC activities, the top management should be in the position of leading and promoting the QC activities of the whole company. They are responsible for compiling the top policy on the quality of manufactured products and service, and for establishing the long-term plan of companywide QC in order to realize the policy. In addition, they should evaluate whether the policy is appropriate and the plan is realized on schedule, whether the expected results are obtained and whether any corrective actions are needed to be taken by the top management. These activities are in the form of plan-do-check-act cycle of companywide size, and are called "policy development", or "hoshin kanri" in Japanese [4]. Internal QC audit by the top management [5] is an effective way of evaluating the results so that appropriate corrective actions can be taken.

Concerning the development of companywide QC of this style, the following reasons are often referred to.

1.  The adaptability and digestability of Japanese people to foreign culture is fairly high. It was seen in the importation of Buddhism and Chinese characters from Mainland China more than 1000 years ago. It has been fully displayed in the introduction of Western culture and technology since about 120 years ago.

2.  Japan's population density is extremely high, and the competition among companies has been intense in both domestic and international markets.

3.  Japanese society is rather homogeneous, and the mobility of employees has been relatively lower; the custom of life-long employment is still prevalent. In these circumstances, the participative structure of management is more easily accepted, and Japanese companies are enthusiastic about education and training of employees on the basis of "people building" philosophy.

In addition to these reasons, furthermore,

4.  The domestic labor market became increasingly tight since the late 1960s. Rising educational levels in Japan, furthermore, led to an increasing proportion of new labor force entrants who wanted jobs that would allow them to develop their ability and talents. The education and training of these young people and increasing job attractiveness appeared to management to be a reasonable strategy that merited investment and efforts [6].

5.  The kind of professionalism that is prevalent in the Western countries has not been fully developed in Japanese industries. The Japanese companies need to promote companywide quality control in which all employees participate [7], rather than providing a large central quality department with numerous centralized quality functions. In Japanese companies, most of these functions are carried out by the line personnel, who have the necessary education and training for such functions.

The teamwork relationship among departments and between mother company and suppliers is emphasized. It is indispensable not only for the assurance of quality, but also for the success of the just-in-time delivery system and for the sharp shortening of new-product development time.

## Companywide QC Education and Training

Introduction and promotion of companywide quality control led to a revolution in management philosophy, which required lengthy and persevering efforts of education and training. Thus, since the early 1950s education and training in quality control have been continued for everyone from top management to first-line employees in each and every department.

Currently there are more than 50 quality training courses of different kinds and levels in Japan, which are held regularly by nonprofit organizations such as JUSE and the Japanese Standards Association (JSA) [8]. Furthermore, many Japanese companies have their own in-company QC education programs and are enthusiastic about the education for the employees of both their own company and the subsidiaries. Education and training of companywide quality control usually start with top management and are then extended to middle management, supervisors, foremen and first-line workers. Thus the progress of companywide quality control exactly reflects the leadership of the company's top management.

On-the-job training is also emphasized. One example is the training that results from internal QC audit by top management [5], which is effective in obtaining the facts within the company and leads to appropriate corrective action. Another example is the on-the-job training of engineers. A case of training of designers of color TV sets is as follows [7].

A characteristic aspect of their training is "practical experience." One major area for such experience is in the production shop, to give them an awareness of the realities often faced by the production personnel and thereby to give them a better understanding of how to design for "productivity." A second major area for their experience acquisition is in field service work. Through such experience, they also learn much about the condition of use, the problems of diagnosing field failures, the difficulties of making repairs, etc. As a result, they understand better how to design for reliability and maintainability. It is common, though no invariable, for Japanese companies to require that designing engineers acquire such shop and field experience before assigned to key responsibilities in product design. For the purpose of broadening the viewpoint of engineers, systematic job rotation of employees is emphasized and carried out in many Japanese companies. The weak recognition of professionalism in Japanese industries is thought favorable for this rotation.

Quality education and training of first-line workers were started since the middle of 1950s. The importance of their role has been recognized along with the progress of companywide QC. In order to offer the opportunity of education and training to the foremen and workers the mass communication media of radio and TV broadcast were utilized. During three months since the start of radio broadcast in 1956 about 100,000 transcripts of the text were sold. A book "QC Text for Foremen", edited by Professor Ishikawa, was published by JUSE in 1960, and 200,000 copies were sold before the end of 1967. These activities of education and training provided the most important basis for the birth of the QC circle activities of the workers [4].

A QC circle usually consists of a group of workers and a foreman who voluntarily meet to solve their job-oriented quality problems. These activities are intended to be tightly linked with companywide QC activities [9]. In May, 1962, the first QC circle was registered at the QC Circle Headquarters of JUSE, and thereafter, the numbers of registered QC circles and the members have been increasing year after year. The number of registered QC circles at the end of May 1993 was more than 360,000; registered members numbered over 2.7 millions.

Since the beginning of the 1980s the direct overseas investment and branching out of Japanese companies began to increase remarkably.

Matsushita Electric Industrial Co. Ltd. has 118 overseas companies [10], and the amount of overseas sales is about 50% of the total amount of sales. About 30% of the sales abroad is manufactured in the overseas companies. At the Training Center of the company in Osaka, Japan built in 1962, about 70,000 trainees from domestic divisions and 1,000 trainees from overseas companies study every year. The company has similar training centers in the United States, Germany, Taiwan, Singapore, Indonesia, Brasil, etc. to teach the employees in the overseas companies about Basic Business Principle of the company, way of management, technical know-how and skill.

In 1991, Overseas Quality Program was launched. First, a series of textbooks was edited for the shop floor people. It was intended that these books are easily understood by primary school graduates in their countries using many cartoons. Then a series of QC seminars was started at the training centers and at overseas companies mainly in southeast Asia. In these seminars, the lecture begins from teaching the basic concept of QC. It is interesting to know that the managing directors of some companies willingly attended the seminar together with rank and file people. Special seminars for the top management were also conducted during the weekend.

During the seminar, the teaching staff always try to watch the level of understanding and common knowledge of the trainees and to avoid using difficult terms of statistics. After the seminar, the trainees are requested to practice some improvement of their jobs utilizing the concept and techniques learned during the seminar. The appropriate discussion and advice given by the managers and teaching staff are always helpful and indispensable to further improve the ability of trainees. It is believed that education means not only to give one-way lectures from teachers but also to help the trainees to understand and experience the necessary ways of improvement for carrying out their own job more successfully and comfortably.

At the Precision Electronics Corp. in the Philippines, a joint corporation with Matsushita, a QC circle was chosen as the representative from the Philippines and presented their own case study, in which they introduced their own circle as follows: "True to its original principle, QC circle in P. E. C. is purely voluntary. Fortunately, the employees are enthusiastic about it, and it has become almost a way of life for most of us."

## Quality versus Cost and Productivity

People talk about "quality culture" [11], but not about "cost culture" or "productivity culture". Why is it so? Quality has special features which distinguish it from cost and productivity [12].

It can be said in the first place that the human history of quality is far longer than cost and productivity. In addition, it must be emphasized that quality is a major concern of customer as well as manufacturer. In this regard, "customer satisfaction" is the important concept in the assurance of quality. In contrast to quality, customers do not have interest in cost: their primary concern is the price of a product and service. Goods are not sold simply because of high productivity. Customers are tempted to purchase a product when they can buy and repair it at any time and at any place. Then it can be said that quality is the only common concern among them.

The desire for quality has existed for more than a million years, and quality is the common concern between manufacturer and customer. These special features of quality make it more compatible with human nature than cost and productivity. It is due to this reason why the request of quality improvement by the upper managers is more easily sympathized and accepted

by the subordinates than the call for cost reduction and productivity increase: indeed it is very difficult for the employees to reject the appeal of quality improvement. Thus the quality improvement is thought to be the most appropriate and acceptable way for employee motivation and for enhancing corporate performance [13].

Furthermore, it is summarized that when quality is improved in a creative way, cost is reduced and productivity is increased [14], [15]. It is also seen when cost is reduced or productivity is increased even in a creative way, quality is not always improved. In other words, quality can be a cause of cost reduction and productivity increase, but low cost and/or high productivity do not always pave the way for quality improvement. It may be only logical, then, that we must start with quality whenever we attempt to improve a company's performance.

## Human Needs and Motivation

Among the best-known and most typical examples of motivation theory have been, for a long time, Maslow's hierarchy of human needs [16] and Herzberg's motivation theory [17]. The hierarchy of human needs was proposed by Maslow and is usually explained as being divided into the following:

1. physiological needs

2. safety needs

3. social needs

4. ego or esteem needs

5. self-fulfilment needs

These needs are said to form a hierarchy ranging from physiological needs at the bottom to self-fulfilment needs at the top. Starting with physiological needs, when the needs of one level are satisfied, the needs at the next higher level arise to replace them. In this way, human needs are said to manifest themselves in step-wise fashion, following this hierarchy. At first glance, this explanation seems plausible, but we are left wondering whether in fact poor people work only in order to satisfy their appetite, a typical physiological need. Old Japanese, for example, experienced the years of terrible poverty immediately after the World War II, when we had to work hard simply to fill our bellies. However, it would be untrue to say that we did not search for ways to satisfy our higher level needs; we did our best even on an empty stomach. It is clear that the previous interpretation of Maslow's hierarchy of human needs is wrong. What Maslow in fact stressed was that human needs do not ascend the hierarchy in orderly succession like this, but all five needs are always present and, as shown in Fig. 1, their relative importance gradually shifts form lower to higher levels as our living standard rises. In thinking about motivation, it is important to remember that human beings always have a variety of needs.

According to the motivation theory proposed by Herzberg, motivation is governed by two different types of factors, which he named human dissatisfiers and human satisfiers. For example, people feed dissatisfaction with things such as low pay and an overheated or noisy working environment. It is important and effective to eliminate such dissatisfiers by measures such as raising pay, installing air conditioners, improving working conditions and employee facilities. However, simply removing the sources of dissatisfaction will not necessarily motivate the people and stimulate their desire to work. To motivate people, it is essential to provide their daily work with another type of factor, called human satisfiers. Satisfiers extremely effective in motivating people include involving employees in preparing work standards and setting work goals, accurately recognizing and appraising their results, and rewarding them appropriately.

Satisfying the relatively low-level human needs in the Maslow's hierarchy, such as physiological and safety needs, can be thought of as equivalent to removing human dissatisfiers. while meeting higher-level needs requires providing human satisfiers. Though it is important to satisfy lower-level needs (i. e. to remove human dissatisfiers), meeting higher-level needs by providing suitable human satisfiers is crucial to human motivation. It was already explained that quality improvement is one of the most appropriate human motivators from its special features.

We are normally quick to identify dissatisfiers when we come across them, but we usually only have a hazy idea of the reasons for our dissatisfaction when satisfiers are absent. This is probably because dissatisfiers are more closely related to our basic survival instincts. Although both human dissatisfiers and satisfiers are important for our motivation, providing suitable satisfiers is probably a more vital question because of the greater difficulty of recognizing them.

## Humanity as the Essence of Motivation

It is sometimes said that work is to earn money and nothing else; in order to carry out and enjoy our social lives, money is indispensable. However, is it true that human work is to earn money and nothing else? We do think that in addition to earning money something else exists which strongly stimulates us to do good work. To clarify this "something" is the essential problem of human motivation.

In hard times, nonetheless, when our living standards are low, work and money are extremely closely linked: work is then regarded simply as a way of earning money, while play, or leisure, is something which consumes it. We work because otherwise we would starve. As the educational level and living standard improve, however, the value of received money as an incentive to the work diminishes rapidly. The rise of absenteeism of employees in the developed countries is a manifestation of this. As work and money become more and more separate, the distinction between work and play blurs, and the two begin to overlap. The recent boom in the leisure and fashion industries is an example

of this, and it has become difficult to distinguish clearly between work and play in these areas today. This kind of change can also be regarded as a phenomenon typifying the maturation of the society.

One typical human play is sport. It is also a commonly accepted idea that, while work may sometimes be unpleasant, sport is always such fun that it can almost make one forget even about eating and sleeping. Today, as the line between work and play becomes harder and harder to define, it is important for us to find out why this should be so. Conversely, if we could identify the elements which make sport so enjoyable and take positive steps to incorporate them into our work, our work would definitely become more pleasurable than it is now. What exactly are the pleasure of our amateur sport? Some of them are described below [18].

1. Our sporting activities are always independent and voluntary.

2. The score does not always turn out as the player wishes. Even though he/she makes great efforts.

3. The player's mental faculties are under strain from time to time.

4. Rhythm is important in sporting activities.

5. A fair and impartial comparison is always made in respect to score.

6. The score is known to the player without any delay.

7. The score which is obtained is decisive for each player.

8. The efforts of a player are precisely reflected in his/her own score.

9. An individual score is clearly recognized by the other participants.

10. The score has no direct relation with money.

etc. It can be said that sporting activities are enjoyable because they stimulate our human nature to the fullest extent.

Form what were discussed above, it can be summarized that sport is enjoyable because it always contains the elements of humanity, while our work is sometimes unenjoyable because it might be to a certain extent dehumanized.

Much emphasis is placed on respect for humanity these days. However, there is little discussion on what humanity itself actually is, and it is thought that our understanding of it is still inadequate; the study of the essence of humanity is an important and difficult problem in philosophy and psychology, and many academics have concentrated their efforts on the metaphysical approach, but elucidating the nature of humanity is still considered to be extremely difficult.

To begin with, any explication of human motivation or humanity must be an explication of the workings of human heart and mind. These in turn depend on the workings of our brain. The studies in the field of celebral physiology is directed to elucidate the workings of our brain. Investigations are made by

comparing the structure of the human brain with those of other animals and observing the functional impact caused by changes produced in specific parts of the brain, etc. This kind of approach is thus more amenable to scientific proof than the metaphysical approach of philosophers and psychologists mentioned above.

Dr. Tokizane [19], a prominent cerebral physiologist, cites the twenty-six items shown in Fig. 2 as the features which characterize human beings. Most of these twenty-six items can be classified into three types: those concerned with creativity which are mainly connected with the function of frontal lobe of our brain; those concerned with sociality which are mainly connected with the part of brain called the archeocortex; and the rest.

In the 1970s, the social climate began to change in the United States, and greater attention was paid how people worked. The Federal Government formed a task force headed by Mr. O'Toole and entrusted it with investigating the problem. After two years, in 1972, the task force published its findings in the well-known report entitled "Work in America". In this report, O'Toole [20] criticized the American custom of emphasizing the relationship between work and financial compensation, and proposed that work should be defined as follows:

"An activity that produces something of value for other people"

Meanwhile, Dr. Nishibori [21] stresses that human work should always include the following three items:

1. creativity (the joy of thinking)

2. physical activity (the joy of physical work)

3. sociality (the joy of sharing pleasure and pain with colleagues)

Although O'Toole's and Nishibori's proposals were made completely independently, they match each other perfectly, if we interpret O'Toole's definition in the following way:

An activity                          (physical activity)

that produces something of value     (creativity)

for other people                     (sociality)

Together, these proposals exemplify the true nature of human work. In other words, it can be said that the essence of human motivation is introducing and fully displaying humanity in our daily work.

## Creative Activities

It may be rather easy to understand the importance of implanting creative activities in our daily work. However, it is often insisted that the room left for the creative work is reduced with the progress of work standardization, and thus the creativity is in contradiction to the standardization. Then the problem of operation manuals is taken up and discussed as an example of work

standardization. We know that the preparation of operation manuals is a time-consuming job, and it often happens that the workers do not abide by the rules of the established manual.

The operation manual in manufacturing usually consists of the following three items:

1.  true aim of the work, i. e., the quality standard which the worker or the group of workers should achieve in their work of manufacturing.

2.  restrictive conditions in executing the work: restrictions to keep the workers in safety and to prevent the quality of intermediate and final products from deterioration are essentially important.

3.  ways and means for executing the work.

With regard to the last item, it is thought that the responsibility of workers for preparing the quality of conformance becomes obscure when they are compelled to obey the established procedures.

Some may also say that ways and means indicated in the operation manual are indispensable for maintaining the highest productivity. However, this opinion is doubtful; if we enforce a left-handed worker to obey the operation manual which is prepared for right-handed workers, it is clear that the productivity of this worker is lowered.

It should be noted that there is a clear difference between the above items 1 and 2 and item 3. Items 1 and 2 are the items for every worker to accomplish or obey, or, these items are general in character and items of observance: every worker should be in safety and should prepare the quality of conformance which is entrusted to him/her. In contrast, item 3 is not of observance, but it is merely the importance reference. On the basis of this reference, actual ways and means of manufacturing are allowed to be different among workers. Consider the training in sport. We start from learning the basic motions from a good instructor using a textbook. However, when we wish to make further progress, our continuous and extraordinary efforts of exercising are required. In consequence, the established motions may be different among us, even though they are based on the basic motions. The skill of workers is not to abide by the indicated procedure for executing the job of manufacturing, but it is to create the most suitable ways and means for each worker based on the indicated basic procedure. Furthermore, we should positively encourage each worker to create and establish the ways and means which are most suitable for the worker under the restrictive conditions.

Next, let us give further consideration on the creative activities which are indispensable element in our daily work. The following four steps are helpful for converting our work activities into creative ones:

1. It is a must to clearly indicate the true aim of each work in the operation manual. Although it sometimes happens that we only indicate the detailed ways and means of work without indicating its true aim, it goes without saying that every work has its own aim, and it is most important to accomplish this aim. It may not be an exaggeration to say that we do not need to stick to the indicated procedure, only if we achieve the aim. On the contrary, it is meaningless to obey the instruction if the aim of the work is not achieved.

2. It is indispensable to implant the keen sense of responsibility in the mind of every worker. This is closely related to the clear indication of the true aim and providing freedom in the procedure. It is known, on the other hand, that we possess weak and unreasonable aspects in our mind; it sometimes happens that we complain about an unsuccessful work and easily look for good excuses in order to relinguish our responsibilities on to the shoulders of others.

   In order to nullify these excuses, it is important in the first place for the managers to do their best in their own works: Deming [22] pointed out the importance of separating the common causes for which managers are responsible from the special causes due to workers. The former causes usually yield the chronic defects and the latter often bring out the sporadic defects. When a control chart is properly used, we can easily distinguish the assignable causes whether they are management controllable or worker controllable.

   Instantaneous feedback of data of quality of conformance obtained at the succeeding processes or inspection is important. They are helpful to motivate the worker who prepared the quality. "Stratification" of data is essential.

3. To choose our thinking time and to make full use of it are important. With the keen sense of responsibility which are the indispensable mental bases for a breakthrough, the flashes of good creative ideas may pass through the brain when one racks his brain and returns to the essence of the problem. Our thinking time is closely related to the time when we are independent and innocent. An old Chinese proverb says, "Good ideas are often born when we are on the horse, on the pillow and on the stool." This may indicate such a thinking time. Because the proper thinking time differs among us, everyone should choose his/her thinking time and make full use of it.

4. Bringing up new ideas is the important job of managers. Sometimes newborn ideas are weak, and it is very easy for the critics to brush them aside. However, the ideas cannot be judged as to whether they are good or not until they are brought up to a somewhat definite form. The supervisors, managers and the related staff should not disregard the creative ideas, but they should patronize them.

After passing through these four steps, the nature of our work is converted into a creative one. At the same time, every worker becomes confident in his/her own work when his/her own creative ideas are considered by the managers. This is very important for the motivation of workers.

## Conclusion

Quality control activities in Japanese industries gradually developed into companywide activities in which all employees participate under the appropriate and powerful leadership of top management. Education and training of the all personnel are emphasized and continued, which are effective for the formation of the teamwork relationship within the company and for the motivation of employees.

Quality is more compatible with human nature than cost and productivity. In addition, when quality is improved in a creative way, cost is reduced and productivity is increased. It can be said quality is one of the most appropriate motivators in our daily work.

Human motivation is an indispensable element for carrying out good work. Not only diminishing the human dissatisfiers but also providing suitable human satisfiers are the essence. By identifying the elements of pleasure in our sporting activities, many hints are obtained for the motivation.

The essential and important elements of humanity are creativity and sociality. Introducing and fully displaying these elements in our daily work are the key of human motivation.

Creativity and work standardization are often thought to be in the contradictory relationship. It was demonstrated, on the contrary, that they are in the complementary relationship each other. Converting our daily work into more creative work is important for the motivation, and four elementary steps are shown.

## References

[1]  Ishikawa, K. and Y. Kondo (1969), "Education and Training for Quality Control in Japanese Industry", Quality, no. 4, p. 90.

[2]  Mizuno, S. and H. Kume (1978), "Development of Education and Training in Quality Control", Report of Statistical Application and Research, JUSE, vol. 25, no. 2, p. 36.

[3]  Ishikawa, K. (1965), "Recent Trend of Quality Control", Report of Statistical Application and Research, JUSE, vol. 12, no. 1, p. 1.

[4]  Kondo, Y. (1988), "Quality in Japan" in Juran's Quality Control Handbook 4th Edition, J. M. Juran and F. M. Gryna, Editors, p. 35F.1, McGraw-Hill, New York.

[5]  Kondo, Y. (1969), "Internal QC Audit in Japanese companies", Quality, no. 4, p. 97.

[6]    Cole, R. E. and A. G. Walder (1981), "Structural Diffusion: The Policies of Participative Work Structure in China, Japan. Sweden and the United States", CRSO Working Paper, no. 226, University of Michigan, February, p. 28.

[7]    Juran, J. M. (1978), "Japanese and Western Quality – A Contrast", Quality Progress, vol. 11, no. 12, p. 10.

[8]    Juran, J. M. and F. M. Gryna (1988), Juran's Quality Control Handbook 4th Edition, p. 11.35 and 35F.10, McGraw-Hill, New York.

[9]    QC Circle Koryo (1980), QC Circle Headquarters, JUSE, Tokyo.

[10]   Tsutsumi, S. (1991) "Basic Business Principle of Our Company and Quality Activities at the Overseas Plants", Proceedings of Asia Quality Control Symposium, 1991, Tokyo. p. 27.

[11]   Hildebrandt, S., K. Kristensen, G. Kanji and J. J. Dahlgaard (1991), "Quality Culture and TQM", Total Quality Management, vol. 2, no. 1, p. 1.

[12]   Kondo, Y. (1988), "Quality through Millenia", Quality Progress, vol. 21, no. 12, p. 83.

[13]   Kondo, Y. (1993), "What is the Basis for Companywide Quality Control – An Overview –", Seminar on Achieving Competitive Quality through Standardization and Implementing Quality System, sponsored by UNIDO and MITI, January 26 – 28, 1993, Jakarta, Indonesia.

[14]   Kondo, Y. (1977), "Creativity in Daily Work", 1977 ASQC Technical Conference Transactions – Philadelphia, p. 430.

[15]   Deming W. E. (1980), "Some Obstacles to Improvement in Quality and Efficiency", Erfaringer fra Kvalitetssyring I Japan, p. 87.

[16]   Maslow, A. H. (1953), "A Theory of Human Motivation", Psychological Review, vol. 50, p. 370.

[17]   Herzberg, F. (1969), The Motivation to Work, Wiley, New York.

[18]   Kondo, Y. (1991), Human Motivation – A Key for management, 3A Corporation, Tokyo.

[19]   Tokizane, T. (1970), Ningen de Aru Koto ("Being Human"), Iwanami Publishing Co., Tokyo (in Japanese).

[20]   O'Toole, J. et al. (1972), Work in America, MIT Press, Cambridge, MA, p. 3.

[21]   Nishibori, E. E. (1971), Humanity and Development of Creativity, Japan Productivity Center, Tokyo (in Japanese).

[22]   Deming, W. E. (1982), Quality, Productivity and Competitive Position, MIT, Center for Advanced Engineering Study, Cambridge, MA.
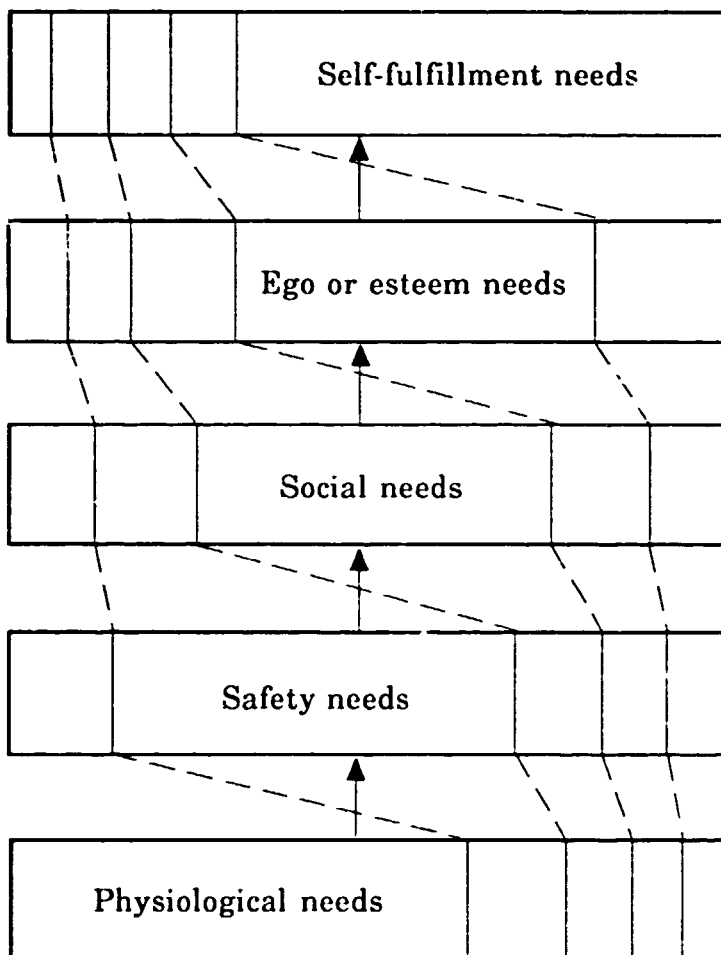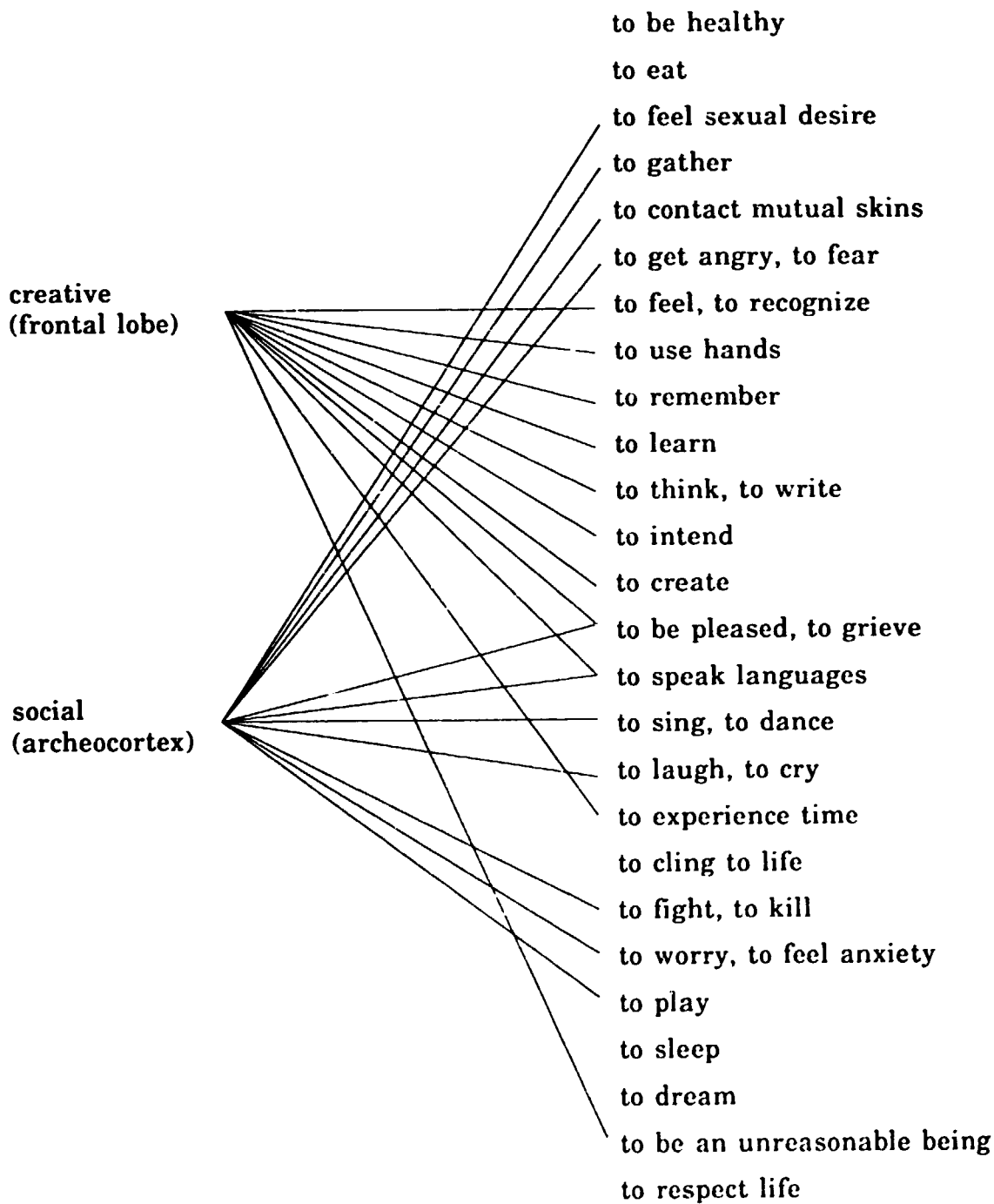
Fig. 1.  Maslow's Hierarchy of Human Needs

creative
(frontal lobe)

social
(archeocortex)

to be healthy

to eat

to feel sexual desire

to gather

to contact mutual skins

to get angry, to fear

to feel, to recognize

to use hands

to remember

to learn

to think, to write

to intend

to create

to be pleased, to grieve

to speak languages

to sing, to dance

to laugh, to cry

to experience time

to cling to life

to fight, to kill

to worry, to feel anxiety

to play

to sleep

to dream

to be an unreasonable being

to respect life

Fig. 2.   Being Human

1-4-19

1-4-20

# SESSION I: TOTAL QUALITY CONTROL

## TQC- It's Impact on
## Yazaki-Torres Manufacturing Inc.

**by Mr. Feliciano L. TORRES**
President and General Manager,
Yazaki-Torres Manufacturing
Inc.

## INTRODUCTION

Here is an example of the T-shirts distributed to our employees, relatives and friends during the 1993 Yazaki-Torres Sports Festival. May I invite your attention to the print at the back of the T-shirt.

Please note the following : 1 ) the company maxim "One for all, all for one." 2) The diagram for Yazaki-Torres "Man's" Guiding Principles, and 3) Yazaki-Torres' 1993 objective - "I commit myself to Quality Plus thru TQC". These in a nutshell, provide the framework that embodies the system of operation for the Total Quality Control (TQC) program in the context of the Guiding Principles of the Yazaki-Torres "Man", participatory involvement by all and in all levels, and commitment of one's self. Yes. with the concepts embodied in this blueprint, so far, we have been successful in carrying out the TQC program.

Let me share with you today, our experiences of growth and profit thru an effective management of this particular program.

## HOW DO WE VIEW TQC?

I shall begin with the perspective by which we perceive TQC and how we actualize it. First, we take it as a program carried out thru activities participated in by everyone in all levels of the organization under the leadership of top management. These activities are considered systematic and scientific because they are performed according to certain precepts, principles, methodologies, standards and specifications. For instance,

1 - Problems are solved thru team development.

2 - Decisions are arrived at thru management of facts, research techniques, and daily work management.

3 - The employees are made aware that the customer does not only mean to be the end users but rather, refers to the person in the next process. How do we enforce awareness? We believe that continuous and concrete reminders are effective. Company slogans are therefore strategically posted to deliver the company's expectations or intents regarding daily work management. Everyone is reminded and motivated to participate and get involved. But no matter how involved and participatory the employees are, if top management is not supportive and not committed to its success, the program will fail.

Therefore, from the rank and file up to top management, everyone is expected to say with determination "I commit myself".

But, of course, commitment is not the sole factor for the success of TQC. TQC has enabled our company to survive market competition and sustain corporate life in the continuum of global market changes, because of several factors.

As the film to be presented will show, our corporation, which started commercial operations in May, 1974, began with 224 employees. That year, we had a gross revenue of ₱1.2 M. Due to the oil shock that rocked the global market then, there was a recession in the US which was our principal market. There was a serious threat to the corporation's existence. Two hundred and twenty four was even trimmed down to 117 strong and committed people. But there was determination to survive (for a cause) and we did. Last year 1992, we had 4,608 employees and secured a gross revenue of US$ 117,707,921. It is recorded that we gained growth and profit. But the momentum of growth process must be maintained. Statistical record for the history of the QCC activity, shows that since its adoption in 1980, its development (in terms of registered circles and number of participants) has kept pace with the growth process of the corporation in the face of global market challenges. Therefore, indeed TQC has had a significant impact on Yazaki -Torres' growth and profit.

At this point, I think that you would profit more from my speech if I share with you how our corporation has successfully implemented TQC to sustain growth and profit. I'm pleased to present to you how we are implementing it.

There are two phases which characterize TQC implementation in our company: the Pre-Implementation Stage and the Implementation Proper. I think it is in

the pre-stage that we differ from others. We have an approach we call YTM-Style.

## PRE-IMPLEMENTATION STAGE

The company provides its way of working environment from where it derives its style of operation, and there are several factors that characterize this : 1) the culture of the Yazaki-Torres people, the way they interact with one another; 2) the hours they keep; 3) the amount and timing of company related social activities; 4) the number, the nature, and duration of meetings, and the attitude of people towards company policies, - in other words, the quality of work life of Yazaki-Torres people at all levels.

In presenting to you the growth process viz a viz TQC, I must admit that TQC has been effective in our company, prior to its practice and adoption, we had already the proper environment which is the Yazaki-Torres style of operation and a fertile ground for sustenance, and that is - quality of mind of our employees.

It is a common knowledge that adoption or innovation, in this case TQC, requires that the system is ready, willing, and able to modify itself. Luckily, sometime before TQC was implemented, our system, the people in particular, were all ready, highly motivated, willing and have the ability to adapt themselves to changes. Yes, the populace was developed and prepared gradually through the years by the Yazaki-Torres Guiding Principles in the development

of the quality of mind.

In retrospect, I would like to mention again that 1974 to 1976 were lean years for Yazaki-Torres. Recession due to oil shock and its subsequent aftermath thereof had affected the global market negatively, and threatened our existence. We were confronted with the "Adapt-to-Change or Perish" business reality. Some basic tenets had to be formulated to serve as the strong backbone of an otherwise collapsing structure. Hence the study of the Filipino employees, (his Culture, his Work - Related Attitude and Perception), was pursued. The basic assumption considered was : "When a person acquires the quality of mind, it would be easier for him to accept and practice the different quality concepts. It further makes the person correlate the work-related quality concepts to those which are non-work related which will eventually make for a quality way of life."

From this assumption, the Guiding Principles of Yazaki-Torres "Man", more popularly known as 7P's and 2D's was conceptualized and has been practiced ever since. Through the years, the Yazaki-Torres people were nurtured with the values so specified in the work ethics formula. Indeed, the developed mind of the populace became the fertile ground for TQC implementation; and sustenance was not so difficult, but of course there were problems.

At this juncture, I would like to explain the Guiding Principles of Yazaki-Torres "Man" that marks the uniqueness of our style of operation.

The Guiding Principles of Yazaki-Torres "Man" is centered in UNITY or "PAGKAKAISA". For unity to exist, FRIENDSHIP or "PAGKAKAIBIGAN" must first be developed. There are four human values needed for friendship to be developed. First is UNDERSTANDING OR "PAG-UNAWA". Understanding is the keypoint. It is the beginning of friendship, for it would be difficult for friendship to develop between or among the employees if they do not understand one another. One can never adapt or be friendly with a system or be comfortable with his job without proper understanding. When understanding is in place, TRUST or "PAGTITIWALA" will be developed. TO FOLLOW or "PAGSUNOD" will come naturally if trust on other persons or the system is developed.

After having understanding, trust, and the willingness to follow, the CONCERN or "PAGMAMALASAKIT" will be developed. One can never have a genuine concern for a person or for the system or for the organization if he does not possess the three prerequisite values I have mentioned. Of course, concern for a beautiful lady prior to any understanding is an exception to the rule. Friendship therefore will only exist with the enhancement of these four human values.

With friendship, UNITY will be attained. But what is most important is how unity can be maintained after it has been developed. For unity could be short-lived without the following three maintenance values :

First, is AWARENESS or "PAGKAKAALAM". It remains important for a person to be aware of things affecting his relationship with people. An example is when one is not aware that what he is saying would hurt other peoples' feel-

ings.  Likewise, without him realizing it, people may perceive his attitude as being unfriendly when he acts indifferently towards them, though he does not really intend to be such.  Another is a work-related example - if one is not aware of the things happening within his work area as well as in other related areas, such situations will automatically affect his work.  Without awareness, simple errors may turn into bigger problems.

The next value is SIMPLICITY or "PAGKAPAYAK".  One should always try to simplify things, as in simplifying work procedures so that it would be easy for people to understand and follow.  Complications usually cause confusions and eventually such condition will create misunderstanding among people.

The third value needed to maintain unity is CONSISTENCY or "PAGPAPA-NATILI".  Unity can be destroyed when one is inconsistent with his ways.

Everyone therefore should always try to be aware of things and to be able to simplify them as much as possible.  Furthermore, he should be consistent in following established procedures unless these are modified.

Aside from these 7P's or seven values, there are two major binding values which we call 2D's in the formula, and which remain as formidable values for friendship to be developed and for unity to be maintained.  These are the virtues of DISCIPLINE and DETERMINATION.  Discipline in a person makes him upright to avoid any tendency to abuse.  On the other hand, determination is the virtue that gives him the will to carry on the friendship that he has developed

and maintain unity even in the face of various difficulties.

With Friendship and Unity instilled in the mind and ways of each and everyone in the company, the organization becomes a MODEL. This status will bring in the form of BENEFIT and RECOGNITION. Hopefully, being the role model that we strive to be, others will emulate the role that we have taken so that we may attain what we deem is our ultimate objective : the PROGRESS of our country.

And so it follows that with the development of the Yazaki-Torres "Man", the adoption or implementation of any innovations and the like is not a very tall order for us. TQC has been practiced successfully because :

1.  The employees trust the system and therefore they follow rules and regulations.

2.  They are thinking people, because they have had education which trained their intellect to be more understanding and aware. And so they are able to participate in planning and decision makings of policies, that they know fully well will affect their daily management and their livelihood ultimately.

3.  They are friendly and concerned, therefore they do not wish harm to others and to top management.

4.    They are understanding and therefore, they are cooperating and working with purposes consistent with objectives of the unit they belong and of the company goals.

5.    They are aware, and therefore they do not follow blindly, they see that their development is the company's development likewise and vice versa.

6.    They are disciplined, therefore there is order in daily work management.  They are determined, and so there is achievement of objectives.

7.    They are simple and therefore they are ready to learn.  For all these, TQC is not a tall order.

To sum it up, our people have the adequate perception, attitude, character, and motivation enough for the implementation of any innovative program for growth and profit.  These characterize our pre-implementation stage of TQC.

Now, we come to the implementation proper or how we conduct to implement the TQC program.

## IMPLEMENTATION PROPER : TQC IN YAZAKI-TORRES' OPERATION

Our corporation's impressive growth in recent years would not have been possi-

ble without management's commitment to Total Quality Control. And yet, even at the outset, I would like to clarify that quality consciousness program was not a magic formula for us. It was carefully planned and worked out in considerations of working man, machine, and the customer, and the business environment. The observance of practices was consistent while the results of the practice were monitored and fed back to the doer to develop his sense of awareness and accomplishment. We spent many years cultivating the Total Quality Control components, in all levels of the system. These scientific tools plus an original work ethics formula and strategies, which we have employed are responsible for the present status of Yazaki-Torres. Under a slogan "One for All, and All for One", which adds vigor to the spirit of unity, every member of the organization worked toward the development of the company and strived to sustain growth and profit to make the company contribute to the socio-economic development of individual, of the community and of the nation, ultimately. The management, on the other hand, had been providing an environment that will not only develop our employees' potentials and capabilities, but also motivate them to aim at an excellent level of performances and quality work life.

To zero-in on the aspect of developing quality individuals is to engage on human resource development.

I would like to stress that, though human resource development is foremost among the factors in the environment, there are other support strategies in the implementation of TQC program such as :

1.   Compartmentalized activities in all units

2.   Management by facts (data management system), and

3.   Improved communication system.


Allow me to cite the specific case of our organization.


The human resource development started with the identification of the problems. We found out that a Filipino employee is faced with the following handicaps which are obstacles to fully develop in him the quality of mind.


1.   Inadequate Education.  Our company has, for its main production, the assembly of automotive wiring harness.  This manufacturing process is labor intensive.  Presently, Yazaki-Torres employs more than 5,466 .  It is broken down into the following categories based on educational attainment:  a)  those who have completed high school education - 70 % ; b)  those who have vocational education and are under graduates - 20 % and;  c)  those who have completed college education - 10 %.

We felt that in order to excel in the manufacturing field and to be competitive in the world market,  it is not just enough for employees to possess healthy physical assets,  but also there is a need for them to develop their intellect to be able to correlate work theories and to appropriately know how the work must be performed based on given standards.  Ascertaining that there is a need for employees to be flexible enough to adjust as changes in technologies happen, it became a chal-

lenge to us and these we have addressed accordingly with utmost priority.

It is unfortunate that most of our high school graduates and even some of those who have completed college sometimes find it difficult to understand written instruction in English; or to accomplish even simple mathematical computation, or to comprehend an application of weights and measures, and or to analyze simple problems. I will not make judgment as to whether these problems result from the deficiencies in our educational system or from the attitude of the students themselves during the education process. However, what we know for certain is that all of these basic skills, abilities and knowledge which they lack, are requisites for an employee to be able to grow with a progressive manufacturing firm.

2.   Negative Concept about Labor. Most people would normally prefer to do white collar jobs, than blue ones. Some people generally regard menial jobs as degrading. They are notoriously known to usually categorize jobs and positions as prestigious or otherwise; and that more often than not, they correlate such job/position to an individual's social standing.

An example is that we can usually hear remarks such as "Factory worker lang yan". "Ordinaryong empleado lang yan". It is unfortunate that this group of people comprising the mass base of our economy are the

ones being looked down and which regard degrades the concept of labor.

3.    <u>Negative Attitudes</u> There are some attitudes that have been influenced by social values, culture, and tradition which are obstacles to full development of the quality of mind. Some of the Filipinos are known to have the "ningas cogon" attitude, that they would not show interest consistently as if they are enthusiastic and good only at the start. This, maybe so, because this type abhors routinary work.

As a result of the Philippines having been under different cultures and influences over 400 years or so, it cannot be avoided that Filipinos inherited some good and bad traits. Unfortunately, many continuously hold on to some of these bad traits - without regard to changing times. They have adhered on observing traditional practices and festivities. They tend to be extravagant in time and resources in observance of traditions. Having such prominent inclination on personal and social preferences, many Filipinos - thus would defer requirements of jobs and rather attend first to the observance of practices.

Historically also, Filipinos are not united. Or they tend to be a diverse people. Revolts during the Spanish times failed because Filipinos lacked the coordination and cooperation. The leaders were divisive. Filipinos would have the tendency to initiate efforts that would bring down what others have successfully worked on. They tend to criticize others the moment they start to earn for themselves due credit. Even during the war, there were cases of FILIPINO TAGO, FILIPINO TURO scheme. Some Filipinos tend to be uncooperative

and therefore are not able to work with others for a common cause.

Having identified these problems as obstacles to advance the development of quality minded individual and having accepted these as handicaps, we at Yazaki-Torres have embarked on a program that would face these obstacles head on and made this our priority. We know that if we are able to hurdle these obstacles, the other problems will not be as difficult.

## SOLUTIONS TO THE PROBLEMS

The following are what we have initiated to overcome these obstacles :

On the question of education, we initiated a program of continuous technical education that is meant to upgrade the basic abilities, skills and understanding of our employees so that they may be prepared to tackle the intricacies of technology involved in their jobs. Under an Education Office created to undertake corollary teachings on policies and technical studies, a comprehensive curriculum was put in place. It includes among others, QC Circle Activities. We pursue the hands-on-training by sending periodically our deserving employees to Japan for training, in different areas of operation, where they enable themselves to keep abreast with the development of modern technologies. Upon their return, they impart these learnings to other employees, having been adequately trained to adopt modern technologies. We also sponsor our people to go abroad for observations and attend to various business fora. This is being done on a wider spectrum of programs created in our organization. In addition to human

resource development programs, similar concerns pertaining to investments on latest machinery and equipment are likewise pursued.

Related to the upholding of the dignity of labor, we address all our employees as employees, regardless of whether he works in the office or in the production line. We never call anyone as worker. This is done not so much as to assuage the feeling of our employees, but because we believe that everybody in the organization is important. We make sure that stratification does not set in. As a matter of policy there is no discrimination between office and factory functions. That is to say, when there is a manpower need in the office where an employee in the factory can fit, we do not resort to hiring outside the company. We utilize some of our own people who have been trained to perform both office and factory functions. Wearing of uniform is observed in all levels of the organization. Even the President makes sure that he is not an exception to this procedure whenever he is in the factory.

Even our canteen is so designed that it is a one room affair where one could sit anywhere he pleases to, thus there is no segregation of the different levels or positions. This set-up fosters unity and equal treatment among employees.

One of the most difficult problems is the question of attitude because it deals with changes in human behavior. The company programs that were initiated to correct those negative attitudes were designed to develop and enhance the inherent desirable characters of the employees, for example, fortitude, courtesy, love for learning, and others. With these measures, adoption of even more sophisti-

cated technologies is made possible.

That is how we develop our human resources. We zero-in on the development of the quality of mind.

*Now, I would like, at this point to share with you some comments regarding Yazaki-Torres Style of Implementation.* Some skeptics asked if our method is a subtle form of "brain washing". On the other hand, some think of it as a refreshing approach to a more productive environment. There are some who wanted to find out if we can express its impact in terms of dollars and cents. There is one comment however, which I think fits well into our concept of the Yazaki-Torres system. This came from a revered fellow, then the Vice President and Group Director for Southern Luzon of a known Company.. and who is now its Vice President for National Marketing and Sales, whose expressed precepts justifies our Style of pursuing productivity.

He said and I quote : "we found out that we focused too much on the quality of circle process and projects rather than on personal quality - the very first step before quality of everything else is achieved. According to Stephen Covey, author of Seven (7) Habits of Highly Effective People, omitting this first step violates the fundamental law of nature which states that : "All real growth and progress is made step by step following a natural sequence of development (A child has to learn to turn over before he can crawl, crawl before he can sit, and so on..) Any short cut will eventually result in failure. So, we are starting all over again; this time beginning with step one developing quality minded em-

ployees as was done by Yazaki-Torres" (end of quote).

*At this point, let me share with you the ways and means by which we promote TQC in the company.*

## PROMOTION OF TQC

To be able to maintain the operation of our TQC program, some forms of promotion have been done :

QCC presentation which is used to be conducted once annually is now being practiced twice a year. QC Circles that have successful projects are given the honor to present their accomplishment to their peers and to management. The winners of these semi-annual activities represent the company in the all Yazaki competition which is held in Japan.

"Before and after" results of 4'S improvements are prominently displayed in the company premises to bolster sense of achievement and to further encourage quality of work.

To strengthen awareness, belongingness, unity, cooperation, and other attitudes that are conducive to growth and development, company slogans are posted in prominent places while company songs are constantly played.

Improvement activity program (Kaizen) had been institutionalized. Monthly

meetings presided by a Deputy Director is held to discuss Kaizen activity programs, results, plans, etc. These meetings are likewise conducted to bolster rapport among the individuals in the unit.

Problem solving techniques had been standardized to follow the "Plan - Do - Check - Action" activities aided by the "7 tools of QC". An on-going education program had been established for this purpose.

A TQC training center had been established, too. This houses the education activities for the TQC. As in other training centers, this place is equipped enough to facilitate more effective instruction. Several seminars and workshops had already been conducted in this unit.

Periodic training in TQC operation both here and abroad is being conducted.

*Now you may ask -*

*What have we really gained from this program?*

## TQC BENEFITS

Let me classify our benefits into two, the tangibles and the intangibles. The former can be measured in terms of volumes and medals received and productivity gained. Records would show that annually from 1985, we expanded our capacity by 100,000 man-hours reaching this year the 1 million man-hours

production volume. While many companies were reeling from the effects of economic instability, we were moving forward and gaining more of the market share. We are now considered the world's largest wiring harness manufacturing facility under one roof. In 1992, we topped the whole Yazaki group in terms of Quality and Productivity. We have been recipients of "Best Suppliers" awards from cai makers in the United States, more specifically from U.S. MAZDA, US NISSAN, and FORD MOTOR of AMERICA. Of course, we have also been honored by our local car makers. On top of all of these, rapport between management and its employees has remained untarnished.

To be specific, I would like to share with you some of the more tangible benefits we have derived from TQC activities.

1 -   There is an increase in efficiency at all levels. Yazaki-Torres' production efficiency has consistently gone up thru the years of its operation.

2 -   Quality of both process and products have continuously improved as well. Our products are accepted by some of the most stringent car makers in Japan and the U.S. We have been recipients of many quality awards by our customer.

3 -   There has been an easy implementation of world class production system - kanban, just in time, SPS, and others; and

4 -   There has been a remarkable continuous reduction in material losses

caused by defects and or obsolescence.

Citing now some of the intangible benefits, we have the following gains :

1 -     Improved Morale and Rapport .  It cannot be denied that the company has not experienced the threat of strikes and demonstrations through these years.  The Yazaki-Torres "Man" feels a comfortable and happy relationship with the management.  They complement each other.  They are one in principle and objectives, and both try to pursue the course with dignity and trust.  So far, both are satisfied because they practice quality of life.

2. -    A higher level of employees skill and aptitude is being attained as indicated  by the increase of quality products.

## STATUS OF TQM IN THE PHILIPPINES

Without intending to be repetitious, I wish to underline the end view of the Yazaki-Torres "Man" Model of Principles - that is the Progress of the Philippines.  And like having a vision that every Filipino aspires to attain progress for our country, our company introduces a model so that we may inspire others to follow, and ultimately for our country to cruise headway fast to progress.

This belief, for the need of a total Philippines' commitment to quality is also being shared broadly by many companies and industries.  Thus, TQC has been

into management systems of these companies. Today at least over 40 companies have embarked on this TQC effort. These involvements date back since early 80's, notably started in Philippine subsidiaries of multinational companies since their mother companies are practicing TQC for years. Also todate, a number of companies in our country have formed an informal group which calls itself he TQM Industry Network. This group of TQM practitioners meet once a month to share information and compare achievements of their respective programs. It has no officers, and the member companies each take turns in hosting the meetings.

There are different organizations in the forefront propagating TQC in the country. One of this and to whom much credit must be given is Philippine Quality and Productivity Movement which launched five years ago, the National Quality Campaign to promote TQC. The other two associations contributing to enhance total quality in the Philippines are the Philippine Society For Quality Control and Productivity Movement Circles Association of the Philippines. Another institution that has continuously advocated TQC principles in its training courses is the Development Academy of the Philippines which sub-entity, the Productivity and Development Center has been in the forefront to promote TQC programs. The history of these Institutions and Associations is that they have centered their programs on TQC. In addition to these organizations, today there are many professional groups that include TQC agenda in their conventions and meetings, such as :

1 -    Management Association of the Philippines

2 -     Production Management Association of the Phils.

3 -     Personnel Management Association of the Phils.

4 -     Philippine Society for Training and Development

5 -     Philippine Institute of Chemical Engineers

6 -     Philippine Association of Technical Educators

7 -     Philippine Chamber of Food Manufacturers

Currently also, many programs visualized by these organizations and the many activities they embarked on, seek to improve the quality and productivity levels of different fields and entities.  To cite a few :

1 -     The Quality Foundation of the PQPM under the National Quality concerns itself with educating consumers and serving as a Center for the inclusion of courses in Quality in the school curricula.

Related to this , it is important to note that AIM has decided to include TQC as full time subject in their Master in Business Management curriculum.  It should not be forgotten that Dela Salle University College of Engineering embarked on TQC training for its faculty members.

2 -     The Productivity Consultancy Program of the PQPM seeks to improve the productivity of small and medium enterprises; with the engagement of consultants who are required to undergo training in TQC principles.

3 -	The Integrated Application Project - a field base activity of Business students of AIM which solicits the participation of companies to allow conduct survey on the state of total Quality Management practice in these companies. The students participate in the process of developing quality ways in the companies and when after their studies, they formulate recommendations for improvement.

Least to emphasize, the joint efforts of all the sectors in Philippine society today, as partners in learning and practices to advance TQC, will work towards a globally competitive Philippines.

To conclude, let me invite you once more to a vision. How do we see ourselves in the future face to face with a global market changes? The challenge is on. So far we have been fortunate that our perseverance and adherence to quality concepts bring us achievements and are acknowledged. Recently we have been awarded the production of wiring harness for one of best selling vans in the United States. Does not the present presupposes the future? When we start production in October this year, it will mean no less than an additional 20 % sales volume for our company.

This my dear friends is not possible without our commitment to Total Quality Control. And if I may take this opportunity - I wish to enjoin all of you to this cause - that we all now become committed to propagate TQC.

Thank you.

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(MEMO)

1-5-25

1-5-26

# UNIDO PRESENTATION

– Address by Mr. Octavio MAIZZA-NETO
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# SEMINAR ON

# MEETING GLOBAL
# MARKET CHALLENGES
# WITH
# TOTAL QUALITY CONTROL
# AND ISO 9000

UNIDO

## SESSION II:  ISO 9000 SERIES

### Significance of the Introduction and Utilization of the Quality System Based on ISO 9000

Speaker:   Mr. Tomiya KOYAMA
Director of Quality System Center,
Japanese Standards Association

### ISO 9002- Pilipinas Shell's Strategy for Market Competitiveness

Speaker:   Mr. Raul M. MIRASOL
Quality Improvement Manager,
Pilipinas Shell Petroleum Corporation

## SESSION III:  TQC AND ISO 9000 SERIES

### TDK'S 4 Steps to ISO 9001 Registration and TQC Activities

Speaker:   Mr. Hirokatsu SHINOKI
Manager, Product Safety Section,
Quality Assurance Department,
Power Electronic Product Mfg. Division,
TDK Corporation

### TQC and ISO 9000- Are They in Conflict?

Speaker:   Mr. Antonio V. ENRIQUEZ II
Asst. Vice-President and Account Director,
San Miguel Packaging Products,
San Miguel Corporation

**28th – 30th, September 1993**
**Philippine International Convention Center**
**Roxas Blvd., Metro Manila**

**SESSION II: ISO 9000 SERIES**

# Significance of Application
# and
# Utilization of the Quality System Based
# on
# The ISO 9000 Series

## Important points which corporations
## should take into consideration
## in facing quality system assessment
## and registration scheme

**by Mr. Tomiya KOYAMA**
Director of Quality System Center,
Japanese Standards Association

## 1. Introduction

The ISO 9000 series and quality system assessment and registration scheme based on the ISO 9000 series are disseminating on a global basis at a speed much faster than generally anticipated. When viewed on the individual corporation level, how they react to this movement varies. Some corporations take actions either quickly to respond to customers' demand or for competitive reasons, while others quietly observe the social influences prior to taking any action. Many hurdles can easily be imagined to rise in order to internationally consolidate quality managements methods, which originally were developed just as a tool for management, by use of international standards and quality system assessment and registration scheme. In order to efficiently administrate, disseminate and develop the scheme, it is indispensable to allow some flexibility for interpretation of the standards and application to the scheme. Allowing flexibility, at the same time, can be weak points of the scheme. Actions of corporations facing the scheme will depend upon the degree of flexibility set within the scheme. Thus, an extent of flexibility will influence future direction of the scheme.

With the above in mind, I, as an auditor, would like to elaborate on application of the ISO 9000 series and how corporations should face quality system assessment and registrations scheme together with my personal view on these issues. I sincerely hope that my report will encourage healthy development and management of the scheme.

## 2. Basic points for quality system based on the ISO 9000 series.

Since interpretation of each quality system requirement of the ISO 9000 series and detailed information on what actions corporations took in fulfilling the requirements of the ISO 9000 series are not a matter of major concern in this report, I will intentionally omit explanation

concerning them. Instead, I would like to set forth basic points to be taken into consideration by corporations for establishment of quality system based on the ISO 9000 series.

2.1. Formulate quality assurance elen nts into a
      consolidated system.

Figure 1 shows a working flow chart of quality system elements set out in the ISO 9000 series. By illustrating quality system requirements (4.1 to 4.20) onto a simple chart like this, it gives you a brief idea of the content of the quality system requirements. In order to establish the quality system that meets the overall objective, twenty quality system elements that varies in level of impact they have on quality must be put in order in accordance with the degree of importance by taking into account a size of the corporation and targeted items. For example, no one will consider that management responsibility (4.1) and statistical techniques (4.20) are equally influential to quality assurance of products.
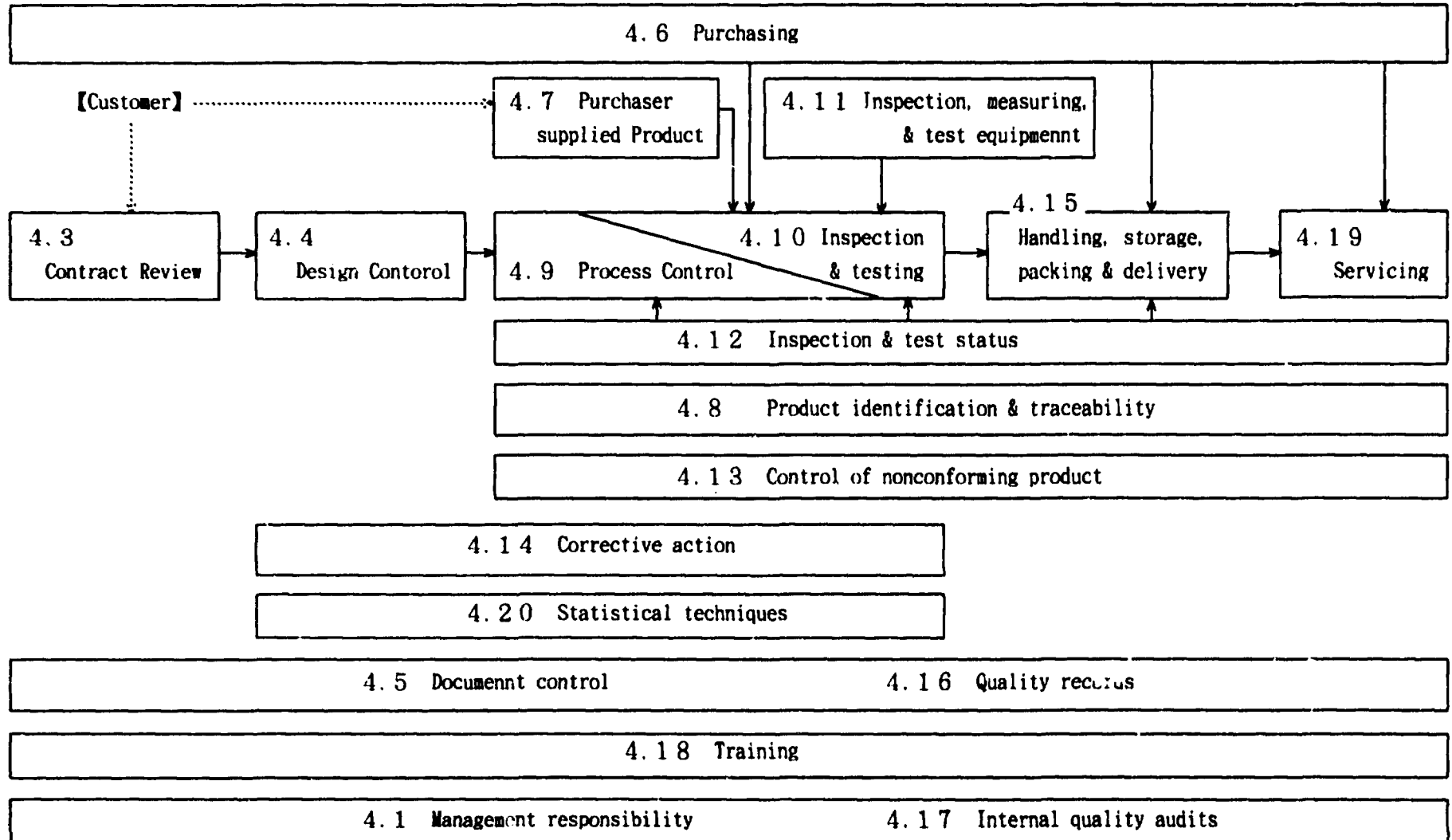
The ISO 9000 series is not yet complete. Many quality system requirements need further clarification. Deliberation for revision of standards has already been undertaken in the ISO technical committees. Taking this into account, corporations should not cope with the standards in a too stringent manner. Excessive adherence in fulfilling each quality system requirement without sufficient understanding of the contents will lead to establishment of a nominal quality system which does not pay for the burden borne.

2.2 Obtain customer reliability and understanding towards
     quality system.

The ISO 9000 series is a set of requirements which are customer-oriented. Thus, corporations shall try to obtain customers' reliability towards their ISO 9000 based quality system. Companies' belief that "companies with

# Fig.1 Quality System Requirements in ISO9001

4.2 Quality system

| 4.6 Purchasing |
|---|

【Customer】 ......................................

| 4.7 Purchaser supplied Product | 4.11 Inspection, measuring, & test equipmennt |
|---|---|

4.15

| 4.3 Contract Review | → | 4.4 Design Contorol | → | 4.9 Process Control     4.10 Inspection & testing | → | Handling, storage, packing & delivery | 4.19 Servicing |
|---|---|---|---|---|---|---|---|

| 4.12 Inspection & test status |
|---|

| 4.8 Product identification & traceability |
|---|

| 4.13 Control of nonconforming product |
|---|

| 4.14 Corrective action |
|---|

| 4.20 Statistical techniques |
|---|

| 4.5 Documennt control        4.16 Quality records |
|---|

| 4.18 Training |
|---|

| 4.1 Management responsibility        4.17 Internal quality audits |
|---|

2-1-4

well-organized manufacturing techniques and facilities will prevent trouble concerning quality, and thus deserves customers' reliability" is based on manufactures' prejudice, and the idea seems to be a self-approbation when viewed from my standpoint. Once companies decide to adopt the ISO 9000 series, they should try to obtain reliability and customer's understanding on the quality system by transforming their quality system into a visible system. Here lies the reason for need of documentation and demonstration of rules and procedures. Lack of understanding of this back-ground, will invite misunderstanding that application of the ISO 9000 series will only lead to a pile of nominal and unnecessary documents.

## 2.3 Verification on the maintenance of quality system.

Works related to maintenance of quality system tends to be put aside by main activities of quality management, such as development of new products and improvement of the quality, for the former tend to be out of focus of interest and have little opportunity of being addressed. In the ISO 9000 series, by taking the nature of maintenance works of quality system into consideration, function which verifies the implementation status of necessary elements for quality system has been recognized to be important.

Quality system requirements of ISO 9001 (extract)

4.1.2 Organization
The responsibility, authority and the interrelation of all personnel who manage, perform and verify work affecting quality shall be defined.

4.1.2.2 Verification resources and personnel
Verification activities shall include inspection test and monitoring of the design, production and servicing processes and/or product.

4.1.3 Management review
Management review on continuing suitability and
effectiveness of quality system.

4.4.5 Design verification
Planning, establishment, documentation of the design
reviews.

4.6.4. Verification of purchased  product
Verification of purchased products by purchasers or his
representative.

4.17 Internal quality audits
Planned audit of quality system.

Function for verification of maintenance of quality system
is either difficult or will become obscure when operated
in corporations that respect voluntary activities on an
individual division basis.   As previously mentioned,
standards of the ISO 9000 series are customer-oriented,
thus maintenance of quality system has to be verified
objectively.   Adequate operation of verification function
will avoid superficial solutions of problems and diffusion
of responsibility.

2.4. Quality system requirements with flexibility and
     which place emphasis on conditions specific to
     corporations.

In the introduction of ISO 9000 (Guidelines for selection
and use), there is a description as follows; "the quality
system of an organization is influenced by the objectives
of the organization, by the product or service and by the
practices specific to the organization, and therefore, the
quality system varies from one organization to another".
This prescription, while aiming to form a consolidated
quality system by use of the ISO 9000 series standards,
admits that there are factors which precludes from uniform
handling of various conditions.   This has been implied in

the following part in ISO 9000 8.5.1 (Tailoring).

ISO 9000 8.5.1 (Tailoring)

8.5.1 Tailoring
Experience has shown that one of the International
Standards (ISO 9001-9003) can be selected that will meet
needs adequately for almost any situation. However, on
occasion, certain quality system elements called for in
the selected International Standard may be deleted and,
on other occasions, elements may be added. If this
should prove necessary, it should be agreed between the
purchaser and the supplier, and should be specified in
the contract.

Furthermore, many quality system requirements in ISO 9001
call for corporations to take their specific condition
into account when coping with the requirements. Thus, in
facing the requirements which have expressions such as
"where appropriate, as appropriate or where applicable",
how flexibly corporations deal with the requirements
should be left to the discretion of the corporations. It
should be remembered that the ISO 9000 series does not aim
to increase nominal works nor expect corporations to over-
act. To look for adequate measures to meet quality system
requirements laid out in the standards, and to consider
where "as appropriate" apply, will be good opportunities
for corporations to review their conventional system and
rules with an aim to improve their quality system into a
more effective one. Through this process, I believe that
application of the ISO 900 series will be significant for
corporations.

2.5 Apply the ISO 9000 series to all works and all
    divisions.

The ISO 9000 series has been internationally accepted as a
standard applicable to varieties of businesses ranging
from manufacturing to services. Quality system assessment
and registration scheme of UK covers as far as to include

hotels and restaurants. Although admitting that it is a matter of course for technical division of manufactures to act as a central point for application, corporations which exercise the activities solely by involvement of the technical development division cannot establish a quality system in a true sense. Systematic development of the activities based on good and close liaison among all divisions including sales division, a focal point of customers with the corporation, and design and development divisions, will enable the corporations to obtain the customers' reliability easily. Even in cases other than quality issues, no management will raise an objection towards the attitude of the corporations to obtain desired results by dealing with the issue in a cooperative manner which strives to define responsibility and authority.

## 2.6 Summary of Paragraph 2

Features of quality system and quality system requirements of the ISO 9000 series can be summarized as follows.

(1) Manufacturers are required to establish and maintain the structure of quality assurance as a system.
  - Clear definition of quality policy, assignment of works, and responsibility and authority is necessary.
  - Organizational and consistent exercise of quality related activities is vital.

(2) Obtain customers understanding and reliability on manufacture's structure of quality assurance.
  - Necessary documentation and demonstration.
  - Harmonization of conditions specific to corporations with quality system requirements of standards shall be encouraged.

(3) Manufactures shall verify suitability and effectiveness of the structure of quality assurance.
  - Periodic management reviews and evaluation.

- Internal Quality Audit
- Audit of primary activities and verification of the results of the audit.

(4) The application of the structure of quality assurance shall not be limited to quality related activities of manufacturing, but shall be applied to varieties of types of businesses and functions.
- Types of businesses; mineral products, commodities, software, service
- Functions; sales, purchasing, R&D, design, equipment, manufacturing, testing and inspection, transportation, etc.

I believe that a clue to further clarify how quality system is maintained and to bring about visible outcome by implementing the quality system is being provided within the ISO 9000 series. Nevertheless, when the ISO 9000 series was introduced, a certain impact was perceived on corporations which developed their own in-house quality system and which believe that their customers appreciate what they do. From my point of view, I think it is important for those corporations to modestly recognize the fact that since its establishment in 1987, the ISO 9000 series has been adopted in over 50 countries. At the same time, many voice that they face difficulty in adopting the ISO 9000 series to their condition and in understanding quality system requirements.

I assume that I am not the only one who feels that deficiencies of conventional quality system will be filled up by application of the ISO 900C series. It is desied that application of the ISO 9000 series would be a good opportunity for corporations to review the old and yet a new topic as 'quality'.

## 3. Actions envisioned for corporations facing quality system assessment and registration scheme.

### 3.1 Flow chart of audit.

As specified in ISO/IEC Guide 48, main activities of audit are as follows.

| |
|---|
| Application for assessment. Receipt of an application. |

| |
|---|
| Contract for assessment works with a supplier. |

| |
|---|
| Provide the assessment body with a quality manual. |

| |
|---|
| Organize the assessment team. |

| |
|---|
| Appraisal of documents. |

| |
|---|
| Draft working plan for assessments. |

| |
|---|
| On-site audit. |

| |
|---|
| Judgement of the result of assessment. |

| |
|---|
| Provide a registration document. |

| |
|---|
| Subsequent surveillance of registration. |

### 3.2 Establishment of quality system by judgement based on common sense.

The ISO 9000 series is designed for application to the widest industrial fields. To this aim, when assessing quality system of special types of businesses and corporations, the auditors' arbitrary interpretation and

judgement in areas, where specific descriptions lack, may force corporations to make a substantial changes. On the other hand, as I previously mentioned, there are many quality system requirements which allow a wide range of flexibility and which respect conditions and policies specific to the corporations. In case each basic function and condition which corporations should at least possess vary with other corporations which are of the same business bracket, customers are unable to accept the results of an audit conducted by a third party. This is the reason why detailed standards and guidelines for specific business fields and products are considered necessary. This matter is expected to be worked out as the scheme disseminates and expands to a broader extent. However, since there is almost no standard which can be used for establishment of quality system for manufactures, auditors and customers of special business fields, "system-oriented-mind" and " judgement based on common sense" should be highlighted by those people concerned. The correlation between these two attitude is shown in the figure below.

Figure 3. Correlation between "system-oriented-mind" and
"judgement based on common sense".

| | Strong system-oriented-mind | Weak system-oriented-mind |
|---|---|---|
| Able to make judgement based on common sense. | Ⅰ Matters will be handled in a practical manner. | Ⅱ Matters may be handled in a practical manner. |
| Judgement is not necessary based on common sense. | Ⅲ Formality precedes. | Ⅳ Chaotic condition |

## 3.3 Documentation of quality system (Drafting of a quality manual)

Drafting of a quality manual does not necessary mean the start of application of the ISO 9000 series. It should be borne in mind that a quality manual is a result of a well-established and adequately maintained quality system. It is forgotten that the objective of assessment is not to confirm conformity of contents of the quality manual to the requirements of the ISO 9000 series, but to ensure that activities for quality system are exercised effectively and that they are in line with the ISO 9000 series. When customers require manufacturers to apply the ISO 9000 series as one of the dealing conditions, manufacturers must demonstrate the structure of their quality system in an observable form. If documentation and records are being kept properly, a quality manual can easily be drafted.

Figure 4. Points for audit



Contract requirements
with customers
Legislations
The ISO 9000 series

Result
Maintain effectiveness

Policy
Intention

Implementation
status

Actual activities
on the working place
Manufacturing process
Records

Quality manual
(standards,
specifications)
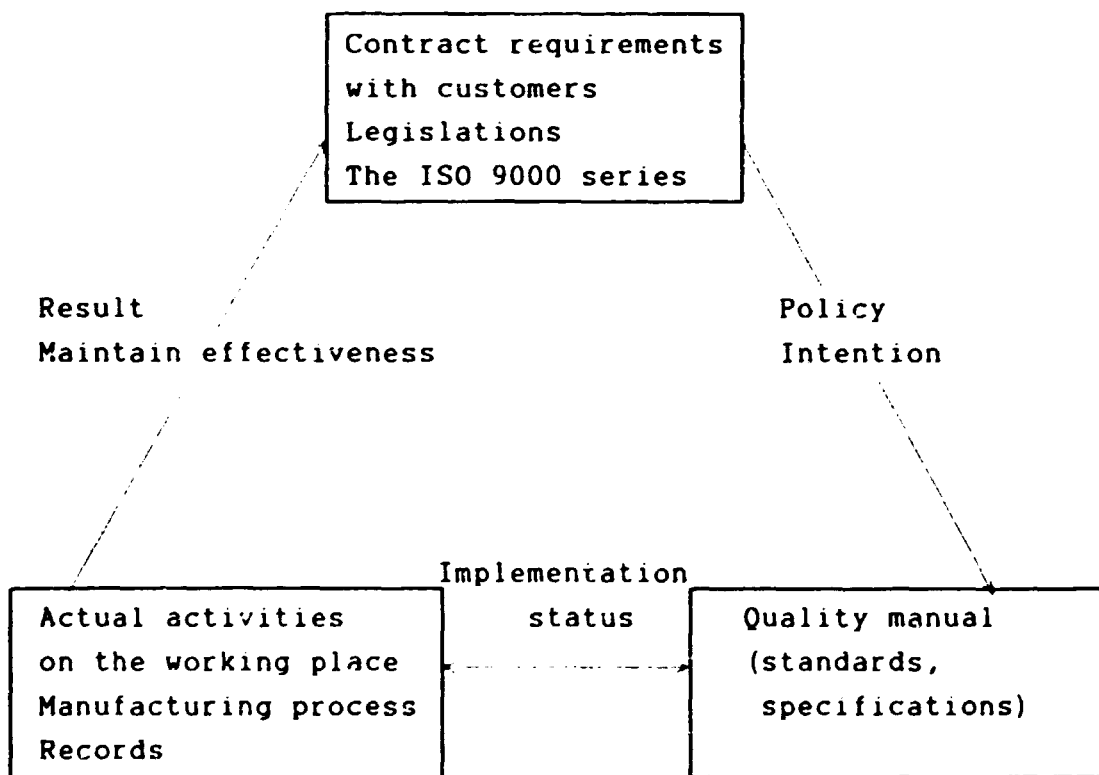
3.4 Selection of adequate assessment bodies and
auditors.

In order to carry out the audit objectively and fairly,
auditors are qualified by a criteria. It is important for
corporations to recognize that assessment works are
susceptible to attributes of auditors rather than
authorization of the auditors. In case expertise and
behavior of the authorized auditors designated by the
assessment bodies seemed untrustworthy, the corporations
should positively execute one's right to avoid the
auditors. To compromise with comments of such
untrustworthy auditors without being truly convinced may
appear to solve the problem, but will, in the long run, be
regretted for the corporations will be forced to
incorporate the nominal activities in their quality
system. Corporations are able to evaluate the attributes
of auditors while the audit actually takes place in the
working place. Risk of unemployment of auditors and
assessment bodies by demonstration of inadequate
assessment activities, will force them to deal with the
activities professionally.

3.5 Systematic preparatory works for application.

(1) Managements will decide the direction of policy of
implementation of the standard and application of the
scheme.

In order to achieve consensus and to establish
cooperative relation between all organizations
concerned with quality system, it is indispensable for
managements to clearly set forth their decision.
Quality system requirement of the ISO 9000 series
defines the responsibility of managements. To confirm
the status, auditors hold interview with managements
concerned with quality management. Thus, the strong
will and resolution of the management leads to a
success.

(2) Defining promotional structure and organization.

Once adoption of the ISO 9000 series has been decided, a team namely, for example, 'committee for preparatory works for application of the ISO 9000 series' shall be established. This committee shall be led by a chairman who will act as a responsible person for the system, and the membership will be comprised of people representing relevant divisions. In parallel, it is expected to establish a secretariat affiliated to the committee. It is possible to handle the preparatory works at the existing committee instead of establishing a new committee. However, in this case, it should be kept in mind that the conventional committee clearly understands where the problem lies and what measures are required for improvement. If the chairman is obliged to report the progress directly to managements, it will help him confirm the overall situation.

(3) Form a team responsible for activities.

Set up a team led by a promotional secretariat or the managerial people of a secretariat, which will be comprised of working level staffs representing each division concerned. This team will be considered as an affiliated team of the preparatory committee. In order to establish quality system, harmonization of works and procedures of different ranking levels and functions of divisions should be secured by the team comprised of members who are well aware of activities exercised in the working place.

(4) Pinpoint the problem by internal audit.

Corporations do not have a good impression about the concept of audit. Thus, implementation of internal audit in the in-house system of a corporation is not easy work. Nevertheless, since the internal audit is an indispensable part of quality system requirements, it is advised to incorporate the

internal audit as a system at an early stage and to operate it from the preparatory stage.

Since the internal auditee and the auditor shares the common interest, it is important to avoid fault-finding attitude and to maintain the atmosphere which allows people to frankly discuss the matters so that the optimum solution can be found. At the same time, internal auditors should always try to view things from customers' or third parties' standpoint and exercise the audit objectively. Internal auditors might take part in seminars held outside the corporations to learn know-how and actual cases of internal audit.

(5) Utilize consultant and conduct preliminary review by assessment bodies.

In order to prevent confusion caused by unpredictably many corrective actions required upon corporations for nonconformity, it might be one way to employ a consultant from the preparatory stage. In selecting a consultant, the corporation shall not employ a consultant who nominally tries to complete infrastructure for merely passing the audit, but shall use a consultant who understands the situation of the corporation and who will be able to provide adequate suggestions for establishing the quality system suitable to the corporation. Some assessment bodies can provide the preliminary review upon request. In whatever case, corporations should first and foremost give their own thought on how the structure can be organized. The establishment of the system, which account for maintenance of the system after being assessed and registered, and which can be utilized continuously, depend upon how far details will be discussed by people concerned at the preparatory stage.

(6) Provide necessary information periodically and exercise activities to motivate people concerned.

The necessary works for establishment of a quality
system and maintenance of the quality system
tends to be carried out by involvement of a limited
number of staffs. However, it was reported that
more than eighty percent of total staffs of a
corporation engaged in the preparatory works and
the fact that auditors directly question working level
people on the site of assessment. Thus, as mentioned
in description of 4.1.1 (quality policy) in ISO 9001;
'The suppliers shall ensure that this policy is
understood, implemented and maintained at all levels
in the organization". It is a very important task for
the promotional secretariat and managerial people of
the committee to act as the core of the activities,
and to provide necessary information regularly and ask
for cooperation from people concerned and conduct
activities to motivate them.

## 4. Conclusion

Let me summarize the factors which drive corporations
to apply the ISO 9000 series and quality system
assessment and registration scheme. Bearing the
following in mind, it is important for corporations to
thoroughly examine the present situations and
environment to decide their future direction by
viewing relevant matters from the mid-term
perspective.

Corporations move towards application of the
ISO 9000 series and quality system assessment and
registration scheme based on the following reasons:

(1) In order to promote international trade, and
    fulfill conditions necessary for entry of the
    market. (for export purpose)

    • Respect GATT Standard Code (technical barriers to
      trade)

- To correspond to the movement of the quality system assessment and registration scheme based on the ISO 9000 series which is expanding internationally.

(2) To correspond to movement which aims to harmonize varieties of existing assessment and certification schemes.

- Apply the schemes to type approval and quality audit exercised by official inspection bodies, and customers.

(3) As a tool for corporations' review of their quality system structure and for reinforcement of the existing quality system structure.

- The structure for quality management should be reinforced as a part of re-structuring measures of the corporations.

- Unification of the schemes with conventional quality control (TQC)

- Reinforce the infrastructure to meet the social needs such as CS and PL.

Corporations should recognize the fact that since establishment of the ISO 9000 series, the standards and quality system assessment and registration scheme are expanding on a global basis at a drastic speed. It is easy to point out the shortcomings of the ISO 9000 series and areas where further consideration is necessary in the quality system assessment and registration scheme. However, it should be borne in mind that how corporations should cope with these standards cannot be found by study of theories nor by holding repetitive discussions. As you may be well aware, diversification of international environment which surrounds the corporations is changing at a very fast speed. For example, economical integration of EC, Uruguay Round multilateral trade negotiations,

North America Free Trade Agreement are movements toward the enhancement of free trade, while a contradicting movement such as protectionism is taking place in some areas. As these major changes occur, we are confronting many tasks necessary to be solved.

I believe that it is the right time for us to consider how the ISO 9000 series can be used to develop international consensus of quality. To build international consensus concerning quality and to practically apply the ISO 9000 series to each region, in a true sense, there are many realistic issues to be solved. I feel that we are moving closer to the universal unification that humans have been dreaming of, from quality's point of view.

2-1-19

2-1-22

# SESSION II: ISO 9000 SERIES

# ISO 9002- Pilipinas Shell's Strategy
# for Market Competitiveness

### by Mr. Raul M. MIRASOL
Quality Improvement Manager,
Pilipinas Shell Petroleum
Corporation

## 1.   WHY ISO 9000?

I will assume that you are familiar with the ISO 9000 Quality System, and therefore it will not be necessary for me to define or describe what it is.

Each of us have our reason for being at this seminar whose theme is "Meeting Global Market Challenges with Total Quality Control and ISO 9000." We each have our reason for implementing ISO 9000. Let me share with you our reasons in Pilipinas Shell for going the ISO 9000 route.

We believe that benchmarking our principal business processes against ISO 9000 standards will help Shell attain our vision of being "the best of class in the fuels, lubricants and chemical markets in the country, maintaining consistent leadership in product quality and customer service." (This quote is the third of five statements that make up the corporate vision of the Shell Companies in the Philippines).

Money is the language of management. If management is to approve ISO 9000 implementation, the proof of the need for ISO certification must be expressed in money terms.

The cost of implementing a Quality Assurance system is easy to measure. In the case of Pilipinas Shell, the ISO 9002 certification of our LubeOil Blending and Grease Plant cost over ₱1 million plus 4.5 manyears of effort.

Why did we do it? We have not quantified the financial benefits for incurring these costs. We have, however, a clear view of the unquantified benefits. These are:

1.    Better products and/or services. Our customers, and ourselves, sleep better at night knowing that the quality of our products is not a chance occurence. We know that product specifications are met as a result of well defined, repeatable and predictable processes that will stand up to rigid and thorough scrutiny.

2.	We believe that being an ISO certified company is consistent with our quality objective of satisfying our customers, satisfying them even to the point of delight. With everybody now outdoing each other in satisfying customers, our objective is now a delighted costumer, not just a satisfied customer.

Semantics aside, streamlining, improving and documenting our processes just because ISC 9000 requires it is missing the point of Quality Management. We must not lose sight of the customer. We must continually strive to meet his requirements, and this usually includes good quality products.

3.	Higher efficiency. As a result of analysing, flow-charting and documenting our processes, we became aware of bureaucratic and/or procedural inefficien-cies which, because of the culture of continuous improvement, we target for elimination.

4.	Less failure, less hassle, less waste. Properly analysed and documented procedures hasten the task of predicting, identifying and eliminating causes of failure and waste.

5.	Better teamwork. Process analysis properly carried out resolves issues of process ownership, process boundaries, and interfaces with other processes. Better understanding and resolution of these issues tends to result in better teamwork among the various players involved in the process.

6.	High motivation. Have you ever participated in a high profile work group that meets monthly without fail with your senior management to checkpoint your progress? If so, you would have experienced the camaraderie that results from working numerous extra hours to meet deadlines and demonstrate tangible progress. The euphoria you feel upon achieving major kilometer posts overshadows whatever fatigue you certainly must also be feeling.

7.	Clearer organization. The review of process flows in an organization clarifies what value is added at each stage of the process. Activities that add no value can be pinpointed and eliminated. This can only result in a healthier and more robust organization.

8.   Less interface problems. Every process provides an
     output to a customer, be he internal or external.  If
     the goal of your Quality System is to delight your
     customer, including internal customers, should
     interface problems persist?

II.  SETTING UP ISO 9000 IN THE COMPANY - CHALLENGES AND
     CPPORTUNITIES

         In the European and American markets, a strong
     driving force for ISO certification is the fact that
     customers require it of their suppliers. This may not yet
     be the case in the Philippine scenario, but it will not be
     long before this becomes a local standard.  When you
     introduce the Quality culture in your organization, in no
     time at all you realize that a critical success factor to
     your ability to satisfy your customers is the ability of
     your suppliers to provide you quality feedstock.  You may
     have the most sophisticated manufacturing process in
     place, but you will fail to deliver on-specification
     products if your raw materials are off-specification.

         Even though our local customers are not yet insisting
     that we be ISO certified suppliers, it will certainly
     demonstrate our earnestness in pursuing Quality if we take
     up the challenge to achieve accreditation.  This challenge
     entails a lot of work and expense, but it is work and
     expense worth taking.  I have dwelt extensively on this
     point in the first part of my talk.

         I mentioned earlier that the accreditation of our
     LubOil Blending and Grease Plant cost Pilipinas Shell over
     ₱1 million, plus 4.5 manyears of work.

         Quality is a long distance marathon that does not end
     after 42 plus kilometers.  Having successfully earned ISO
     9002 accreditation, we continuously improve to maintain
     our certification.  More importantly, we continuously
     improve to move closer to our goal of delighting our
     customers.

         We started our journey for ISO 9002 certification of
     the LubOil Blending and Grease Plant in November 1991, and
     received certification in January 1993.

         This year, four work sites are in varying stages of
     the process of accreditation:

Poro Installation and Pasacao Depot aim to receive certification by February 1994.

The Base Oil Refinery of Philippine Petroleum Corporation in Pililla and the LPG terminal of Shell Gas Eastern in Tabangao both aim to be certified by the end of 1994.

By 1995 our target is to certify five more installations in Legaspi, Cebu, Iloilo, Davao and Bacolod. Our experience for Poro will allow us to work for the simultaneous accreditation of these installations.

Our target for 1996 is even more ambitious -- 14 depots throughout the archipelago whose operations mirror the Pasacao model.

Other challenges awaiting to be scheduled in the ISO certification calendar include our other LPG plants, other operating sectors of Pandacan Installation, and our new Refinery which is presently under construction adjacent to the existing Refinery at Tabangao.

These accreditation efforts require the setting up of a) appropriate Steering Committees, composed of line managers involved in the business, and b) working groups, composed of process owners who will be tasked to document procedures and related work instructions. Membership in these groups vary, though some overlap occurs. There is need for a large investment in training to understand the ISO standards, proper documentation, and effective auditing.

At the moment, the company's focus on quality, quality assurance, customer delight and continuous improvement is at a high pitch.

III. COMPLEMENTARY QUALITY PROGRAMS WITHIN THE COMPANY

We in Shell view ISO 9000 certification as a minimum standard, or hurdle, in our quest for Total Quality Management. We formally embarked on the road to Quality in mid-1990.. Creating and sustaining the Quality culture included a number of activities, one of which is our ISO accreditation strategy.

We formed and trained the Quality Management Steering Committee (QMSC), composed of our Chief Executive and his direct reports. These direct reports in turn chair their respective functional Quality Improvement Teams or QITs, composed of the functional senior managers. These QITs deploy corporate Quality policies determined by the QMSC into the respective functions or divisions. The QITs empower Business Improvement Teams who are tasked to analyse root causes of recurring business problems and recommend measures to eliminate or minimize these problems. Close to 500 employees have actively participated in these Business Improvement Teams.

We conducted Quality Awareness workshops, targetting 100% penetration. The entire marketing division consisting of 600 employees underwent a Customer Service Workshop designed to achieve a paradigm shift in how we traditionally view and behave towards our customers. We are now actively sharing this Quality philosophy with both our external suppliers and external customers.

In the light of the foregoing, it is difficult to measure improvements in our corporate performance which can be directly attributed to ISO 9000 certification. However, we are convinced that we are doing the right thing. We also believe that investments in Quality will pay for themselves, as Philip Crosby asserts in his book, "Quality is Free." Our rallying cry in Shell is that "Quality" means "Improving our Business." Our market leadership can only be strengthened by our Quality initiatives.

IV.     Future of ISO 9000 in the Philippines

Companies in the Philippines learn quickly about current management thinking, concepts like Quality Assurance, continuous improvement, kaizen, zero defects, customer delight, and so forth. Multinational subsidiaries and companies competing in the export market are in a position to learn sooner about management trends. It is just a matter of time before new practices spread and are embraced by the business community.

It is now fashionable to be in the know about Quality and ISO 9000. The number of companies seeking ISO accreditation is growing by the day. The trend will certainly keep the Bureau of Product Standards very busy.

I, for one, am happy to see this Quality revolution taking place in our business community. Happy because you and I, as consumers or products and services, are the ultimate beneficiaries and focus of the Quality movement. I would like to remind those who are in the midst of frenetic activities to attain ISO certification, not to lose sight of why you are doing these activities. To improve profitability and to bring down costs, certainly. To improve internal efficiency, surely. To delight your customers by meeting their requirements, most definitely!

I am aware that for the past 15 minutes you have been my customers. I have been sharing ideas and experiences which you will consider, evaluate, store and perhaps replicate. My wish is that I have succeeded in delighting you, and that your time while listening to me had not been wasted.

Thank you very much.

2-2-8

# SESSION III: TQC AND ISO 9000 SERIES

## TDK's Four Steps to ISO 9001 Registration and TQC Activities

by Mr. Hirokatsu SHINOKI
Narita Plant
TDK Corporation

## 1. Introduction

On Sept. 27th, 1991, TDK's Power Electronics Manufacturing Division in Narita was registered as having an approved plant for ISO-9001 quality system by the JMI Institute.

Since then, in response to requests from clients, industries, relevant organizations and recently from companies of different fields, TDK has been holding explanatory meetings which now amounts to over sixty times.

The topics explained in those meetings are covered in this report, "TDK's Four Steps to ISO-9001 Registration". In addition, I would like to talk about TQC in TDK and about how harmonization of TQC activities with ISO-9000 was attained. This will be laid out in three parts as follows:

(1) TQC activities in TDK

(2) TDK's four steps to ISO 9001 Registration

(3) Harmonization of TQC and ISO-9000

## 2. TQC activities in TDK

TQC activities in TDK were launched in July 1967 with the inauguration of the TDK Head Office Quality Assurance Department in the company. The objective of the activities was to improve the overall company attitude towards Q. A. with the participation of all employees. The goal was set, as a matter of fact, on winning the Demming Prize in 1970, only three years after commencing Q. A. activities with a strategy named "seven-zero (70) strategy".

At TDK, the implementation of TQC has contributed to developing a quality assurance scheme and enabling systematic quality control operation. That is to say, through the implementation of TQC, a variety of knowledge, ranging from quality control policy to improvement activities carried out by members of QC circles, was gained and has had a major influence especially on quality

related issues and, as a result, provoked drastic reform in the company. This trend was percieved not only in TDK, but also in many other Japanese companies which implemented TQC. I believe that the change in the reputation of Japanese products introduced after world war II which were once notorious for "low price and low quality" to their current position as the world's best quality products is largely attributable to the implementation of TQC.

Contrary to our initial planning and despite the fact that TDK was at the preliminary audit stage for the 1969 Demming Prize, it decided to give up the idea of winning "the Demming Prize".

It should be kept in mind, however, that although TDK gave up the idea of reaching its initial goal, it kept making strenuous efforts with respect to TQC activities. Ever since, TDK has been enaging in practical TQC activities such as overseas QC circle member exchanges, holding on-site seminars for QC on-site leaders and QC courses for engineers. Hence, on-site group activities which is the foundation of TQC activities have both been taking place and have been playing a major role in improving quality.

I would like to explain the "on-site group activities" which are representative of the kinds of TQC activities taking place at TDK's Power Electronics Manufacturing Division in Narita.
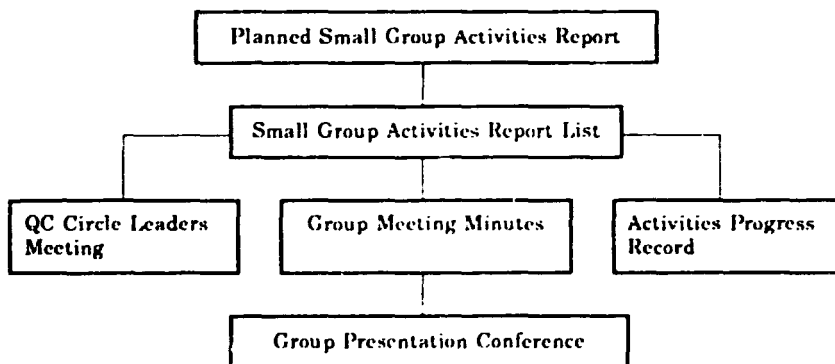


These activities will be completed within six months starting from planning to group presentation in each plant and each cooperative company. A presentation conference hosted annually by the division is a contest among teams which are selected from each plant.


## 3.    TDK's Four Steps to ISO 9001 Registration

3-1    In the first place, applying for ISO-9001 certification was taken into consideration after being notified of the need for ISO-9000 certification during an August 1990 meeting held with the participation of sales people of TDK-UK in view of the 1992 market integration of EC. Since the standards for this quality scheme are international standards, it was decided to carry out the plan by giving responsibility to the product safety control section which is in charge of obtain' .ᵦ ᵥverseas safety standard approvals such as from UL/CSA.

This project promotion team was comprised of a total of 5 people: the division manager who acted as the leader, the manager of the quality assurance department and 3 members of the product safety control section one person from each management level. This composition brought very good results in the end. One of which was to be able to reflect a variety of opinions of different ranking people, and another was the ability to respond to questions whenever they occurred in the different procedures and in the different ranking levels, so that appropriate suggestions and solutions could be made.

In addition to the five core members of this project team, each section was requested to designate one project member. The qualification for the people to be selected from the various sections was that they must have a full under- standing of the overall working of their own sections, that is to say, people who can contribute correspondingly to the need for re-establishing the quality system of their sections should be selected.

The key point for the implementation of ISO-9001 quality scheme is, as specified in ISO-9001 Section 4.2 "Quality System", "establish and maintain quality system by use of documentation". This is to say, as prescribed in a) and b), "a) to prepare the quality system procedures and instructions in the form of documents and b) to effectively implement the quality system procedures and instructions thus documented."

The steps taken into consideration for drafting a plan have been indicated in "The Timing of ISO-9000 Application".

By reviewing requirements specified in each item in ISO-9000 and applying to the quality system on a minimum basis, 20 % of existing activities needed modification and the remaining 80 % of the system was judged to readily comply with the requirements. I would like to explain how we have been proceeding with this preparatory work, documentation, exercise of activities and application in a series.

## The Timing of ISO9000 Application



2-3-3
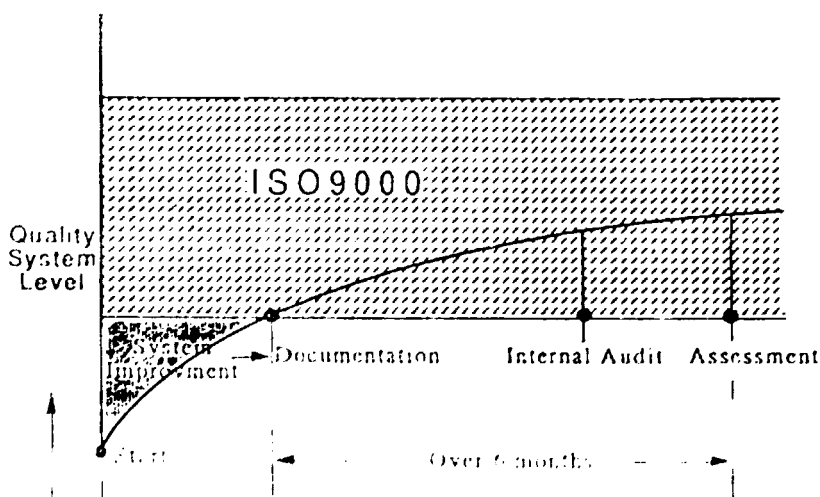
**3-2  Program to Obtain Approval**    After attending JMI's "ISO-9000 Training Course", in which staff from the British Standards Institution (BSI) lectured, in February 1991, the Power Electronic Products Mfg. Division prepared a "Program to Obtain Approval" in the order explained below.  It both explained the Program and requested the cooperation of the Quality Assurance Department at TDK's Head Office, and then also requested the cooperation of all the members of the Division.

  (1)   What is ISO-9000 ?

  (2)   Why do we intend to obtain ISO-9000 approval ?

  (3)   To which plants (or departments) does it apply to ?

  (4)   Who will implement the plan ?

  (5)   Implementation items

  (6)   Schedule and budget for obtaining approval

  (7)   Items not yet programmed and problems involved in them.

As soon as the Program was approved and our policy was finally determined, we prepared a "Program to Obtain Approval, Part II" which detailed the objectives, scope of application, and schedule for obtaining approval.


### (PROGRAM TO OBTAIN APPROVAL)


1.  Objectives

  1)  To realize the Division's quality policy, "Satisfying our customers' quality needs."

  2)  To reduce total quality costs.

  3)  To expand markets in Europe.


2.  Scope of application

  ISO-9001:   TDK CORPORATION, Power Electronic Product Mfg. Division, Narita Plant.

  Applicable Products:   Switching power supply units

  Applicable Departments:   Power Electronic Mfg. Dept. No. 1 (standard power supplies)

  Power Electronic Mfg. Dept. No. 2 (power supplies classified by applications)

  Device Dept. (on-board power supplies)

  Large Power Supply Dept.

3. Schedule for obtaining approval

    1) Narita Plant (ISO-9001)      From April to August 1991

    2) Tsuruoka TDK (ISO-9002)      From September to November 1991

    3) Satellite Plants      Not yet finalized

**3-3 Schedule for Obtaining Approval**    The first item that we considered in setting up the schedule was how many months it would take for us to establish an ISO-9001 quality control system.

In 1983, the TDK Head Office Quality Assurance Department produced the "TDK Quality System" based on the specifications of the ANSI/ASQCZ-1.15-1979. In turn each division reviewed its own quality program with reference to this system.

The Power Electronic Products Mfg. Division made a plan based on the idea that, with the "TDK Quality System", as a starting point, it would be possible to obtain approval within six months with the cooperation of all employees. We divided the principal work into four stages and determined one target for each stage so that each stage might be completed in a month and be clearly understood among the employees. Since the documentation work seemed to take a considerably long period at first, this stage was estimated to take two months: the whole schedule was set up to cover five months.

| Stages | Theme | Objectives | Period |
|--------|-------|------------|--------|
| I | Preparation | Starting the project | Apr. 1 to Apr. 26 |
| II | Documentation | Completing the quality manual | May 7 to Jun. 28 |
| III | Implementation | Completing the internal quality audit | Jul. 1 to Jul. 27 |
| IV | Examination | Obtaining approval | Aug. 5 to Aug. 30 |

Activities taken at each stage are shown in the following table. It was decided to review activities to be taken in a subsequent stage only when the objective for each stage was achieved.

# SCHEDULE FOR OBTAINING APPROVAL FOR ISO-9000

Issued on:   April 9
Revised on: April 22

| | I.   Preparation | II.   Documentation | III.   Implementation | IV.   Examination |
|---|---|---|---|---|
| **Period** | Apr. 1 to Apr. 26 | May 7 to Jun. 28 | Jul. 1 to Jul. 27 | Aug. 5 to Aug. 30 |
| **Main activities** | • Formulation of the project (including budget)<br>• Designation of the project members<br>• Preparation of explanatory documents<br>• Starting implementation of the project (Apr. 18)<br>• Preparation of lists of requirements for the ISO-9000 by departments and sections<br>• Preparation of regulatory systems (draft)<br>• Preparation of typical case study<br>  • Identification of a duties<br>  • Working instructions<br>  • The Division's specifications | • Manuals for documentation work<br>• Review of procedures (for meeting requirements of ISO-9000)<br><br>• Documentation at production departments (May 15 to 18)   • Documentation at staff departments (May 29 to Jun. 1)<br><br>Preparation of filling<br><br>Quality manuals | • Survey of actual states (comparison between manuals and actual states)<br>• Correction according to the manuals<br>• Adherence to the manuals<br>• Implementation of internal quality auditing<br>• Application to the approving agency<br>  • Preparation of application forms<br>  • Application for advance checking | • Advance examination by the approving agency<br>• Corrective (activities, if any)<br>• Auditing by Third Party (JMI) (Aug. 14 and 15) |
| **Ancillary activities** | • Auditing and inspection by witness of clients at Tsuruoka TDK (Apr. 4)<br>• Inspection of regulations and procedures (inspection on the "Quality Day")<br>• Negotiation with Headquirters QA. Dept. (Apr. 15)<br>• Research and ordering of CPU | • Dividing documentation work into groups<br>• Saving documents on floppy disks<br>• Reviewing the filing system | • Participation in seminars (Jul. 1 to 4) | |
| **Objective** | Starting the project | Completing quality manual | Completing internal quality auditing | Obtaining approval |

ISO 9000

## 3-4 Schedule

**3-4-1 Preparation (Objective: Starting the project)** The schedule for obtaining approval as stated in Section 3 was formulated in this stage of preparation. According to the schedule, a meeting for starting implementation of the project was to be held on April 18, and explanatory documents for the meeting were prepared in accordance with this original schedule. These documents included the schedule for obtaining approval, together with a list of ISO-9001 requirements applicable to each department and section, documentation manuals, and case studies. Each department was requested to designate one project member for each section. The members' qualifications included i) a full understanding of the workings of their own sections and ii) excellent capability in documentation. This means that they should preferably be the manager or assistant manager of each section.

All of the employees should be willing to participate in and cooperate with the implementation of this ISO-9000 project. Hence, campaign posters were prepared and put up in appropriate places in the Plant to arouse interest in the ISO-9000 among the employees so that the project might be successfully carried out. They declared the Division's quality policy of "Satisfying our- customers' quality needs," to enlighten all the persons concerned on understanding, implementation, and maintenance of the policy.

On April 18, the meeting for starting implementation of the project was held as planned, thereby initiating the drive for obtaining approval.

**3-4-2 Documentation (Objective: Completing quality manual)** ISO-9001 Section 4.2 "Quality system" requires us to "a) prepare the quality system procedures and instructions in a form of documents and to b) effectively implement the quality system procedures and instructions thus documented." This means that documentation is one of the 2 key points of ISO-9000, the other being its effective implementation.

Our documentation work included both the preparation of new quality manuals and assuring the coherence of our existing quality assurance standards to the ISO-9001 requirements.

The 20 items listed in the ISO-900 requirements were distributed to the relevant departments and sections and were checked for coherence between existing specifications and ISO-9001 requirements. However, this verification work turned out to be far more difficult than was initially expected; hence, it was decided that the existing specifications were not going to be modified for the time being and left for future amendment, and the 20 items listed in the ISO-9001 requirements were incorporated, without any modification, into a new version of the Division's specifications. This was called "First Division Specifications," and the existing ones were called "Second Division Specifications" so that both might be compatible within the Plant. Then, the main points of these two types of Specifications were integrated into "TDK Power Electronic Product Mfg.

Division's Quality Manual."

To assure the effective implementation of the documentation work, documentation meetings were planned in which the members of both the production and the staff departments lodged together for a few days in order to concentrate on completing the documentation work. They had two sessions of three-day meetings during this stage. They prepared and reviewed the first and second Division's Specifications mentioned above as well as a list identifying duties among departments and working instructions.

### 3-4-3    Implementation (Objective: Completing internal quality audits)
During this audit stage, the contents of all the manuals already completed (namely, Quality Assurance Manuals, First and Second Division's Specifications, Standards and Working Instructions) were compared in detail with the actual procedures. "Internal quality auditing" was carried out systematically in order to attain this goal systematically.

I attended a four day BSI seminar on internal quality auditing from July 1 to 4. The BSI lecturer gave us a lecture on "internal quality auditing" and the staff prepared the Internal Quality Auditing Program based on the knowledge I acquired there. A schedule was set up to designate the Division Manager as the person responsible for all the auditing procedures, and to make two terms (each team was composed of two in-company auditors) to audit the production and staff departments, respectively, from 9 a.m. to 4 p.m. on July 27 (Saturday), so that the teams would prepare their report after holding their meetings.

The four team members prepared their own check lists for auditing so that each department could be audited from two different viewpoints.

Since this was the first experience for both the auditors and the departments being audited, the auditing work did not go very smoothly: less than half of the original schedule was completed on July 27, and in the end it took about two weeks. The total number of items found not conforming to ISO-9001 requirements was 82 (one major, 11 medium, and 70 minor discrepancies).

Although there were some personal differences among the auditors in ranking the levels of the discrepancies, the major benefit of this audit was that so many discrepancies had been found and that both the auditors and the audited departments recognized what was and was not in conformity with the ISO requirements.

### 3-4-4    Examination (Objective: Obtaining approval)    During the planning stage, we set the dates of the JMI and it for August 14 and 15, 1991. However, these dates turned out not to be acceptable to JMI during our schedule-adjusting meeting with them. It was then agreed to carry out the examination over a period of three days from September 11 to 13 with four teams (one examiner/team).

This postponement of about one month at the final stage was rather helpful to us, because it afforded us time to prepare fully for the audit by conducting a thorough review of all the processes taken up to that time. It also gave us enough time to fully review the Check List for Applicant Self-diagnosis (for auditing and checking manuals) which JMI instructed us to do prior to the examination. After reviewing this list, we made up an examination list for each team in each department in accordance with JMI's "TDK AUDIT PLAN DAILY SCHEDULE."

The opening meeting started in a tense atmosphere for our side, which resulted in some departments vigorously discussing a matter of interpretation of ISO requirements with the examiners.

At the closing meeting after the three-day examination, the examiners notified us that we passed without any comments. Although some slight discrepancies were found during the course of the examination, their corrections were confirmed before the completion of the examination. Hence, the Plant was approved and registered under No. JMI-0006 on September 27, 1991.

# TDK AUDIT PLAN DAILY SCHEDULE (ISO-9000)

Planned by JMI
Arranged by NXX

| Team | | #1 | #2 | #3 | #4 |
|---|---|---|---|---|---|
| Auditor | | Sakumoto | Morita | Takiguchi | Miyake |
| Guide | | Shinoki | Yamamoto | Ishii | Tsukada |
| First day | | September 11 (Wednesday) | | | |
| *Examination items and departments* | | Opening meeting (Conference Room N) | | | |
| | Morning from nine | (1) Responsibility of management<br>(2) Quality system<br><br>Division Manager<br>Planning Dept.<br>Quality Assurance Dept. | (4) Design Administration<br><br>Design Dept. | (8) Identification of products<br><br>Manufacturing Dept. | (6) Procurement<br><br>Material Dept.<br>Design Dept.<br>Production staff |
| | Afternoon from four | (3) Contents of agreement<br><br>Design Dept.<br>Staff | | (9) Process control<br>(10) Inspection and test<br><br>Manufacturing Dept.<br>Quality Assurance Dept. | (7) Confirmation of supplied items<br>(13) Administration of defective items<br><br>Quality assurance Dept.<br>Manufacturing Dept.<br>Material Procurement Dept. |
| | | Team meeting | | | |
| Second day | | September 12 (Thursday) | | | |
| *Examination items and departments* | Morning | (16) Record of quality<br><br>(17) Internal auditing<br><br>Quality Assurance Dept.<br>Manufacturing Dept.<br>Design Dept. | (5) Document control<br><br>Design Dept.<br>Quality Assurance Dept.<br>Manufacturing Dept. | (12) Inspecting and testing procedures<br>(15) Handling of products<br><br>Quality Assurance Dept.<br>Manufacturing Dept. | (14) Corrective measures<br><br>(20) Statistical methods<br><br>Quality Assurance Dept.<br>Design Dept.<br>Manufacturing Dept. |
| | Afternoon from four | (18) Education and training<br><br>Personnel Dept.<br>Staff<br>Quality Assurance Dept.<br>Design Dept.<br>Manufacturing Dept. | | (19) After-sale service<br><br>Quality Assurance Dept.<br>Design Dept. | (11) Measurement control<br><br>Quality Assurance Dept.<br>Manufacturing Dept. |
| | | Team meeting | | | |
| Third day | | September 13 (Friday) | | | |
| | Morning | Audit team meeting | | | |
| | Afternoon | Preparation of report | | | |
| | Form three | Closing meeting (Conference Rooms A and B) | | | |

## 4. Harmonization of TQC to ISO-9000 series

The role which TQC has been playing for over twenty five years in TDK is remarkable. However, in the Power Electronics Manufacturing Division, we are not at all free of problems. Quality related issues have no end. Although we have been doing our utmost to improve quality by implementing measures for improvement and by setting a monthly goal to be attained, the top management and staff of the quality control division question themselves as to whether they are doing the right thing. While TQC measures place importance on "improvement activities". ISO-9000 specifies 20 requirements ranging from the responsibility of managements through statistical techniques. That is to say, that by establishing a quality system which complies with the 20 requirements we will be regarded as being certified by a third party assessment body. This eventually will give companies confidence in their quality control.

I do not intend to judge which of the two differing coexisting quality systems are superior.

An example of how a coherent quality control system which includes both ISO-9001 and TQC activities has been attained will be presented as follows.

As the result of the three-day audit, our quality system was certified as corresponding with the requirements of ISO-9001. However, although this result was achieved by means of audit and internal quality audit, it was based on a sampling test, thus even conformity of the system with ISO-9001 cannot be 100 % guaranteed. In order to maintain the level of quality system which was judged to have "passed" the audit, and in order to enhance the degree of completion, "Maintenance Program" was prepared and which went into operation on 11th Nov. 1991.

The Maintenance Program has been operating based on the following three pillars:

(1) Self-checking system     --- Monthly

(2) Internal quality audit     --- Semiannually

(3) JMI's auditing     --- Semiannually

In accordance with the program, we have the obligation to carry out item 2 and 3 mentioned above, whereas item 1, the self-checking system, has been developed by TDK as a part of our improvement activities. Under the monthly self-checking system, a theme for each month is provided to every quality assurance division, and the activities will be reviewed to see if they have been carried out in compliance with a manual. For example, one item such as "document control" and "training" will be selected among 20 items specified in ISO-9001, and will be checked on the ninth of every month (the company's Q-day. "Q" stands for quality-checking as well as pronunciation of 9 is in Japanese which equal with "q" in English). The result will be reported to the quality assurance department. Since, this is not based on the sampling methods used in the audit, when each section discovers a non-conformity in the system, they will honestly confess the discrepancies, further this system has proven effective in correcting them.

The following is the outcome of the implementation of the self-checking system to ISO-9001 requirements are listed below.

July 1991   Quality internal audit exercised immediately before the actual audit.        Defect points = 95

Nov. 1991   Implementation of self-check system

Jan. 1991   The first internal audit immediately after the actual audit. Defect points = 68

July 1991   The second internal audit exercised immediately after the actual audit.        Defect points = 36

The above numbers were calculated in accordance with the degree of seriousness of non-conformity.  Major discrepancy — 3 points, medium discrepancy — 2 points, minor discrepancy — 1 point.

Besides the self-checking system, there are many cases which provoked a change in the attitude of workers and staff at each division which promoted QC circles known as Plan-Do-Check-Action and which resulted in documentated of working procedures.

Therefore, when well-organized coordination between TQC and ISO-9000 can be achieved between TQC and ISO-9000, the quality level of the company will surely be upgraded.

2-3-15

2-3-16

SESSION III: TQC AND ISO 9000 SERIES

# TQC AND ISO 9000

# ARE THEY IN CONFLICT?

Antonio V. Enriquez II
San Miguel Packaging Products
September 29, 1993
Philippine International Convention Center

## Quality Circles as First Step to TQC

The concept of Total Quality Control (TQC) was introduced in San Miguel Corporation back in 1986, with the launching of the Quality Circles. In San Miguel Packaging Products(SMPP), a division of San Miguel, the QCs started in 1986 with the first Circles at the Farola and Mandaue Glass Plants.

As defined, QCs are a group of 3-10 employees/workers in a work station who group together for the problem solving process.

Education and Training was a key thrust of QCs, with focus on the seven (7) tools of Quality. These are Checksheet, Pareto Diagram, Cause and Effect Diagram, Histogram, Scatter Diagram, Control Charts, Stratification Chart.

What is quite noteworthy is that these tools were learned by heart by shop floor personnel, and used in the day-to-day problem solving process. In the hot-end or glass forming area of Mandaue Glass Plant or the Cold-end or packing area of Manila Glass Plant, it is common to see an Ishikawa Diagram or a Solution Formulation (Awakishi) diagram. On graph # 1 is shown the growth of Quality Circles in SMPP, from 1986 to date.

It goes without saying that the growth of QCs in SMPP also resulted in a culture change throughout the organization. Rank and file collectively put in their brainpower in a spirit of caring for the Business and the organization. At the same time, middle managers, superintendents and supervisors were in a way pressured into being more open and receptive to ideas from the shop floor. The structure of the QC system provided for such. Supervisors and foremen acted as Circle Advisers, while Department Managers collectively formed the Plant's Steering Committee.

Management influenced Quality Circles in the following ways:

o Setting of Annual Theme
- This was directed to areas which in Management's assessment needed concerted effort e.g., Safety, Productivity Improvement, Efficiency.

o Focus on Customer Satisfaction
- The QC system taught our people that the next person in the process was his customer, and he had to meet the expectations of this person.

o Process Orientation
  - Through the seven step process, QC taught our people to identify, classify, validate problems, identify root causes and work out solutions and validate potential problems.

o Monitoring and Control
  - QC taught our people that once approved, project standardization can be attained only after careful monitoring of project results vis-a-vis project objectives. Monitoring also helped reinforce ownership of the projects, thus enhancing likelihood of continuity.

## Employee Suggestion System (ESS)

In 1990, San Miguel introduced changes on it's Innovation Program (INNPRO). The INNPRO was a program under which employees could submit suggestions for cost reduction, or process improvements, or improvements in product quality or quality of work life. If approved, the employee received a plaque and depending on the magnitude of the project, some monetary recognition. The key point in the program though was that project evaluation was centralized with the Industrial Engineering Department at plant level and Corporate level. Hence, queuing often times affected the enthusiasm of project proponents.

The Employee Suggestion System (ESS) decentralized evaluation to the supervisors and department heads, thus allowing for a shorter leadtime to process suggestions. Project ownership, monitoring and control was likewise enhanced as the supervisors who themselves did the evaluation provided greater support. Recognition was also immediate. At the Mandaue Glass Plant for example, last year, we attained a 1.8 suggestion/person/year. Hence, during the regular flag ceremony every Monday, we would give awards to 20 employees, on the average.

## The Key elements of the ESS were as follows:

o Company wide participation
  - This is open to all employees from shop floor personnel to managers

o Continuous Improvement Focus
  - As they say, "there is always a better way." Hence, a process standard today will certainly be superceded tomorrow.

ISO 9000 as an Appropriate Sequel to TQC

Allow me now to proceed to our very interesting topic of ISO. In 1992,
given San Miguel's Corporate direction to expand businesses and operations
in the Asia-Pacific region, the focus shifted to the implementation of ISO 9000
in the various plants as a stepping stone toward internationalization.

In their book The ISO 9000 Book, John T. Rabbitt and Peter A Bergh
identified the Seven Quality Success Factors. Allow me to discuss very briefly:

o Customer focus
  - The customer is king, and knowing your customer better (product,
    process, market and way of doing business), will allow you to serve
    him better.

o Process versus results focus
  - Once process stability and state of process control is attained,
    the desired process output or result is a natural resultant.

o Management commitment/responsibility
  - Management must provide the necessary systems and structures,
    as well as visibility.

o Continuous improvement
  - There is no such thing as a static process. As mentioned earlier,
    there is always a better way of running your process and serving
    your customer.

o Less than 20% of problems caused by workers
  - According to Juran, 80% of problems are really management
    controllable, because we have not placed our workers in a state
    of self-control.

o Performance Measures
  - This allows for constant monitoring and therefore increases
    awareness of all concerned. As they say, what you cannot
    measure, you will find difficult to control.

o Cross functional councils create constancy
  - These Quality Improvement Teams or QITs break organizational
    barriers and encourage openness throughout the organization.

## Elements of ISO 9002

Attention to detail is one of the important attributes of interest in ISO 9000. Let us pick-up specific sections of ISO 9002, and discuss them in greater detail.

### Element 4.1  Management Responsibility

This requires a well defined Quality Policy, known, understood and accepted throughout the organization. A QMR must be appointed, and a Management Review regularly conducted to discuss internal audit data and customer feedback.

### Element 4.2 Contract Review

This requires a clear understanding of customer requirements (with reference to volume, delivery, time and product specifications), as well as an understanding of a supplier's capability for meeting such. Needless to say, these all must be documented.

### Element 4.5 Documentation

Document Control is of essence, defining establishment, authorization, review, upgrade and removal of obsolete documents. Likewise, all quality records must be easily obtainable. Changes in any procedure must go through the review and authorization process. All procedures and work instructions must be properly documented.

### Element 4.17 Education and Training

In essence, all personnel must have undergone training (formal or on the job), before they assume their positions, and such must be documented. Such assures that employees have been placed in a "state of control" before being assigned to various tasks.

Are They in Conflict?

We go back to the key question of this paper: TQC & ISO 9000: Are they in Conflict?

I wish to answer this question by citing that the elements of success for TQC & ISO 9000 are the same.

| Characteristics | TQC | ISO 9000 |
|---|---|---|
| o Support required | All levels of mgt; must be continuing & visible | All levels of mgt; must be continuing & visible |
| o Participation | Voluntary,with wide participation level | Peer pressure will ensure participation |

| Characteristics | TQC | ISO 9000 |
|---|---|---|
| o Knowledge required | Detailed | Attention to detail is a must |
| o Audit element | Standardization required | Internal Quality Audit is part of the process |
| o Documentation required | Analytical tools (Pareto, Ishikawa, etc.) must be used & documented | Procedures & Work Instructions must be documented in a Quality Manual |

Success Requirement

This tabulation will show clearly the similarity in the success requirement for TQC & ISO 9000. In fact, and in my experience, they complement each other. Another way of looking at the subject is by asking ourselves: What will derail the attainment of TQC or ISO 9000 of our plants. May I offer the two simple , basic reasons:

    o Support of Management is limited to lip service
    e.g.  - lack of attention to detail
          - lack of interest in documentation
          - minimal visibility in TQC or ISO activities

    o Lack of awareness on TQC & ISO by plant personnel
    e.g.  - inadequate training
          - cascade is not done to all

Let me close by citing three key benefits arising from the implementation of TQC and ISO  in or facilities:

    o Teamwork and high employee morale is enhanced.
        - Enthusiasm begets enthusiasm, and people have fun getting involved

    o Employee training is facilitated
        - The availability of work instructions for all activities allow for ease and uniformity in the cascade of work instruction. This likewise helps ensure continuity in the wa s of doing things.

    o Lesser errors result in higher efficiencies and productivity
        - This arises from doing things right the first time and all the time.

With these thoughts, I trust we are all convinced of the support and complementary role of TQC in the attainment of ISO 9000. There is one more point I wish to take up though before we close. As apostles of quality, share the good news with others, and in so doing, give your share in having others join the ISO 9000 bandwagon.
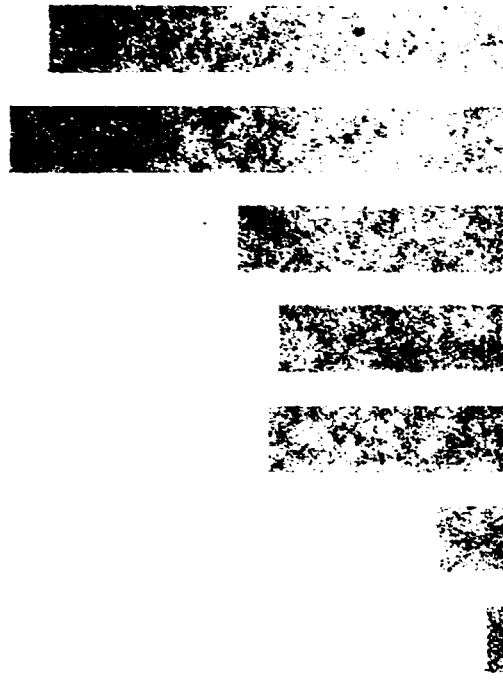
Good afternoon.

# SMPP QUALITY CIRCLES

NO. OF CIRCLES

A bar chart titled "SMPP QUALITY CIRCLES" showing number of circles by year:

| Year | No. of Circles |
|------|----------------|
| 1986 | 21 |
| 87 | 45 |
| 88 | 131 |
| 89 | 170 |
| 90 | 205 |
| 91 | 213 |
| 92 | 182 |

■ ACTUAL

**GRAPH #1**

SMPP QC PROJECTS PRESENTED
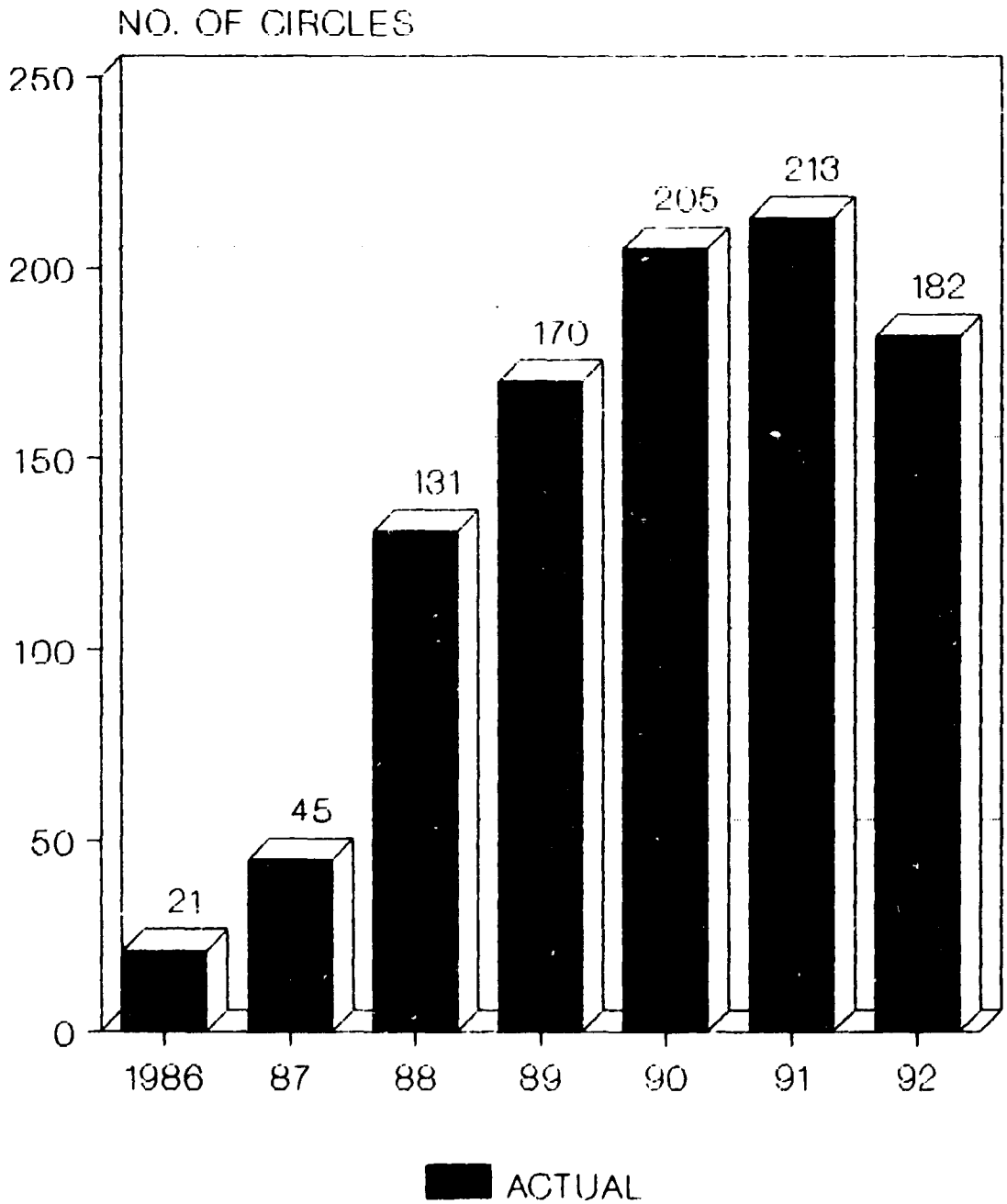
SMPP QC MEMBERSHIP
(DIVISION-WIDE)

GRAPH #3

GRAPH #2

# SEMINAR ON

# MEETING GLOBAL
# MARKET CHALLENGES
# WITH
# TOTAL QUALITY CONTROL
# AND ISO 9000

**UNIDO**

**SESSION IV:  INTERNATIONAL COOPERATION TO ACHIEVE COM-
PETITIVE QUALITY OF PRODUCTS AND SERVICES**

## Country Report Presentation

Presenters:   Representatives of ASEAN Countries

## Panel Discussion

Panel Leader:   Mr. Kunio INOUE
Director for International Standardization Affairs,
AIST. MITI.

Panelists:       Japanese Experts, BPS, Representatives of ASEAN
Countries, UNIDO

## Closing Ceremony

– Address by BPS
Mr. Renato V. NAVARRETE
Director

– Closing Address by JSA
Mr. Genichi FUKUHARA
Director General

**28th – 30th, September 1993
Philippine International Convention Center
Roxas Blvd., Metro Manila**

# SESSION IV: INTERNATIONAL COOPERATION TO ACHIEVE COMPETITIVE QUALITY OF PRODUCTS AND SERVICES

## Country Report Presentation

Presenters:   Representatives of ASEAN Countries

3-1-4

# Panel Discussion

Panel Leader: Mr. Kunio INOUE
Director for International
Standardization Affairs,
AIST. MITI.

Panelists: Japanese Experts, BPS,
Representatives of ASEAN
Councries, UNIDO

3-2-2

3-2-3

# Closing Ceremony

– Address by BPS
  Mr. Renato V. NAVARRETE
  Director

3-3-2

3-3-3

3-3-4

# Closing Ceremony

- Closing Address by JSA
  Mr. Genichi FUKUHARA
  Director General

3-4-4

# INTERNATIONAL COOPERATION TO ACHIEVE
# COMPETITIVE QUALITY OF PRODUCTS AND SERVICES *)

by: Sjarif Husen **)

## 1. BACKGROUND

To anticipate the global market waving throughout the world, developed or developing countries must prepare themselves in their standardization and quality management programmes according to international requirements. The field of standardization and particularly quality management are growing rapidly, and hence Indonesia has to enhance its ability in those fields. The world's end and what has been done by the government of Indonesia need to be informed to all parties involved in standardization activities in the country , and thus enables us to work together in the same direction.

The Standardization Council of Indonesia (DSN) was established to coordinate and synchronize standardization activities in Indonesia including certification programme for standardization. In doing that task, DSN cooperates with various experts or bodies, inside or outside the country, working in the field of standardization. The rapid growing of quality management was also anticipated. In Indonesia, the demand of know how of standardization and quality management is very high. The education and training programme leading to certification scheme in standardization are the answer of these needs. DSN is currently developing a programme to satisfy the demands of the education and training in standardization.

## 2. IMPLEMENTATION OF TQC AND ISO 9000 IN INDONESIA

At least there are three merits of the ISO 9000 series:
- It gives manufacturers specific targets or their quality control activities, leading to improvement of the quality of their products;
- the state of quality control activities of manufacturers can be assessed and registered fairly, impartially, and neutrally by the third-party assessment body in line with objective check items common to the world;

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- the result of the assesment and registration becomes a "common passport to international markets", and there is a possibility that such schemes will grow up to be a measure to avoid unnecessary repetitive examinations conducted in different countries.

TQC has been implemented in many industries in Indonesia for years, especially industries having relation with Japan. The implementation proved to be fruitfull in improving quality of the products. Many industries have formed quality circle in their companies.

Meanwhile, ISO 9000 has been implemented in Indonesia roughly since 1991 with the adoption of ISO 9000 into an Indonesian national standard namely SNI 19-9000.

The implementation of TQC and ISO 9000 improved the competitiveness of the companies. Each process stage is monitored more or less so thet quality can be assured. The quality is improved each time there is feedback from users or other independent organizations since every feedback is processed and put into priority. Also market is always under close-look, and every trend is followed so that users can always be satisfied.

Currently there are several companies already have ISO 9000 certificates, all of them granted by foreign certification bodies, as there is no certification body yet in Indonesia. These companies are from big industries with advanced technology, and they are able to seek consultancy and certification eventhough it is costly since they (the certification and consultancy bodies) are from abroad.

There have been many requests from middle and small companies for a consultancy of ISO 9000 implementation to DSN and other government institutions. Currently we conducts seminar and workshops in various cities throughout Indonesia with topics on quality assurance and good laboratory practice. But this is not sufficient, and in fact the companies need to know how to implement quality assurance in their factories, not just the general knowledge of it.

## 3. INTERNATIONAL COOPERATION TO SUPPORT QUALITY ASSURANCE PROGRAMME

Certification bodies are urgently required by thousand companies in Indonesia. A lot of request for ISO 9000 certification have been addressed to DSN (Standardization Council of Indonesia) and KAN (National Accreditation Committee). One of the problems faced by Indonesia is the large number of assessors especially lead assessors that have to be provided. The number of available assessors must be proportional to the number of existing companies.

International cooperation is one alternative to solve the problem. Currently DSN has an MOU on technical cooperation with SIRIM; this cooperation certainly gives advantages to both countries. Experience excange in solving problems on quality issues can be very useful and may help each other in developing their own scheme. Some other technical cooperation are presently under consideration.

As already known, to be registered as a lead assessor, an assessor must have several times experience in assessing companies led by a registered lead assessor beside other training requirement. A technical cooperation with other foreign certification body may allow an involvement of other party's assessor in assessment and therefore the assessor can gain experience to fulfill the requirements as a lead assessors.

In ASEAN region, it has been formed a committee called ACCSQ (ASEAN Consultative Committee for Standards and Quality) to promote cooperation among ASEAN standard bodies. It includes cooperation in quality assurance scheme. Eventhough ACCSQ in principle is to support AFTA (ASEAN Free Trade Area) its programme in quality assurance will hopefully benefits all members in achieving competitive quality.

Establishment of certification bodies will facilitate many companies for ISO 9000 certification scheme. The scheme will help them to improve their quality management and especially their competitiveness in the market.

There is also another possibility of international cooperation in training for trainers and consultants. This training programme can be in the framework of experience exchange. This kind of training will give the trainees broader views on their quality understanding. Since the trainees themselves are already trainers and consultants, they can then be expected to spread what they have got in their own training and consultancy services.

Direct training to industrial people in the framework of international technical cooperation can be another alternative. The training can really touch practical problems to the industry and therefore can generate direct solutions during the training programme. But this approach has disadvantage in the limited industries could be involved.

Therefore it seems that combination of the two approach, direct industrial people training and trainer and consultants training, is the solution. The trainers can see how quality assurance is implemented in industry and this will be a benefit to them in their future work.

International cooperation is also expected as a way leading to mutual recognition. Technical cooperation can build confidence among the countries involved towards their partners systems. Mutual recognition should be developed to reduce barriers to trade and at the same time to increase competitive quality in the market.

## 4. CONCLUSIONS

International cooperation is placed as an important activity by Indonesia especially in preparing reliable certification bodies and quality assurance training. The lead assessors training especially in gainning assessing experience to satisfy the requirement can only be done by cooperation with leading countries in ISO 9000 certification. Domestic trainers and consultants are also required to help companies implement quality assurance in their own environment.

The international cooperation can also improve confidence towards each other certification scheme and hopefully this will utimately lead to the way of mutual recognition with foreign certification or accreditation bodies. If this can be achieved, the cost of certification can be reduced and therefore more middle and small companies can participate in this quality improvement programme.

But of course certificate is not the main goal of a certification scheme, it is the quality assurance and continuous quality improvement that must be kept in mind to be the ultimate goal. Certification scheme is only a fair way to support the main goal.

# ACHIEVING INTERNATIONAL COMPETITIVENESS THROUGH QUALITY

## IMPLEMENTATION OF THE ISO 9000 STANDARDS IN MALAYSIA

By

Lam Teng Chee - Director of Standards & Quality

Rajinder Raj - Head, Inspectorate Unit

Standards and Industrial Research Institute of Malaysia

## 1. BACKGROUND

Prior to 1987, the concept of registering a quality system was not generally known in Malaysia outside the few manufacturers serving as vendors to specialised markets. Product certification schemes, implemented by the Standards and Industrial Research Institute of Malaysia (SIRIM) were applicable only to products complying with the Malaysian national standards.

Nationally there was a need for providing some form of recognition to manufacturers with good quality systems meeting customer's requirement. For example, for the Malaysian national car project launched at that time, there was a need for assessing and accepting suppliers for components for which national standards are not applicable. Similarly the Public Works Department required assurance of quality for products which are made to specific requirements.

Similarly, in the international arena, leading corporations had recognised the important role of raw material and component suppliers in final product quality. Selection of suppliers were based on assessment of capability by means of audits to quality system standards instead of price alone. Malaysian raw material and component suppliers had to be prepared to respond to these developments if they wished to continue to stay in the market.

Recognising this need for Quality System Certification both from the national viewpoint and also from international market demands, SIRIM launched the Quality System Assessment and Registration Scheme in 1987. This programme is one of the many initiated by the government to create awareness for quality and to meet the need for a cost effective quality management system to enhance the competitiveness of Malaysian products in the global marketplace. In our industrialisation programme both the large indigenous corporations and the small and medium scale supporting industries were found to need upgrading of management practices to consistently meet requirements of the marketplace. The ISO 9000 standards was an excellent start for this.

The first applications for ISO 9000 registrations were received by SIRIM in 1987 and the first five firms were granted registration to ISO 9002 in 1988. In Malaysia today as of September 1993, there are 222 organizations certified to ISO 9002 with 12 to ISO 9001 by SIRIM. SIRIM has since then received over 653 applications for ISO 9000 registrations. We believe that there is still a much larger number of organizations that are actively preparing themselves before applying.

## 2. EARLY POLICY DECISIONS

When the proposal to establish a quality system registration scheme was first developed by SIRIM in 1986, the ISO 9000 standards were draft documents. Various national quality system standards were being implemented in other countries at that time. However, the choice of standards became very clear to us in SIRIM when the ISO 9000 standards were published in 1987. The subsequent adoption of these standards by the European Community as EN 29000 standards and later by all the major industrial nations confirmed our correct choice.

From the beginning a decision was made that for our ISO 9000 registration scheme to have any impact, it would need to be creditable both in the national and global markets. Internal procedures and guidelines had to be established. Procedures based on ISO and EN Guides were developed. The UK Assessor/Lead Assessor Registration criteria was also selected to ensure that assessors are not only competent, but also recognised as such. Two SIRIM staff were sent to attend auditor training courses in the UK in late 1987 and studied the UK system of Quality System Registration.

As Quality System Management was a new concept and it need to be actively promoted to both producers and purchasers a concerted programme on promotion and education was carried out.

Similarly during that period, training on quality management systems in Malaysia were not available. There were also no consultants competent in this field. The required infrastructure for consultancy and training had to be developed.

3.   REGISTERING QUALITY CONSULTANTS IN MALAYSIA

The ISO 9000 standards are generic quality management system standards. However in order to use these standards effectively in depth knowledge of quality management is required, with specialise training  needed.

SIRIM was faced with a huge need for training and consultancy. This was partly fulfilled by the established training and consultancy firms in Malaysia, some with overseas links.

In order to provide some measure of regulation and prevent misrepresentation, SIRIM had to established a Quality Consultant Registration Scheme which lists consultants who meet the minimum stipulated criteria. This step has been proven to be very useful in meeting the needs of the industry.

## 4. WHY COMPANIES REGISTER THEIR QUALITY SYSTEM

We are now seeing a rapid increase in interest in ISO 9000 standards. This is clearly reflected in the increase in the number of applications for ISO 9000 registration received by SIRIM - the increase in 1992 from 1991 was from 107 to 221 - an increase of more than 100%. Applications have come from all sectors of industry. Why are more and more Malaysian organizations using ISO 9000 standards for quality management? Among the reasons for this interest are:

### 4.1 To establish Quality Management in the company to improve product quality

This is the best reason for a company to use ISO 9000 standards. They provide an excellent framework for companies to embark on Total Quality Management. Although these standards have been criticized as being inadequate, it must be seen that for a large number of Malaysian companies complying with the requirements of ISO 9001/2 requires a revolution in attitudes and practices within the organisation. Of course it must be realised that these are minimum standards, and nobody wins races for achieving minimum requirements. Feedback received from registered companies has been very positive. They have reported changes such as improved communication, better control of production, and reduction of failures.

### 4.2 To satisfy customer requirements

Customers such as government/public purchasing authorities and large corporations in Malaysia are beginning to select suppliers on the basis of ISO 9000 registration or make it a provision of the supply contract.

4.3   **The holding company has a corporate policy for all subsidiaries to comply with ISO 9000 standards**

Some large corporations have voluntarily decided to use the ISO 9000 standards for all their subsidiaries to strengthen quality management practices within in order to remain competitive.

4.4   **To improve their quality image in the market for promotional purposes**

Almost all of the companies use the fact of registration as a marketing tool, and from the feedback received from registered firms it has helped to secure new markets especially in Europe and North America.

4.5   **To comply with regulatory authorities requiring ISO 9000 registration**

In the EC it is proposed that certain regulated products that have a bearing on public health and safety can only be marketed if produced by ISO 9000 certified producers. Producers exporting to such markets would require registration. In Malaysia it has now become mandatory for producers of concrete piles to have ISO 9002 registration, and it is expected that more items will be added by the relevant authorities safeguarding public health and safety.

4.6   **To meet product certification requirements of some certification bodies that require ISO 9000 registration**

Some certification bodies have already incorporated ISO 9001/2/3 requirements into product certification procedures.

### 4.7    Fear of being excluded from European Markets

This fear is sometimes exaggerated as only regulated products required mandatory registration. However, European buyers has dictated compliance to ISO 9001/2/3 even for non regulated products.

## 5.    INTERNATIONAL RECOGNITION

Internally, in SIRIM we had to further consolidate our operations to ensure our credibility and acceptance both rationally and internationally.

In 1989 CEN/CENELEC, the joint European Standards Institution established the EN 45000 series of standards for the purpose of harmonizing accreditation, testing and certification requirements as part of the EC's programme to remove trade barriers internally within the EC. Quality system registration in order to be acceptable in the EC would have to be conducted to "EN 45012 - General Criteria for Certification Bodies Operating Quality System Certification".

SIRIM has adopted these criteria and recently having realigned operations to comply with these requirements, was assessed by the British Standards Institute for compliance to this standard. As a result of this Quality System Audits performed by SIRIM auditors are accepted by the British Standards Institute as from 26 May 1993.

The ISO 9000 standards can only truly be beneficial for increasing trade opportunities to the manufacturers if there is recognition of its registration internationally. The ISO is now addressing this issue. In the absence of any other international arrangement at this juncture bilateral mutual recognition such as with the BSI is most logical.

Morever under the GATT Standards Code, the provision for mutual recognition of conformity certification calls for the ISO 9000 standards as the basis. In the medical products and pharmaceutical sphere we again note the alignment of GMP (good manufacturing practice) codes to the ISO 9000 standards. The ISO 9000 Standards have become truly global standards. These are factors a trading nation such as Malaysia cannot afford to ignore.

6.  **ISO 9000 STANDARDS AND PRODUCT CERTIFICATION**

Product certification preceded the development of Quality System Registration internationally. In Malaysia the Quality System Registration Scheme has been running in parallel to the product certification scheme that was started in 1973. We now have a situation in some countries where ISO 9000 certification is part of product certification in some countries. In other countries product certification remains a parallel activity such as USA and Canada. BSI in UK now require compliance to ISO 9002 as a prerequisite to product certification. The Japanese have also recently proposed ISO 9000 requirements be used as a criteria for the JIS Marking Scheme. We in SIRIM believe that there is currently still a need in Malaysia for product certification without requiring ISO 9000 certification, although in the longer term companies that are product certified are encouraged to comply with ISO 9001/2. In fact at the moment 33 of companies that have ISO 9001/2 registration, also have their products certified by SIRIM i.e. 14% of the companies granted ISO 9001/2 registration have product certification.

## 7.    PITFALLS OF ISO 9000

Benefits of the registration to ISO 9001/2 standards can only accrue, if there is full commitment for quality from the higher levels of management in the organization. There is thus a danger of registration being pursued only for the purpose of achieving the registered status.

Additionally, if ISO 9001/2 is made mandatory for Product Certified companies who are ill-prepared in terms of not having the required management resources nor commitment, we may then see more registered companies which have quality systems designed by consultants only for the purpose of satisfying auditors but not fully serving to set a proper foundation for Total Quality Management and continuous improvement.

I believe that this "pitfalls of ISO 9000" is a major cause of the complaints against these standards.

## 8.    AUDIT FINDINGS

SIRIM's quality auditors have now assessed more than 234 organizations to ISO 9001/2. What are their findings? One of our colleagues classified the non-conformance reports during the audits conducted. (Figure 1). The largest number of non-conformances in descending order were due to:

i)      Document Control

ii)     Calibration

iii)    Inspection and Testing

iv)     Process Control

v)      Internal Quality Audit

9.  MEASUREMENTS AND CALIBRATIONS

The need to ensure that measuring and test equipment are accurate and traceable being an ISO 9000 requirement, has lead to a tremendous demand for calibration services in accredited calibration laboratories. To address this, the Malaysian Laboratory Accreditation Scheme, SAMM, received many applications for accreditation from the private sector. Presently the SIRIM Calibration Laboratories and the private sector SAMM Accredited Laboratories are just coping with the demand for calibrations by the industry. It is anticipated that this activity will be growing at a pace similar to the demand for ISO 9000 registration in the future.

10.  THE FUTURE OF ISO 9000 IN MALAYSIA

Since the introduction of the ISO 9000 standards in Malaysia, some very significant developments have occurred:

10. 1   Increased Competitiveness

The introduction of these standards has taken the movement for quality in the Malaysian industry to a higher plane. There is now a much larger pool of managers and engineers in the country who have become knowledgeable in quality management and are actively introducing the concepts and practices to their organisations. This, in my view, is the most important result and will have an important impact on the national economy.

## 10.2 International Acceptance

The assessments conducted by SIRIM are now recognised by the British Standards Institute and that SIRIM is also working towards being recognised by few more foreign bodies in the near future. This will make it possible for Malaysian organisations to obtain dual or multiple Registration with one audit at very much reduced costs.

## 10.3 Other Benefits

There is a developing pool of quality consultants and trainers. This is a direct result of the promotion of the ISO 9000 standards.

In the near future it is expected that there will be more rapid increase in the number of companies seeking and obtaining registration to ISO 9001/2. We note that more corporations are voluntarily seeking registration. This year it was earlier projected that 100 companies will be registered by SIRIM. We now expect close to 200 companies to be registered. The figure would be even higher if not for the constraints due to shortage of qualified auditors.

It is also expected that there will be more cases of mandatory requirement for ISO 9001/2 enforced by regulatory authorities both for Malaysian markets and export markets.

## ISO 9002

| | |
|---|---|
| 4.1 | Management responsibility |
| 4.2 | Quality System principles |
| 4.3 | Contract review |
| 4.4 | Document control |
| 4.5 | Quality in procurement |
| 4.6 | Purchaser supplied product |
| 4.7 | Material control |
| 4.8 | Quality in production |
| 4.9 | Product verification |
| 4.10 | Control of measuring & test equipment |
| 4.11 | Inspection and Test status |
| 4.12 | Non conformity control |
| 4.13 | Corrective action |
| 4.14 | Handling and post-production functions |
| 4.15 | Quality records |
| 4.16 | Auditing the quality system (internal) |
| 4.17 | Training |
| 4.18 | Statistical Methods |

## ANALYSIS OF NON-CONFORMANCE
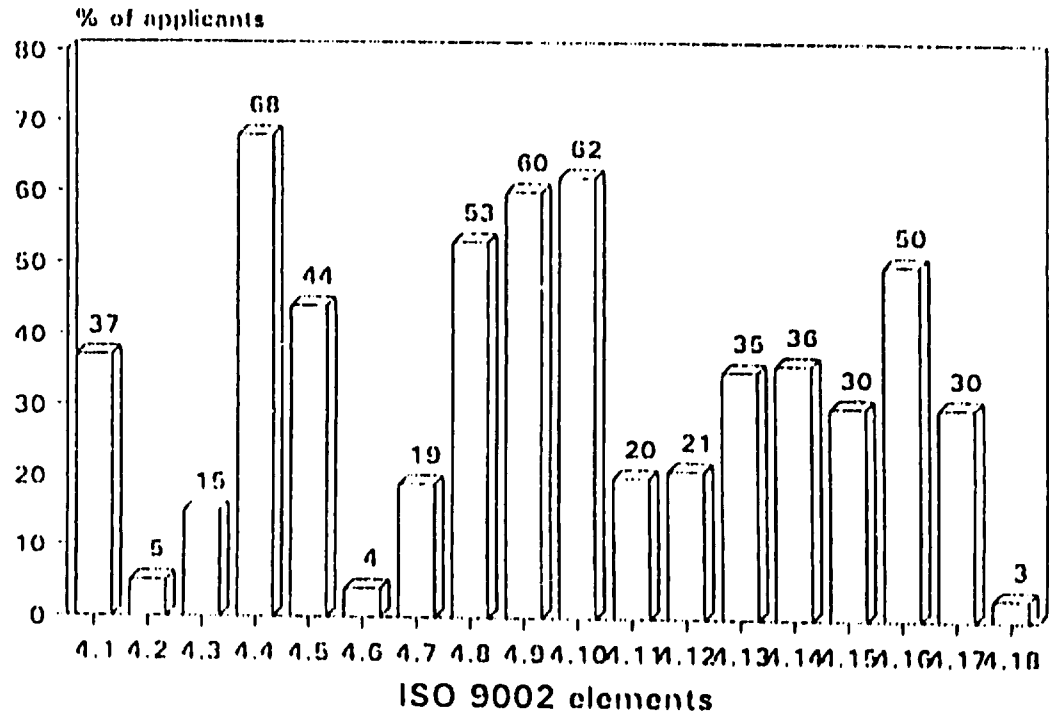
% of applicants



ISO 9002 elements

# INTERNATIONAL COOPERATION TO ACHIEVE COMPETITIVE QUALITY OF PRODUCTS AND SERVICES

## Implementation of ISO 9000 Standards in the Philippines

by: MELBA M. VALDEZ
BUREAU OF PRODUCT STANDARDS

## INTRODUCTION

The breakdown of political and economic barriers and the acceleration of technology advancement have combined to make global trading and procurement activities more competitive. There is a need to embrace sound principles of managing quality in a competitive society, to provide a standardized base for enterprises in all regions, which if implemented will provide the base for continuous improvement and realistic competitive opportunities.

Many initiatives have been taken in Philippine industrial circles to promote quality. Several institutions have engaged in teaching Total Quality Management (TQM) and in organizing quality seminars and related activities. Foremost among these are the Philippine Quality and Productivity Movement, the Philippine Society of Quality Control and our sponsors, PHILEXPORT and PICHE. Quality has become the major thrust of these organizations.

Philippine companies know that to become a newly industrialized economy by the year 2000 and to be well prepared for the emerging Asean Free Trade Area (AFTA), the Philippines should focus its efforts in improving the state of its quality and productivity.

## ISO 9000 SERIES

One of the most effective tools towards this direction is the international standard series, ISO 9000. Adopted by no less than 55 countries, this standard will dominate industrial and trade strengthening measures. In the Philippines, conforming to ISO 9000 will be encountered more by Philippine companies as a market requirement. Customer sensitive companies realize that today it is no longer enough for a company to have a good quality product. To survive in an increasingly

competitive environment, a company must earn the confidence of its market by developing its overall reliability as a supplier of goods or services. It must also strive for continuous improvement.

Introduced in the Philippines in 1989, the standard gained momentum in its implementation by early 1992. ISO 9000 specifies the criteria needed to design a management system for quality. The system must be a living organism to which strong commitment is given by everyone in the organization, at all levels, from top to bottom. With ISO 9000, the concept and practice of quality has evolved from merely a production function to a top management strategy.

The standard, adopted as PNS 1000, enables suppliers to assure themselves that indeed quality is being achieved by their organizations. Moreover, suppliers can provide external assurance to their clients that quality is being achieved, by using their documented and certified quality systems as evidence.

## QUALITY SYSTEM CERTIFICATION

In the Philippines, the national certification scheme is being operated by the national standards body, the Bureau of Product Standards (BPS). The BPS which has been operating its quality certification scheme since February of 1992 does this with government recognition, as embodied in Department of Trade and Industry Administrative Order No. 3, series of 1992. The certification scheme of the BPS was made possible by the assistance of the ASEAN-EC Industrial Standards and Quality Assurance Program (ISQAP), with its Central Coordinating Office in Thailand, and with the cooperation of Brunei, Indonesia, Malaysia, Thailand, and Singapore.

As Quality Management System under ISO 9000 was a new concept in the country, it needed to be actively promoted among suppliers/producers and purchasers. A vigorous program on promotion and training has been carried out in the last 3 years. The Philippine Trade Training Center was tapped by the BPS to assist in its promotion programs. From February 1992, the BPS-PTTC joint efforts resulted in over 200 companies having undergone the awareness and introduction course

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on ISO 9000. Move advanced courses were presented by international training organizations, in close cooperation with the BPS.

The Quality System Certification Scheme of the BPS was strengthened by the ASEAN-EC ISQAP with competent foreign consultants who provided state-of-the-art training to BPS assessors and trainors. The project was also responsible for providing training programs overseas for BPS assessors.

## IMPLEMENTATION OF ISO 9000 SERIES

Companies most ready for ISO 9000 certification are usually those that are already implementing quality management using such models as Total Quality Control, Statistical Quality Control, or company-wide quality improvement programme. When working towards ISO 9000, they undertake some adjustments to bring themselves to the requirement of the ISO 9000 model they have selected. These actions may include the setting up of additional components to their existing quality management system and/or fully documenting their existing system. Because of market competition. there is now a rapid rise in interest in ISO 9000. Since the BPS awarded its first Certificate of Approval in J·  of 1992, the number of applicants for ISO 9000 certification has increased tremendously. Applications have come from many sectors of industry, including the following:

1. subsidiaries of multinational companies;
2. companies, whether joint ventures or completely domestic-controlled;
3. companies which are strengthening their domestic market base; and
4. companies operating stringent safety measures in their operations.
   ...

Of the 20 certified companies in the Philippines, 14 were certified by the BPS and the rest by foreign certification bodies. But with the number of applications being processed, these numbers will increase exponentially in the next few months.

## INTERNATIONAL RECOGNITION:

To promote mutual recognition among ASEAN certification bodies, within ASEAN and th
European Community as a basis for market access, the BPS certification scheme is consistent wit
ISO and European guidelines governing certification practices. These are:

EN 45012, General criteria for certification bodies operating quality system certification

ISO/IEC Guide 40, General requirements for the acceptance of certification bodies

ISO/IEC Guide 48, Guidelines for third party assessment and registration of a supplier's
    quality system

ISO/I10011, Guidelines for auditing quality systems,
  Part 1. Auditing
  Part 2. Qualification criteria for quality system auditing

Efforts are exerted vigorously by the BPS to see to it that its certification procedures, and th
training and registration of its assessors, who undergo continued proficiency training, are credibl
and competent. Building our ISO 9000 certification system on this foundation will enhanc
recognition and acceptance of our certificates in foreign markets.

To further reinforce the acceptance of BPS's certification by other countries, BPS signe
Memoranda of Understanding (MOUs) with overseas certification bodies, such as Bureau Verita
Quality International (BVQI) and TUV Product Service. MOUs are being actively processed wit
other certification bodies in Australia, UK and USA.

The credibility of the Quality Management System Certification under ISO 9000 depend
largely on the ability of the certification body to comply fully with EN 45012 and ISO 1001
standards. And BPS has these standards deeply in place in its organization.

Within the ASEAN context, standardization authorities are actively pursuing mutual recognition of their respective national quality management certification schemes under the auspices of the ASEAN Consultative Committee on Standards and Quality (ACCSQ). Formed in 1992 among the ASEAN standard bodies together with representatives from each national member of the ASEAN Chamber of Commerce and Industry to remove technical barriers to trade, the ACCSQ focused its objectives on the harmonization of standardization measures in ASEAN.

Within the next 3 years, the expected outputs of the program will include the establishment of mutual confidence between ASEAN countries in their quality management system certification schemes. Criteria will be established for the competence of quality management system auditors for purposes of recognition and acceptance in ASEAN and other countries. We will establish in ASEAN an internationally accepted auditor registration scheme. Active cooperation among ASEAN countries will assure an ongoing programme of mutual assistance in the further development of our ISO 9000 certification and training programs.

## CONCLUSION

The initial success and acceptance of the BPS certification scheme is in the context of the ASEAN thrust to stimulate greater intra-ASEAN trade and for ASEAN countries to compete globally.

To enjoy the rewards of lucrative markets, Philippine companies must prepare for the hard work that lies ahead. ISO 9000 and certification to this series will provide the basis for confidence between sellers and buyers leading to better quality, to satisfy customer expectations.

**COUNTRY REPORT BY SINGAPORE**

## INTERNATIONAL COOPERATION TO ACHIEVE COMPETITIVE QUALITY OF PRODUCTS AND SERVICES

### I.   INTRODUCTION

1.   Embracing TQC has become a priority for many companies in Singapore. Unlike the business fad that came and went during the 1970s and 1980s, TQC can profoundly reshape the way firms look at their customers, their processes and their employees. Product quality/services has become a marketing tool for firms to position itself amongst its competitors in terms of quality competitive advantages.

2.   Properly implemented, TQC concepts have the power to create substantiable competitive advantages. Many companies in Singapore have implemented the ISO 9000 process as a building block in a long term continuous process which is actually the underpinning of the TQC.

3.   This paper outlines the outcomes from the implementation of ISO 9000 in Singapore. It indicates plans for introducing specific measures of quality improvement in ISO 9000 certified companies.

### II   OUTCOMES FROM IMPLEMENTATION OF ISO 9000 STANDARD SERIES

4.   In Singapore, there are more than 300 companies that are already certified to ISO 9000 standard series. More industry sectors including companies such as trading, construction, firms, freight forwarders and hotels are participating in ISO 9000 certification scheme. Those who have implemented their quality management systems to the ISO 9000 standards are already seeing tangible benefits.

5.   Among other things, their documentation system has improved. Customer satisfaction has increased. First-time reject rate has declined. Over time, these

benefits will translate into higher productivity, more competitiveness and greater profitability. These will more than offset their initial cost outlay in starting their quality management system.

6.  SISIR has laid a solid foundation with the ISO 9000 . The institute is working closely with the ISO, IEC and other national bodies to keep our companies abreast of the quality race.

7.  A survey was conducted by SISIR this year to determine the outcomes or benefits that have brought about in the implementation of ISO 9000 by these companies. The objectives were to ascertain the impact of the ISO 9000 standards, motivation of employees in acquiring the certification and the challenges and difficulties that the company experienced in the process of certification.

8.  The survey was targeted at both small medium enterprise (SME) and non SME. The top three specific outcomes for SME and non SME are in the same order;

    8.1    Documentation

    8.2    Customer Satisfaction

    8.3    Controls

    Details of the survey is as in Annex 1.


III   SPECIFIC OUTCOME PLAN

9.  In the course of the survey, it was noted that most certified companies in Singapore did not have a system of collecting data on cost of quality. As such, SISIR is presently working with other national bodies to use ISO 9000 implementation as a platform to establish a framework on measurement of Cost of Quality (COQ). Preliminary plans have been established to pilot run on five ISO 9000 certified companies. The first model of COQ derived from the pilot run is expected to be available first half of 1994.

# IV    INTERNATIONAL RECOGNITION OF ISO 9000 CERTIFICATION

10.    SISIR has fully implemented MOUs with three different bodies; BSI, JMI and SAQAS through the signing of the Implementation Agreement. Up to end July 93, the following number of companies that have obtained joint registration under the MOU arrangement:

    10.1        BSI-SISIR:        18 companies

    10.2        JMI-SISIR:        2 companies

    10.3        SAQAS-SISIR:    1 company

11.    There are also 21 companies in the pipeline, including 4-way and 3-way joint registration.

# VI    INTERNATIONAL COOPERATION

12.    There have been a lot of discussion informally at international forums such as ISO/CASCO and the ISO 9000 Forum on establishing an international system to accredite certification bodies. It was noted that members would be appointed by ISO to form an ad-hoc committee to set up this structure with a deadline of end 1994.

13.    In the ASEAN region, a framework of mutual recognition of quality management system has been discussed at length in the ASEAN Consultative Committee for Standards and Quality (ACCSQ) meeting in Singapore in July 93. Singapore has been appointed to lead in this subject area. The terms of reference and work plan is attached as in Annex 2.

# VII    CONCLUSION

14.    Singapore government is in full support of SISIR's quality programme. The objective is to ensure that standards and certification that companies attain command recognition and respect internationally.

15. Developed countries now take quality as a way of life. They are promoting it aggressively as a strategy to remain competitive. Singapore industries have to do the same to improve its quality competitiveness.

# QUALITY MANAGEMENT SYSTEM CERTIFICATION
## LEAD COUNTRY : SINGAPORE

## OBJECTIVE

To establish an appropriate framework of mutual recognition of quality management system.

## SUB-OBJECTIVES

1.  Establishing policies and guidelines in the development of a mutual recognition between member states of procedures for quality management system certification

2.  Establishing on ASEAN qualification scheme for quality management system auditors.

## WORK PROGRAMMES:

1.  To actively promote the adoption of the FN 45012 standard by member states

2.  Establishment of criteria for competence of ASEAN quality management system auditors

3.  Established of an ASEAN registration scheme for auditors of quality management system.

4.  Establishment of a programme for the harmonization of quality management system certification procedures.

5.  Mutual assistance between member state in the development of quality management certification systems and the training of staff.

## OUTPUTS

1.  Mutual confidence between member states in quality management system certification.

2.  Criteria for competence of quality management system auditors recognised and accepted in ASEAN and internationally.

3.  Established of an ASEAN and internationally accepted auditor registration scheme.

4.   Establishment of an ongoing programme of mutual assistance in quality system development

## TIMEFRAME

The proposed timeframe:

| No | Programmes | Year | | |
|----|-----------|------|---|---|
| | | 1 | 2 | 3 |
| 1 | Adoption of EN 45012 | | | |
| 2 | Criteria for auditors | | | |
| 3 | Registration scheme for auditors | | | |
| 4 | Harmonization of quality management system certification procedures | | | |
| 5 | Mutual assistance programme | | | |

## RESOURCES

Short term expatriate input covering training and technical assistance are required as follows for each programme:

| | Year (Man/Months) | | |
|----|-----|-----|-----|
| | 1 | 2 | 3 |
| P1 | 3 | 3 | - |
| P2 | 4 | 4 | - |
| P3 | 3 | 3 | 3 |
| P4 | 3 | 3 | 3 |
| P5 | - | - | - |

# COUNTRY REPORT

# IMPLEMENTATION OF TQM AND ISO 9000

# IN THAILAND

## 1. Introduction

Thailand is a country with rapid industrial development. Within the country, the industry covering various areas comes under classification as fellows:

| | |
|---|---|
| 1. Agricultural Products | 11. Machinery |
| 2. Agricultural Machinery | 12. Medical Devices |
| 3. Automotives and Parts | 13. Paints and Vanishes |
| 4. Ceramics | 14. Petroleum and Gas |
| 5. Chemicals | 15. Plastics |
| 6. Construction Materials | 16. Pressure Vessels |
| 7. Electrical and Electronics | 17. Pulps and Paper |
| 8. Food | 18. Rubber-Based Products |
| 9. Furniture | 19. Sports |
| 10. Leather-Based Products | 20. Textiles and Garment |

However, such classification does not cover some small scale manufacturers such as cottage industry. Whereas manufacturing factories in Thailand number around 100,000, the number is reduced to 80,000 if rice mills are excluded. Of these, 60% are medium and small scale industries.

## 2. Implementation of TQM and ISO 9000

Industrial development at its start was for import-substitution. It later developed to be also export-oriented after the country confronted international trade problems.

QC implementation was initiated since the industry followed the direction of import-substitution. This was to enable competition with import and market regain and, afterwards, competition with other countries in the international market.

QC implementation in Thailand was led mostly by large-scale manufacturers or multi-national company whose quality consciousness was already built-in. Implementation in medium and small scale manufacturers still needs the encouragement and support of the government.

ISO 9000 is regarded by local industry as foundation for TQM. The accurate number of factories implementing TQM and ISO 9000 is still difficult to obtain but may be estimated from the activities of product certification and ISO 9000 as follows :

## 2.1 QC

It may be said that manufacturers in general implement QC in their own factories to maintain product quality, competitiveness and their market. Their method and scope vary. An estimate number of manufacturers undergoing product certification is 3,000 which cover almost all areas of industry. This figure only indicates the use of QC to comply with rules and regulations of product certification. There are others which apply QC to their own or their customers' requirements.

## 2.2 ISO 9000

ISO 9000 is still new for Thailand. Although the scheme started 2 years ago, the number of certified firms is very low, i.e., only two have been certified under the national scheme and about 10 under overseas scheme. The rest, about 40, are under process.

Manufacturers in Thailand have certain general characteristics, as follows :
(1) In voluntary scheme, participation is slow.

(2) Participation in any scheme will be made only when they are fully prepared.

(3) They dislike to lead participation in a scheme and prefer to "wait and see" the results of others.

(4) Familiarity with and dependence on government support.


Another obstacle may be the inadequacy in the promotion from the government.


2.2 TQM

Some manufacturers have already applied TQM but the number cannot be obtained.


3. Measures for ISO 9000 and TQM Promotion


3.1 The government of Thailand recognizes the importance of medium and small scale industries in providing a good foundation for the national economic development. Therefore the implementation of ISO 9000 in these two groups is the main goal and incorporates a long term planning. Implementation of TQM may take shape only after considerable achievement of ISO 9000.


The approach for ISO 9000 implementation includes :

(1) Extensive training to ensure correct and clear understanding of ISO 9000.

(2) Encouraging consultancy service for accurate and affective implementation of ISO 9000.


Because English is not an official language in Thailand, linguistic problem results despite the training or consultancy services being undertaken from the start using internationally accepted courses and in English. The problem

3/5

is felt more especially among the medium and small-scale industries. Therefore, preparation is underway to have training and consultation conducted in Thai.

3.2 Implementation of ISO 9000 is now focused on the manufacturing sector. The service sector and other sector will follow in due course.

3.3 Support from government

There was preliminary discussion on taxation measures to attract private sector, especially medium and small scale industries, to implement ISO 9000. This may involve tax exemption for investment related to ISO 9000 implementation in the factory, including training and the process leading to the obtaining of the ISO 9000 Certificate.

3.4 Scheduling change of requirement in product certification from QC requirement to ISO 9000.

3.5 Including ISO 9000 as a requirement in government purchase.

3.6 Defining a qualified personal registration scheme.

4. International Cooperation

4.1 Thailand is but a follower in the implementation of ISO 9000 and TQM. This, coupled with the use of native language, makes it a long and difficult process for the country to reach the goal, especially with such a great number of medium and small scale manufacturers. Assistance from experienced countries will help speed up the process. However, much work remains to be done by Thailand, such as conducting training in Thai. A roughly estimated number of personnel to be trained both from private and government sectors may reach a million.

4.2 Although ISO 9000 began in Europe, at present, almost all trading countries have an ISO 9000 system of their own. Through ISO 9000 the following are derived :

(1) Common standards used

(2) Common direction for training

(3) Qualified personnel registration scheme

(4) Common standard for certification

These will facilitate and speed up mutual recognition. If TQM can be implemented in the same direction as with ISO 9000, the harmonization of of standards and procedures in each and every country will be possible in the same fashion.

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TISI

September 1993

Country Report
Case study on results achieved by
implementation of TQC in Japan

| Types of Business | Size of enterprise | Improved points | Results achieved |
|---|---|---|---|
| 1. Manufactures of home appliances (Air-conditioners) | Large sized-cooperation | Promoted standardization of fan motor for air-conditioners. (Simplification: Decrease the number of types) [Outline] Developed mono-speed motors which can be applied to a wider range of general purpose. In order to make the multiple-speed control of the motor, application technology for external speed control technique was developed and standardized, which resulted in decrease of the number of types of motors. | ·Reduce the number of types of motors. 38 types → 13 types ·Increase the development efficiency rate by 65% compared to the conventional rate. ·Reduce the cost of 30 million yen(0.3 million in US$) a year. |
| | | Encourage activities on QC circle basis to decrease the correction rate caused by leakage of refrigerant gas. [Outline] Standardization for connecting methods for refrigerant of air-conditioner, automation of brazing works was promoted. Confirmation was made as to whether thorough utilization of certification system for working competence of employees has been taking place. | ·Reduce correction rate from 0.39% recorded in 1985 to 0.07% in 1991. |
| 2. Manufactures for electric wire (Copper wire, enamel wire, etc.) | Large sized-cooperation | Improvement and standardization was made on manufacturing process of overhead electric power wires installing optical fiber. As a result, productivity was improved. [Outline] Conventionally, owing to the structure of electric wire, two manufacturing processes were necessary. Optimum condition for each manufacturing process was studied efficiently and quantitatively by use of statistical technique. As a result, only one manufacturing process became necessary and it was standardized within the company. | ·Reduce the necessary process to 1/3 of the conventional number. ·Decrease the loss of materials by 40% |
| | | Improved productivity by incorporation of automatic equipments and execution of in-house standardization. [Outline] Incorporate automatic equipments such as painting robot. In order to use these equipments properly, promotion of in-house standardization concerning working rules and procedures as well as rules for operation of these equipments were thoroughly exercised for employees' complete understanding. As a result, productivity improved steadily. | ·Improved labor productivity by 37% (1991) from 1987. |

| Types of Business | Size of enterprise | Improved points | Results achieved |
|---|---|---|---|
| 3.Steel manufactures (Steel pipe, steel materials) | Large sized-cooperation | Encourage activities on QC Circle basis. [Case study] Survey and analysis was made on how efficiently carrier car has been utilized. As a result of the study, the waiting time for the carrier car at the billet center was reduced by 10%. | ·Cost down 70 million yen (0.7 mUS$) was decreased a year. ·The outcome of the overall QC Circle activities brought desired results which accounts for 3~4 billion yen (30~40 mUS$) a year. |
| 4.Steel manufactures (Steel pipe, steel materials) | Large sized-cooperation | Encourage QC Circle activities. | ·As of 1990 ·Total number of QC activities took place in 1990 : 725 ·Total results in yen : 26 billion yen(250 mUS$) |
| 5.Tire manufactures (Tires for automobile) | Large sized-cooperation | Improvement of the operating ratio of molding machine for tires by utilization of statistical methods. [Outline] Conduct factorial analyze by use of statistical methods in order to reduce time necessary for inspection during manufacturing process, and to exterminate manufacturing line stoppage caused by minor troubles. As a result, the facilities and computer controlled program were improved. | ·Increased the operating ratio by 34% compared to the conventional rate. ·Decrease the number of the manufacturing line stoppgae from 8 times/day to 0 time/day. ·Cost saved by the improvement in yen: 20 million yen/year(0.2 mUS$) |
| | | Development of the high speed durability tires by using statistical method. [Outline] Conducted test efficiently by implementation of designing experimental methods which is based on statistical methods such as orthogonal array method and two-way layout method. In addition, identification was made concerning highly influential factors for high-speed performance of tires such as roundness and tread width. As a result, high speed durability tires which has maximum speed of 260km/hour was developed. | ·Effective way of developing the new product. |

| Types of Business | Size of enterprise | Improved points | Results achieved |
|---|---|---|---|
| 6. Petroleum refinement manufactures (Gasoline, lamp oil, light oil, heavy oil) | Large sized-cooperation | Reduce manufacturing cost by adjustment of over-quality of gasoline. [Outline] To control the allowance of regular gasoline's vapor pressure used in the manufacturing process to be within the limitation of current facilities by utilization of statistical quality control methods. ([0.450~0.950 kgf/cm2] → [0.550~0.870 kgf/cm2]) As the result, content ratio of the over-quality gasoline was adjusted | ·Reduced the manufacturing cost by 200 million yen. (2 million US$) |
| 7. Manufactures for reinforced concrete products (Reinforced concret products for road use) | Large sized-cooperation | The optimum manufacturing condition was sought by utilization of statistical methods. [Outline] By taking account the economic efficiency, and in parallel with incorporation of concrete pump, the optimum mixing ratio was decided. | ·Reduction of the cement content ratio of concrete. 440 kg/m3 → 428 kg/m3 |
| 8. Manufactures for machinery parts (Formed head) | Small and medium size corporation | Improved productivity by standardization of formed head forming process methods. [Outline] Formerly, determination of the forming process method was done by each product. Forming process method for products which have many features in common was standardized. As a result, time for estimation and consideration for manufacturing methods which was made in advance of actual production was reduced. | ·Reduction of consideration time 1 hour/item → 5 minutes/item |
| 9. Manufactures for building materials (Windows) | Large sized-cooperation | Improved working efficiency by standardization and simplification in distribution section. [Outline] By analyzing the data concerning distribution into and out of the warehouse and the status of stock, as well as by conduct a survey and analyze of distribution flow, standardization for the variation of size was promoted, and reduction of the number of types of the products, the most suitable calculation methods of loadage for containers and/or trucks and automation of delivery system was achieved. | ·Reduced the number of variation of stock by 65%. ·Increased the total loadage by 52%. ·Total loadage delivered per person was increased by 59%. ·The ratio of stock which can by delivered immediately upon request increased by 28%. |

| Types of Business | Size of enterprise | Improved points | Results achieved |
|---|---|---|---|
| 10. Manufactures for building materials (Windows) | Small and medium size corporation | Improvement of company standards for maintenance control of aging furnace.<br>[Outline]<br>Provisions for maintenance control of aging furnace which have had frequent troubles have been been taken into overale review, and based on the optimum methods found, in-house company standards were improved | ·Walking distance for facility check-up was reduced from 216m for one check-up to 56m.<br>·Points for check-up was reduced from 585 points to 49 points per month.<br>·Time necessary for oil supply was reduced from 15 minutes to 1 minute.<br>·Frequency of trouble was reduced from 7 times per month to 0.<br>·Cost saved by the improvement was 40 million yen a year. |

# Effects obtained through introduction of ISO 9000 series in Japan
## (Main Points)

## General effects obtained from becoming a registered firm.

① The possibility to acquire new customers increases.

② It becomes clear who is responsible and, as the result, the depart-
mental relationships improve.

③ Errors in work and misunderstanding among different divisions can be
reduced to a great extent by making company standard to be complied
thoroughly.

④ You can take quick action in response to complaints and inquiries as
a result of setting up the company standards and improving records.

⑤ On-site inspection by customers can be simplified or omitted.

⑥ Internal audit can be executed thoroughly.

⑦ Quality can be stabilized.

⑧ You can improve the quality consciousness of the employees.

⑨ Companies expanding their operations abroad have easier time imple-
menting ISO 9000 overseas with their local employees since ISO 9000
is accepted internationally.