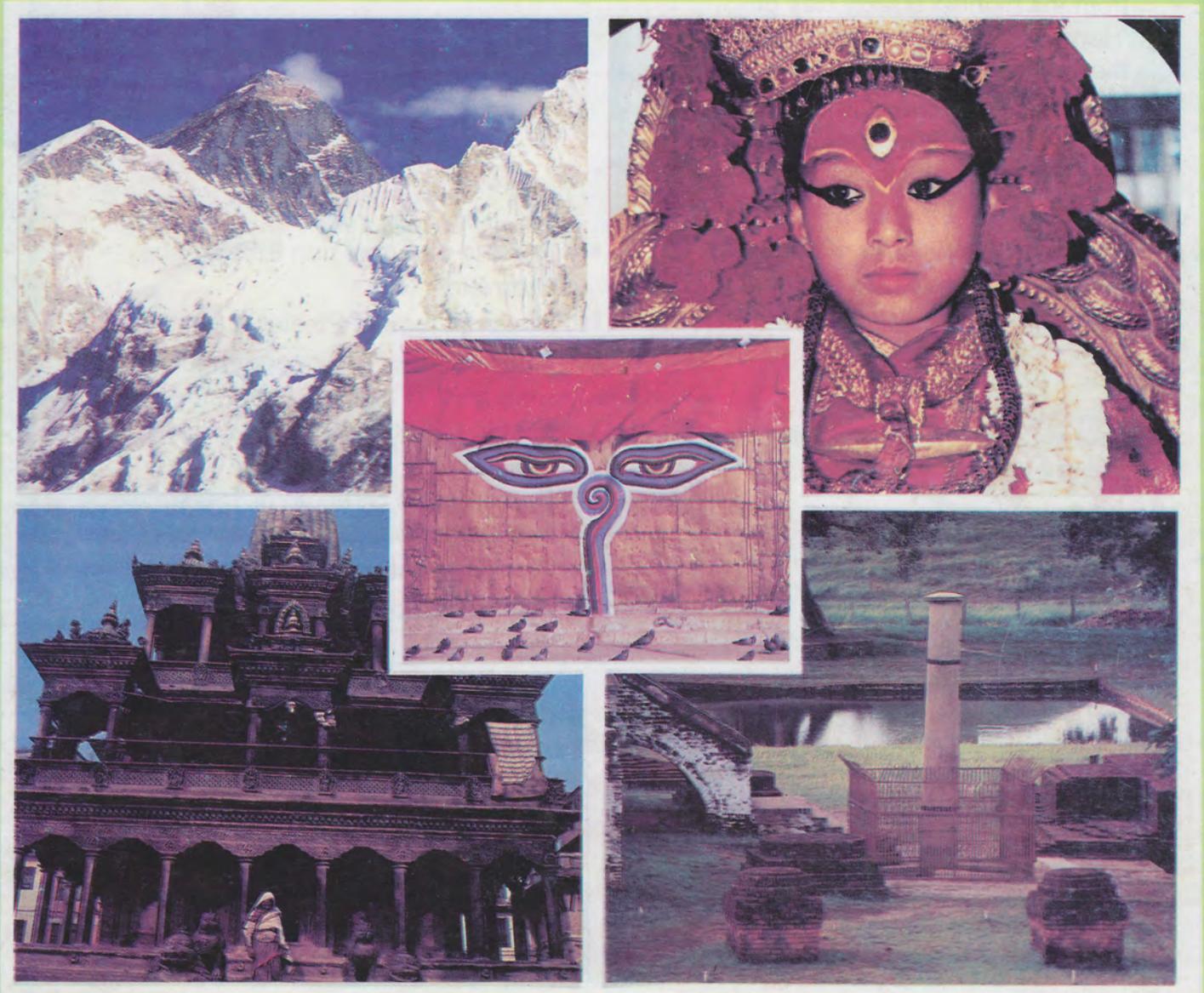


# TALIM

ANNUAL PUBLICATION

VOL. 7, JUNE 1997



NEPAL AOTS ALUMNI SOCIETY

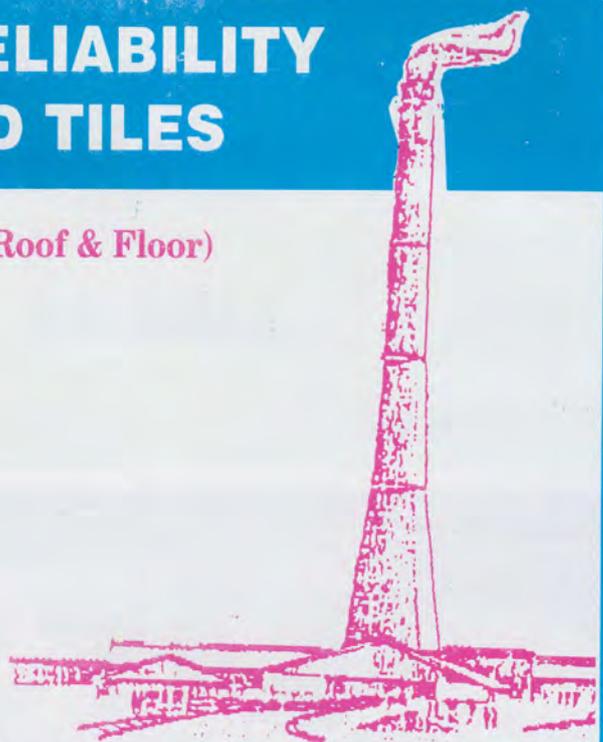
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## EDITORIAL

We are happy to bring out this 7th issue of TALIM in time for the 7th annual general meeting of Nepal AOTS Alumni Society (NAAS) on 27th June 1997. We have been maintaining the NAAS tradition of bringing out one issue of the NAAS magazine every year in time for the AGM. This has been possible only with the cooperation of all NAAS friends, contributions from our advertisers and well wishers and not the least, the all out efforts of the editorial board. This year TALIM has for the first time reproduced an article from one of the past KENSHU magazines brought out by AOTS, Japan (with AOTS, Japan's nod, indeed). We hope to continue incorporating such articles along with those from some of our SAFAAS members.

NAAS has been actively striving towards promotion of HRD in the country and its training programmes are being popularly sought out and widely participated. For the first time, two participants from Bangladesh (with courtesy of BAAS) attended one of the overseas training programmes (OTP) held in Kathmandu in 1996. Besides the regular training features like OTP, domestic lecturing tour, PNEE, lecturing tours from Japanese resource persons, NAAS collaborated with local Kathmandu University to organise an informal talk session by Mrs. Karen Legge, Professor, University of Lancaster and a 5-day seminar on ISO-9000 and Quality Improvement Management conducted by Prof. B.B. Bansal, Head of Mechanical Engineering Department and Dr. A.K. Agrawal both of Banaras Hindu University (India). We hope to continue this effort of providing maximum exposure to participants of NAAS multi programmes.

### EDITORIAL BOARD

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**Ramesh Man Singh**

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Authors are responsible for views expressed in their articles.

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# TALIM

Vol. 7

June, 1997

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### Cover : Visit Nepal Year 1998

The theme for Visit Nepal 1998 is "A Sustainable Habitat Through Sustainable Tourism" and the marketing slogan is "Visit Nepal '98 - A World Of Its Own."

Center : Wisdom eyes together symbolizing oneness

From top left clockwise :

- Mt. Everest - The top of the world, 8848 m. Pride of Nepal
- Kumari - The living legend whose chariot festival is held in the city of Kathmandu during August - September.
- Krishnamandir - One of the popular stone carving shikhara style temple of Lord Krishna situated at the heart of Patan city.
- Lumbini - The birth place of Lord Buddha

**NAAS-YEAR PLANNER  
(April 1997-March 1998)**

S.No.	Activities	1997 Apr.	1997 May	1997 June	1997 July	1997 Aug.	1997 Sept.	1997 Oct.	1997 Nov.	1997 Dec.	1998 Jan.	1998 Feb.	1998 March	Person In-Charge
1.	Japanese Language Class	*	*	*	*	*	*	*					*	Amira Dali
2	Computer Class	*	*	*		*	*	*					*	Prakash Suwal
3	TOT-1 on Jap. Mgmt. (Training of Trainers)		*											Ramesh Nepal
4	Alumni Exchange Program (to Dhaka)			*										Amira Dali
5	TALIM Publication			*										Prakash Suwal
6	AGM (With half day seminar)			*										Mahesh Nakarmi
7	Presentation/Talk program by fresh trainees			*										Ramesh Nepal Bidur Khanal
8	OPT-5A Mr. Masuda (Tourism Marketing Mgmt.) Kathmandu					5 days								Dinesh Chapagain
9	OTP-5B (Tourism Mktng. Mgmt.) Pokhara					5 days								Dinesh Chapagain
10	Lecturing Tour by Ikawa Sensei					*								Ballav Pradhananga
11	Lecturing Tour by Prof. ONO						*							Bidur Khanal
12	Nagoya Convention						*							Madhusudan Bhattarai
13	Maintenance of Industrial Sewing M/c by BROTHER at Dhaka							*						Amira Dali
14	Alumni Exchange Program (to Karachi)								*					Shanta Malla
15	BATOM-4								*					Dinesh Chapagain
16	OTP-6 (Maintenance of Sewing Machine)								*					Dinesh Chapagain
17	Alumni Recommended Scholarship									*				Madhusudan Bhattarai
18	Domestic Lecturing Tour (Narayanghat)										*			Mudhusudan Bhattarai

## MESSAGE



*Nepal AOTS Alumni Society (NAAS) family is happy to present its annual publication 'TALIM' on the occasion of the Seventh Annual General Meeting of the Society.*

*It is noteworthy to mention that NAAS members have been busy in organizing various training programmes, seminars, lecturing tour programmes and sending trainees to Japan, Bangladesh, India and Pakistan in the past year in close cooperation with AOTS Japan and other regional alumni societies. NAAS is committed to human resources development in Nepal with its stornig future activities, and I am certain that these will contribute toward the fulfillment of the noble objective of training Nepalese manpower needed for the industrial development.*

*TALIM will provide its readers some interesting reading materials and acquaint them with the information on the past activities of NAAS.*

**Madhusudan Bhattarai**

*President*

*Nepal AOTS Alumni Society*

## Nepal AOTS Alumni Society Executive Committee, 1996-1998



<b>Mr. Madhusudan Bhattarai</b>	President
<b>Mr. Dinesh P. Chapagain</b>	Vice President
<b>Mr. Ramesh P. Nepal</b>	Vice President
<b>Mr. Amira Dali</b>	General Secretary
<b>Mr. Asta B. Shakya</b>	Joint Secretary
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<b>Mr. Kumar Khanal</b>	Joint Treasurer
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<b>Mr. Kiran Shakya</b>	Member
<b>Mr. Ballav Pradhananga</b>	Member
<b>Mr. Purushottam N. Manandhar</b>	Advisor
<b>Mr. Ashoka M.S. Bania</b>	Advisor

### NEPAL AOTS ALUMNI SOCIETY

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Tel : 478467 (YTG), 521295, 419841  
Fax : 977-1-525417

# NEPAL AOTS ALUMNI SOCIETY

## CORPORATE MEMBERS

1. Nepal Rastra Bank  
Baluwatar, Kathmandu, Nepal
2. Shimizu Corporation  
Blue Star Building  
P. O. Box 346, Kathmandu, Nepal  
Tel : 227568
3. Harisiddhi Brick & Tile Factory Ltd.  
Harisiddhi, Lalitpur,  
P. O. Box 476, Kathmandu, Nepal  
Tel : 241265, 240698
4. Himalayan Brewery Co. Ltd.  
Godawari, Lalitpur, Nepal
5. Sweta Bhairab Power Supply Co. Ltd.  
Jyatha, Kathmandu, Nepal  
Tel : 212082, Fax : 977-1-223187  
e-mail : sako@mos.com.np
6. ICTC Pvt. Ltd.  
ICTC Building, Hattisar  
P. O. Box 660, Kathmandu, Nepal
7. Nepal Industrial Development Corporation  
NIDC Building, Durbar Marg,  
Kathmandu, Nepal  
P. O. Box 10, Tel : 228322
8. Royal Drugs Limited  
Babar Mahal, Kathmandu, Nepal
9. Nepal Electricity Authority  
Central Office  
Ratna Park, Kathmandu, Nepal
10. Jyoti Group of Companies  
Jyoti Bhawan, Kantipath, Kathmandu
11. Himalayan Bank Ltd.  
Sanchaya Kosh Building, Tridevi Marg  
Kathmandu

## LIFE MEMBERS

1. Hazama Corporation  
New Everest Construction Building  
New Baneshwor, Kathmandu, Nepal
2. Nepal Hokkei (Pvt) Ltd.  
Lumbini Sacred Garden, Rupandehi  
Tel/Fax : 977-71-20236
3. Nissaku Co. (Nepal Office)  
P. O. Box 3753, Kathmandu, Nepal
4. Pacific Commercial Co. (Pvt) Ltd.  
Pacific Building, Putalisadak  
P. O. Box 347, Kathmandu, Nepal
5. Deepak Garment Industries  
P. O. Box 1958  
New Baneshwor, Kathmandu, Nepal

## HONORARY LIFE MEMBER

1. Mr. Sindhu Nath Pykural  
Senior Advocate  
Kha 2-34, Kathmandu  
Dillibazar, Kathmandu, Nepal  
Tel : 412025, 412759

## Sixth Annual General Meeting of NAAS

The sixth annual general meeting of Nepal AOTS Alumni Society (NAAS) was concluded at Hotel Himalaya on 26th June 1996. The meeting began with elections for a new executive body of NAAS for the period 1996-1998 and was held under the commissionership of Senior Advocate Mr. Sindhunath Pyakurel, Honorary Member, NAAS.



## Training on Improvement of Quality and Productivity

Under the Domestic Lecturing Tour (DLT - 3) program, a 4-day training on "Improvement of Quality and Productivity" was conducted in Biratnagar on July 23~26, 1996 by NAAS in collaboration with Morang Chamber of Commerce. The trainers were among the NAAS members themselves.

## Japanese Language Conversation Class

NAAS launched its first Japanese language class which was inaugurated by Mr. S. Katsuyama, Managing Director, AOTS, Japan on 2nd August, 1996 at the Yamamoto Talim Ghar (YTG). Currently, the second session of the language class is going on. The Japanese language classes are conducted by Asta Shakya, a NAAS member.



### Nepal-Japan Training Program on Hotel Management (OTP- 3)

A 6-day training seminar on Hotel Management (OTP - 3) was organised at Hotel Himalaya from 4 to 9 August 1996 by AOTS, Japan under joint implementation of Himalaya Kanko Kaihatsu Co. Ltd., Japan and NAAS. Mr. Rick Masuda, an experienced hotelier was the chief trainer in the program attended by 65 participants including two from Bangladesh.



### Seminar on Export Promotion of Nepalese Products to Japan

Mr. Toshio Ikawa from Japan conducted a seminar on " Export Promotion of Nepalese Products to Japan." Altogether 20 enthusiastic local businessmen and entrepreneurs attended the 2 - day program held at the Blue Star Hotel, Kathmandu on August 20 and 21, 1996.



### Computer Training Program (CTP-1)

NAAS launched its first computer training program (CTP - 1) which was inaugurated by Mr. S. Katsuyama, Managing Director, AOTS Japan on 2nd August, 1996 at the Yamamoto Talim Ghar. At the closing ceremony of the CTP-1 on 28th September, 1996, Mr. M. Bhattarai, President, NAAS distributed certificates to the 10 participants who completed the course..



## Nepal-Japan Training Program on Management of Garment Factory

Another 6 - day training on Management of Garment Factory (OTP - 4) was conducted this year. As the previous one, this was also implemented jointly by JUKI (Singapore) Pte. Ltd. and NAAS, and was organised by AOTS, Japan. Mr. K. Sakae and his colleague H. Takaiya from Juki Corporation, Japan were the resource persons in the program attended by 60 local participants.



## Japanese Cooperation on HRD in Nepal

On the occasion of the 40th anniversary of the establishment of Nepal-Japan diplomatic relations, NAAS organised a one-day seminar on "Japanese Cooperation on Human Resources Development in Nepal" on November 1st, 1996 at Hotel Himalaya, Kathmandu. The forum of speakers represented the Japanese Embassy in Nepal, the Federation of Nepalese Chamber of Commerce and Industry and Nepal AOTS Alumni Society.

## Program for Nepalese Entrepreneurs (PNEE-5)

Altogether 23 Nepalese entrepreneurs participated in the PNEE-5 program which was held from 28 October to 8 November 1996 at Kansai Kenshu Center, Osaka, Japan. An orientation program was organized by NAAS for the participants before their departure to Japan.



## Training Program on ISO - 9000 and Quality Improvement Management

For the first time, NAAS organised a training program on "ISO - 9000 and Quality Improvement Management" in cooperation with Kathmandu University. The 5 - day seminar was conducted by two reknown professors of Banaras Hindu University (India) Prof. B. B. Bansal and Dr. A. K. Agrawal from 13 to 17 January 1997 at the premises of Kathmandu University.



## Japanese Management for Improvement of Quality and Productivity

Under the Domestic Lecturing Tour (DLT-4) program, a training on " Japanese Management for Improvement of Quality and Productivity" was held in Butwal with the joint cooperation of Rupandehi Industrial Association. The 2-day seminar held on 21 and 22 January 1997 was attended by local entrepreneurs and businessmen and was conducted by NAAS trainers.



## Talk Program on Management by Quality

Mr. Dinesh Chapagain, Vice President, NAAS conducted a half-day talk program on Management by Quality (MBQ) at the Yamamoto Talim Ghar (YTG) exclusively for NAAS members on February 20th, 1996. The informative program was followed by a dinner.



## Computer Training Program (CTP-2)

The Computer Training Program (CTP - 2) was inaugurated by Mr. Madhusudan Bhattarai, President, NAAS on 12th April, 1997 at YTG. At the closing ceremony, the president distributed the certificates to the 5 participants who completed the course. An introductory preview on Internet was also organised on the last day.



## Guest Lecture on Human Resources Management

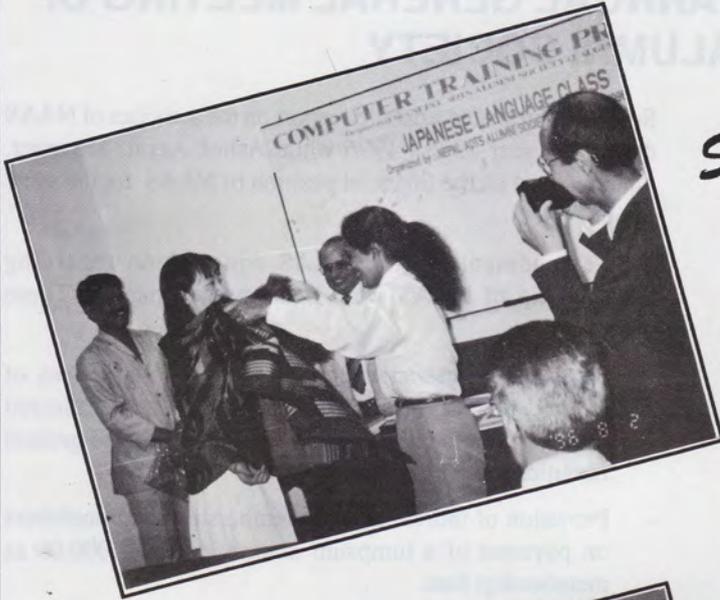
A half-day interaction program on "Human Resources Management in Developing Countries" was held with Prof. Karen Legge of Lancaster University. NAAS invited Prof. Legge who was on a brief deputation to Kathmandu University to deliver a talk for NAAS members on April 23rd, 1997 at YTG.

## Training of Trainers on Japanese Management

For the first time, NAAS organised a training of trainers (TOT) program to develop trainers for the promotion of Japanese management in Nepal. Mr. Khairul Bashar and Mr. Zaman of Bangladesh were the resource persons who conducted the program under the Inter Alumni Resource Exchange Program from May 12 to 16, 1997 at YTG.



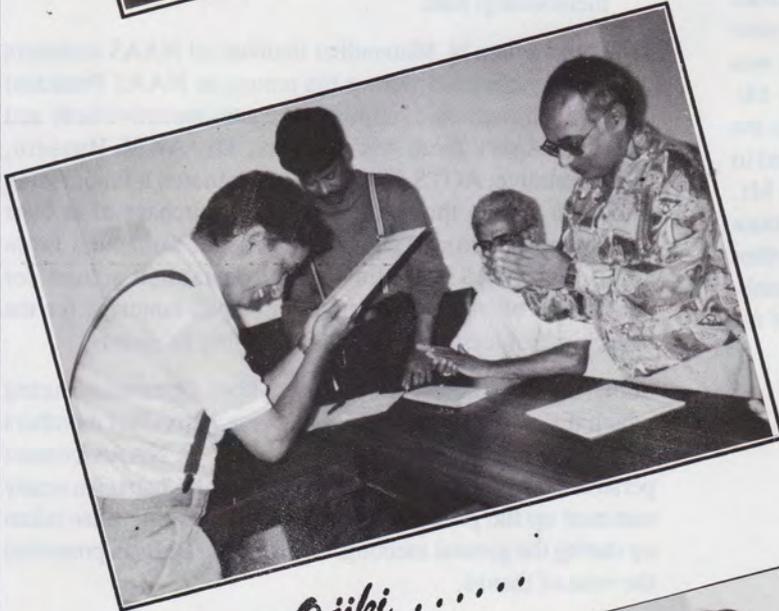
MOMENTS



*Suteki ... Yoku Niāu Ne*



*Tsuuwan .....  
Neparu No Rakusi (Osake)*



*Konna Ojiki .....*



*Anmari Mo Kenka Suruna !*

## PROCEEDINGS OF THE SIXTH ANNUAL GENERAL MEETING OF NEPAL AOTS ALUMNI SOCIETY



The sixth annual general meeting of Nepal AOTS Alumni Society (NAAS) was concluded at Hotel Himalaya on 26th June 1996. The meeting began with elections for a new executive body of NAAS for the period 1996-1998 and was held under the commissionership of Senior Advocate Mr. Sindhunath Pyakurel, Honorary Member, NAAS. Unlike the past, the new executive committee this time was expanded to accommodate some additional portfolios with Mr. Madhusudan Bhattarai heading the committee. The immediate past president, Mr. Purushottam N. Manandhar and another premier member, Mr. Ashoka M.S. Baniya were unanimously nominated as advisors. The new committee comprises of the following members.

President	: Mr. Madhusudan Bhattarai
Vice Presidents	: Mr. Dinesh P. Chapagain Mr. Ramesh P. Nepal
General Secretary	: Mrs. Amira Dali
Joint Secretary	: Mr. Asta B. Shakya
Treasurer	: Mr. Ashok Aryal
Joint Treasurer	: Mr. Kumar Khanal
Members	: Mr. Bhavani B. Joshi Mr. Mahesh Nakarmi Mr. Kiran Shakya Mr. Prakash Suwal Mr. Pradeep Bista Mr. Ballav Pradhananga Mrs. Ram Badan Bania Mr. Shanta B. Malla
Advisors	: Mr. Purushottam N. Manandhar Mr. Ashok M.S. Bania

The second part of the meeting started with a welcome address by Mr. Madhusudan Bhattarai during which he highlighted the major achievements of NAAS. Mrs. Amira Dali, General

Secretary, presented a detailed report on the activities of NAAS during the year 1995 - 1996 while Ashok Aryal, Treasurer, made a report on the financial position of NAAS for the same period.

Two amendments in the NAAS constitution regarding membership of NAAS were unanimously passed. These were :

- Provision of associate membership to all trainees of NAAS/AOTS Overseas Training Programs conducted locally. Such members would be eligible for all general facilities except the right to vote.
- Provision of individual life membership to all members on payment of a lumpsum amount of Rs. 2,000.00 as membership fees.

Mr. Purushottam N. Manandhar thanked all NAAS members for their cooperation during his tenure as NAAS President and pledged continued support to the new executive body and NAAS. Apart from his address, Dr. AKM Hussain, Representative, AOTS Dhaka Office, initiated a fund raising campaign among the members for the purchase of at least three computers to start computer classes at Yamamoto Talim Ghar, the NAAS building, and to establish a fund for publication of training materials in Nepali language for the benefit of trainees of NAAS local training programs.

Some time was allocated for open floor discussion during which it was decided to nominate some individual members from Hetauda, Pokhara and Biratnagar as NAAS contact persons of those areas. After this, Mr. Dinesh Chapagain neatly summed up the proceedings and all matters that were taken up during the general meeting. Mr. Bhavani B. Joshi presented the vote of thanks.

The meeting was concluded in a lively atmosphere with a record participation of 71 members including a few guests and was followed by a dinner at the hotel.



## NEPAL-JAPAN TRAINING PROGRAM ON HOTEL MANAGEMENT

A six-day Nepal-Japan Training Program on Hotel Management was conducted in Kathmandu from 4 to 9 August, 1996. The program was organized by The Association for Overseas Technical Scholarship (AOTS), Japan and was implemented by Himalaya Kanko Kaihatsu Co. Ltd., Japan in cooperation with Nepal AOTS Alumni Society (NAAS), Nepal.

The objective of the training program has been to assist Nepal in developing appropriate human resources in the area of hotel management for further development of tourism industry in the country, thereby, promoting effective cooperation and friendship between Japan and Nepal.

Mr. Rick Masuda and his assistant Mr. T. Ikeda were dispatched by Himalaya Kanko Kaihatsu Co. Ltd., Japan as resource persons for the training. Mr. Masuda gave lectures, used video presentation and conducted practical sessions with the participants.

Mr. Rick Masuda had extensive experience as hotelier in marketing field as well as operation field with 10 years with Hyatt Hotels and Resorts in Asia and Hawaii.

65 participants including 7 women participants all affiliated to the hotel industry as proprietors, managers or supervisors were selected for the training course. The participants included two persons from Bangladesh representing



Sonargaon Pan Pacific Hotel, Dhaka, and other local participants from Kathmandu, Biratnagar, Pokhara and Chitwan.

The opening ceremony of the training program was held on 4th August 1996 at Hotel Himalaya, Lalitpur. Honourable Minister for Tourism and Civil Aviation, Mr. Chakra P. Bastola inaugurated the program by lighting the Panos. Mr. Y. Iida, Charge d' Affaires, Embassy of Japan was also present on the occasion. From the Association for Overseas Technical Scholarship (AOTS), Japan, Mr. Shun Katsuyama, Managing Director, Mr. T. Miyahara, Managing Director of Himalaya Kanko Kaihatsu, Japan and the General Secretary of Hotel Association of Nepal, Mr. Narendra Bajracharya were also present and addressed the gathering.



## SEMINAR ON "EXPORT PROMOTION OF NEPALESE PRODUCTS TO JAPAN"

A two-day seminar on "Export Promotion of Nepalese Products to Japan" was organized by NAAS on 20-21 August 1996 at Hotel Blue Star in Kathmandu with the support of AOTS, Japan. AOTS, Japan sent professional consultant Toshio Ikawa as a resource person. Toshio Ikawa sensei is at present, Overseas Investment Advisor of Japan Small Business Corporation under Ministry of International Trade and Industry. He is also a lecturer and instructor at various other institutions. In the past, he held key posts at many corporations in Japan.

To conduct the seminar, a coordinating committee consisting of the following members was formed.

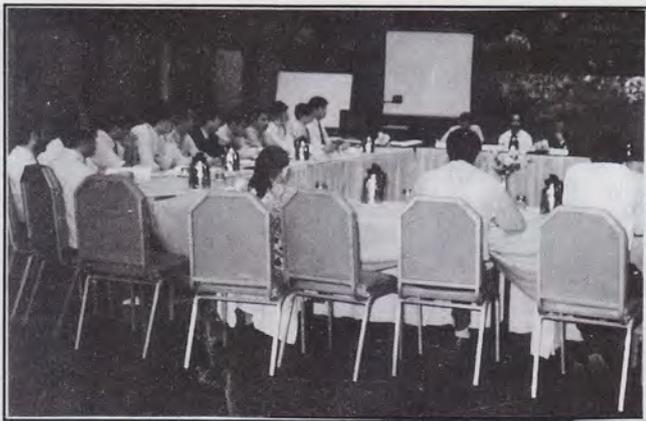
Mr. Ballav B. Pradhanang	- Coordinator
Mrs. Ram Badan Bania	- Member
Mr. Asta B. Shakya	- Member
Mr. Mahesh Nakarmi	- Member

Other NAAS members were also actively involved in organizing this seminar.

The schedule of the seminar was published in the local dailies inviting those interested for the registration. The response from various organizations was very good.

The content of the seminar was as follows :

- I. Changes of Import Structure in Japan
- II. Distribution Channel in Japan
- III. How to Approach Japanese Market and Exercise "Marketing"



- IV. Building up Subcontract Relation with Japanese Manufacturers
- V. How to Negotiate Business with Japanese Parties
- VI. Japanese Business Practice

The two-day lecturing tour focused on developing the idea, vision and export promotion efficiency of the participants.

Ikawa sensei arrived in Kathmandu on August 17th and on 18th and 19th he went for sight seeing and factory visit at Jai Nepal Auto Industry, Hyonjan Electrical Engg. Fabricator Pvt. Ltd., Modern Packaging Industry and Himalaya Bakery Co. Pvt. Ltd. He encouraged the respective entrepreneurs to export their products to Japan.

In the opening ceremony of the seminar on 20th August, the welcome speech was delivered by NAAS President, Mr. Madhusudan Bhattarai. The keynote address was given by the program coordinator, Mr. Ballav Pradhananga while the vote of thanks was given by Vice President Dinesh Chapagain. The Master of ceremony was Vice President Ramesh Nepal.

Altogether, there were twenty-three participants hailing from various fields such as manufacturing, exporting and fabrication. All the participants enthusiastically attended the lectures of Mr. Ikawa sensei who was very happy for the keen interest shown by the participants. In every topic, Mr. Ikawa sensei discussed deeply with the participants. Many participants discussed about their problems and interests after the seminar was over. All the participants highly appreciated the program and wished for such seminars to be conducted again in Nepal. On 21st August, after the conclusion of the seminar, certificates were distributed to all the participants.

## TRAINING ON MANAGEMENT OF GARMENT FACTORY IN NEPAL

Nepal AOTS Alumni Society (NAAS) successfully organised a six-day training program on "Management of Garment Factory" at Hotel Himalaya in Kathmandu on 8-13 September, 1996 under the AOTS Overseas Training Program (OTP-4). The main objective of the training course was to assist Nepal in developing appropriate human resources in the area of management of garment manufacturing for the further development of garment industry in the country. Altogether 64 participants including 11 women affiliated to various local garment industries as proprietors, managers or supervisors enthusiastically participated in the training which was implemented by JUKI Corporation, Japan in cooperation with JUKI (Singapore) Pte. Ltd., Singapore and NAAS. After successfully conducting a similar training program in July 1995, this program was held



on numerous requests from those concerned with the garment industry in the country.

Mr. Kazunori Sakae (General Manager) and his assistant, Mr. Hiroshi Takaiya (First Secretary) both of Apparel Manufacturing Research Laboratory at JUKI Corporation, Japan were the two resource persons in the training.

Honourable Minister of Industry, Mr. Dhundi Raj Shastri inaugurated the program by lighting the panas amidst a ceremony which was attended by Mr. H. Kikuchi, Counsellor, Embassy of Japan, Dr. AKM Moazzem Hussain, Representative, AOTS Dhaka Office and president, Garment



Association of Nepal, Mr. Chandi Dhakal. Besides these, a number of other people associated with the garment industry sector, NAAS members, and media people attended this ceremony.

The closing ceremony of the training program was held on the last day at Himalaya Hotel itself. Mr. Yasuo Sugihara, Director (Executive Division Manager, International Sales Division), JUKI Corporation, who had come to Nepal specially for the occasion addressed the gathering and distributed certificates to all the participants who successfully participated in the week-long training program. The president of Garment Association of Nepal was also invited to the closing ceremony and he briefly addressed the gathering.



## TRAINING PROGRAM ON ISO-9000 AND QUALITY IMPROVEMENT MANAGEMENT

Nepalese industries are facing tough global competition with the liberalization and globalization of trade and opening up of economy by many countries of this South Asian region. In this scenario, quality is emerging as a vital factor for the survival and growth of the industries. The companies with forward looking management have realized this fact and are eager to implement ISO 9000 and other effective quality improvement mechanism. Once an organization is committed to adopt the ISO 9000 quality system, stage is set for launching itself to Total Quality Management (TQM).

Considering this present need, Nepal AOTS Alumni Society (NAAS) organized a week-long 13 to 17 January 1997 training program on "ISO-9000 and Quality Improvement Management" joining hands with the school of management under the Kathmandu University, a well reputed private sector university in Nepal. The objective of this training program was to generate awareness of the importance of ISO-9000 and TQM system to the senior managers of companies enabling them to develop, design and implement suitable quality system in their organizations.

Prof. B.B. Bansal, a well experienced personality in this field and Head of the Mechanical Engineering Department, Institute of Technology, Banaras Hindu University, India was the key lecturer. Dr. Anil K. Agrawal, Reader, B.H.U., Shakti Rana, Kathmandu University and Mr. Dinesh P. Chapagain, Nepal AOTS Alumni Society also delivered lectures on various topics of quality improvement systems.



Topics like Introduction to ISO-9000, Total Quality Management and Quality Improvement, Numerical Techniques, Documentation and Implementation, Statistical Process Control, Quality Audit and Certification, Process Capability, Non-numerical Quality Improvement Techniques, Adaptive Quality Control, Management By Quality, and Supplier Quality Management were covered during the 5-days training program.

Fourteen production managers and quality managers from different organizations, mainly manufacturing companies, got a first hand opportunity to understand the method of implementing Total Quality Management and ISO-9000 system through the lecture program. The participants, on the concluding session, expressed their full satisfaction with the program and assured that they would try to implement the quality improvement management system in their respective organizations when they return to their companies. Certificates were presented to the participants by Prof. S.R. Sharma, Vice Chancellor of Kathmandu University.

For the first time, Nepal AOTS Alumni Society has collaborated with two renowned universities- Kathmandu University of Nepal and Banaras Hindu University of India to organize a successful training program on quality management. NAAS proposes to develop this type of academic collaboration with others in the future to disseminate the managerial and technical knowledge needed for human resources development in the country.

## SEMINAR ON JAPANESE MANAGEMENT FOR IMPROVEMENT OF QUALITY AND PRODUCTIVITY

A two-day seminar on Japanese Management for Improvement of Quality and Productivity was conducted in Butwal on January 21 - 22, 1997. Butwal is a rapidly growing industrial town in the Tarai belt of the western development region of the Kingdom, near Lumbini, the birth place of Lord Buddha. Senior executives of 29 industrial units participated in the seminar from Butwal and Bhairahawa which was jointly organized by AOTS Japan, Nepal AOTS Alumni Society and Rupandehi Industrial Association.

Mr. Bijaya Prasad Dhital, Chairman, Rupandehi District Development Committee inaugurated the seminar. Representatives from local government offices, financial institutions and business and industrial companies were present in the opening ceremony. Dr. AKM Hussain, AOTS Representative, Dhaka Office, was one of the resource persons of the seminar who presented the paper titled "Introduction



of Japanese Management". Four resource persons from NAAS presented their papers on the topics 'Management By Quality', 5's concepts and Application, QC Circle Activities, and Seven Tools of QC.

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## BUSINESS STRATEGY AND PLANT MANAGEMENT AT KIRIN BREWERY

Naoki Hashimoto

Managing Director, Kirin Brewery Co., Ltd.  
General Manager of Yokohama Plant

*The following is a synopsis of a lecture delivered by Dr. Naoki Hashimoto of Kirin Brewery Co., Ltd. at Keidanren Kaikan in Tokyo as part of AOTS's 10th Top Management Seminar (TOPS) course. (It is reproduced from the KENSUE, Number 134, winter, 1994-1995, with the kind consent of AOTS, Tokyo, Japan)*

### Overview and Management Philosophy of Kirin Group

Japanese manufacturing industry is at present passing through a period of major change, and companies everywhere are rethinking their strategies and management styles. In my lecture today, I should like to describe the business strategy of my company, Kirin Brewery Co., Ltd., as an illustration of this trend. In particular, I will talk about the new way in which we are Managing our Yokohama Plant as an example of how we are putting this strategy into effect. I will start with a brief introduction to our company's history and present situation.

Japan's first brewery was the Spring Valley brewery, established in Yokohama in 1870 by an American named William Copeland. This marked the start of the Japanese beer industry. The Japan Brewery Company was founded in 1885, and Kirin Beer was first put on sale by this company three years later. Kirin Beer enjoyed a good reputation for quality right from the start, and Kirin Brewery Co., Ltd. was set up in 1907, taking over from the Japan Brewery Company. By 1954, Kirin Brewery had succeeded in capturing the top share of the Japanese beer market. Our beer business continued to grow steadily in the ensuing years, but we began diversifying at the beginning of

the 1970s, when Japan's period of rapid economic growth came to an end. We then continued right through the 1980s to branch out into a variety of businesses including foods, biotechnology, pharmaceuticals and agribusiness.

In 1988, with these developments behind us, we worked out a long-term management vision to carry the Kirin Group through to the beginning of the 21st century. We embarked on a program of corporate restructuring designed to lessen our dependence on brewing and establish a balanced structure of group management oriented toward diversifying into the five business field of foods, biotechnology, services, engineering and information. Our aim in doing this was to turn ourselves into a powerful business group able to cope flexibly with changes in the business environment.

Since 1992, we have been taking this group management concept a step further with a three-year drive to expand our various businesses and make them more independent. Under this campaign, we are busy strengthening and developing the five principal business areas just mentioned. Over this period, we aim to increase total group sales to ¥3 trillion while reducing beer's share of total sales from 60% to 40%. Meanwhile, we are putting our brewing operation through a program of radical



Dr. N. Hashimoto

reform with the aim of reducing costs and improving productivity.

Our corporate mission is to contribute to the health, pleasure and comfort of the people of the world, and our corresponding management policy, which constitutes the guidelines for our employees' behavior, is to practice sound management based on putting quality and the customer first, while being fair and open in our dealings, respecting people's humanity, and contributing to society.

As I have already mentioned, we are trying to diversify our business activities. However, beer is still our core business. We are experiencing major market change in this area, and the restructuring of our production and marketing systems has become a key issue. As a typical example of this, I should now like to describe what has been happening at our Yokohama Plant.

We have 15 breweries at various locations all over Japan. In 1993, these

facilities produced 3,340,000 kl of beer and achieved total sales of ¥1,320 billion. The Yokohama Plant, our flagship brewery, is a giant complex that produce approximately 11% of all our beer. It is the world's most efficient high-technology brewery and has a high reputation as a model "new factory" suitable even for the next century.

### Management Issues in the Beer Industry

Beer consumption in Japan continued to grow steadily until the beginning of the 1980s, when it entered a period of temporary decline. To restimulate demand, brewers began competing to develop new types of beer, and the Japanese brewing industry was plunged into a period of intense rivalry during which many new products were created. To cope with this situation, it became necessary to switch from our existing "product-out" manufacturing approach (the planned production of a small number of different types of beer) to a make-to-order production system able to produce many different types of beer on demand. At the same time, we had to establish a "fresh-in-time" (FIT) production system and a just-in-time (JIT) distribution system able not only to produce the right quantities, but also to deliver the brands required by customers in exactly the right amounts, at exactly the right times, in the freshest possible condition.

Because this could not be achieved satisfactorily with the ageing equipment we had at the time, we decided to renew the operation by scrapping the Yokohama Plant and rebuilding it from scratch, creating a totally new facility. This new high-tech plant was designed to achieve the ultimate in productivity through the extensive use of sophisticated automation and computer-integrated manufacturing (CIM) systems, while close attention was also paid to creating a safe and pleasant working environment (see Fig. 1)

### Assesment after 1 Year's Operation; Introduction of TP Management

To make the FIT system possible, packaging lines able to cope with a variety of brands have been constructed at the Yokohama Plant, and the plant is the first brewery in Japan to operate continuously 24 hours a day on a 3-shift system. A quick-response distribution system has also been developed, with robots that pick and pack orders overnight, preparing up to 500 truckloads per night for early-morning dispatch. However, the plant was not really able to achieve its desired productivity level even after a full year's operation. Among other reasons, this was because the newly-introduced factory automation (FA) system did not operate as expected and the plant's employees had not received sufficient training in its use. Unaccustomed to the sophisticated FA equipment, the plant's operators found themselves being driven too hard by the machines and began suffering from nervous tension and stress. In fact, it was not unusual for people to work more than 100 hours of overtime a month.

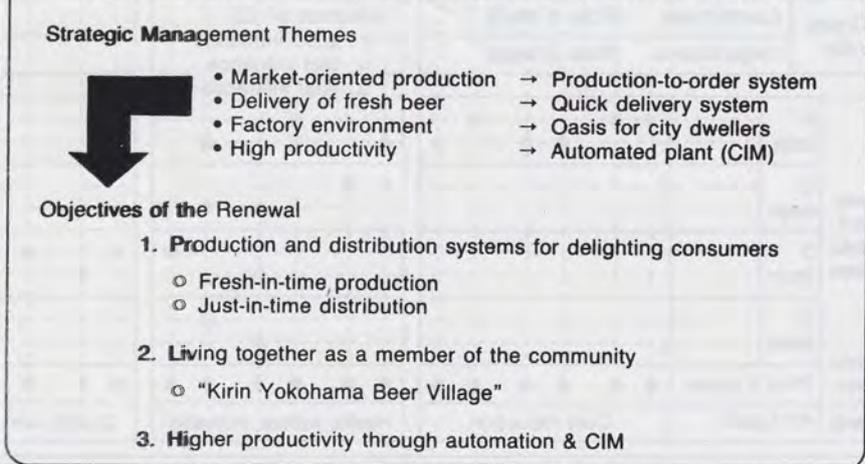
Seeing this situation, we realized that a highly sophisticated facility like the new Yokohama Plant, which goes far beyond the boundaries of the traditional brewery concept, required a new factory

management system able to cope with its advanced technology. After much thought, we concluded that Total Productivity Management (TP Management) was the most suitable system for this purpose.

TP Management, a new production management system developed in Japan, has the following characteristics :

1. It clearly sets overall strategic objectives.
2. It breaks down and organizes the overall objectives into individual objectives and clearly shows the contribution made by each individual objective to the achievement of the overall objectives.
3. It employs a selective approach to determine the order of priority when choosing specific strategies for achieving the individual objectives.
4. By devolving each strategy to the level of individual tasks, it gives employees a clear sense of purpose and enables them to understand the significance of their work.
5. By clarifying objectives and strategies, it effectively combines the top-down and bottom-up management approaches.

Fig. 1 Strategic Management Themes in the Beer Business



6. Through these management processes, employees band together to attain the overall objectives (i.e., to achieve total productivity) rapidly and dramatically.

We introduced TP Management in 1992, eighteen months after the Yokohama Plant had started operating. The first activity undertaken in the TP Management program was to convert the new plant's management objectives into goals that could be easily understood and accepted by all of its employees.

**A Multifunctional Factory for the 21st Century**

The concept behind the renewal of the Yokohama Plant was to create a multifunctional "new factory" suitable for the 21st century. As a large-scale, highly-advanced brewery located in a metropolitan area, the plant's most important issue was to achieve a higher

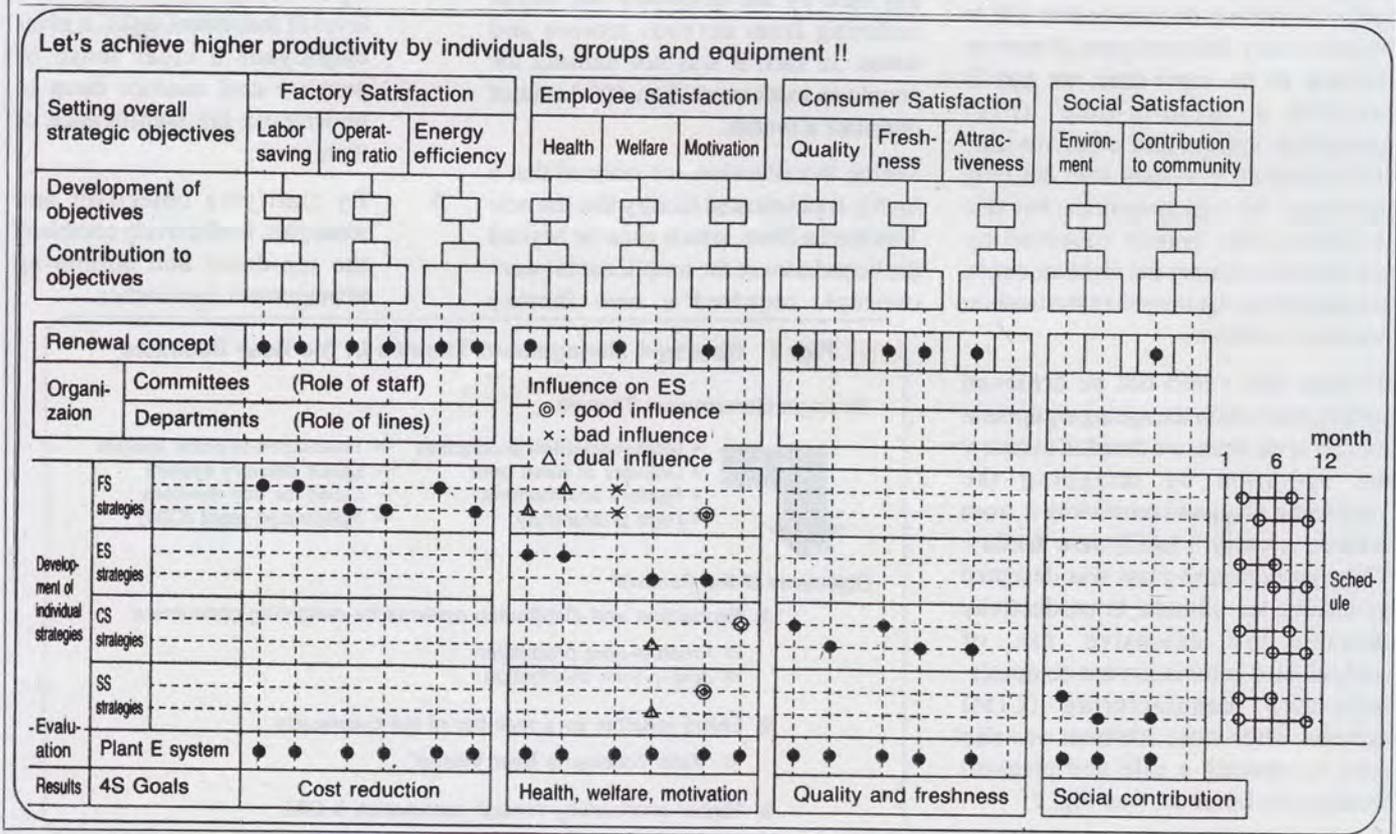
level of productivity than any comparable facility. Another important topic was to use the FIT and JIT systems to achieve consumer satisfaction (CS), which means delighting our consumers by providing them with delicious, fresh beer whenever they want it. A further major goal was to enhance social satisfaction (SS) by opening the plant to the public and establishing it as an urban oasis for relaxation and the enjoyment of beer. In addition, it was also important for us to use the plant as a means of generating future business opportunities by equipping it with research, development and training facilities for developing and applying the most up-to-date beer production techniques.

Last but not least are our employees. In fact, they are more important than anything else, since they are the ones who operate the plant and all the other facilities clustered there. We realized that it would be impossible to achieve our

goals without developing our employees' abilities and raising their satisfaction levels. This means providing an excellent working environment, eliminating hard physical labour and cutting down on overtime, at the same time as promoting personnel development, training and the appointment of the right people to the right jobs in order to create workplace in which people can operate the equipment with confidence, know the connection between the improvement of their individual working practices and the attainment of the plant's overall objectives, and are able to work enjoyably and with a sense of fulfillment. In short, we recognized that achieving employee satisfaction (ES) by improving the quality of working life is the most important issue for factories of the future.

Figure 2 show our overall TP deployment diagram, or TP matrix,

**Fig. 2 TP Management at Yokohama Brewery**



which organizes our rather complex management objectives into the four categories of factory satisfaction (FS), employee satisfaction (ES), consumer satisfaction (CS) and social satisfaction (SS) and breaks each of these down into individual objectives and strategies for achieving those objectives. The four Ss (FS, ES, CS and SS) are arranged along the top of the matrix, while the vertical lines of the matrix illustrate the process of breaking these down into specific individual strategies. This diagram is the basic tool of TP Management.

### **Reducing Total Labor Costs**

I should now like to explain how some of the individual strategies selected through the TP deployment process were implemented.

First, we were faced with the need to reduce total labour costs in order to achieve our FS objective. Building production systems capable of producing beer that can compete on quality and cost with imported products is a major issue for all Japanese brewers. Reducing total labor costs, improving the operating rates of packaging lines, achieving high levels of energy efficiency and improving raw material extraction rates are all essential cost-cutting measures for breweries.

We know that cost reductions achieved by reducing total labor costs account for 75% of a plant's overall cost reductions. We had taken various steps to boost productivity in our old plant, concentrating on increasing the productivity of people engaged directly in beer production. However, every plant has large numbers of indirect employees in addition to those actually working on the production floor. On introducing TP Management, we set objectives for reducing the total labor costs for everyone working in the plant, not just direct operators, and decided that the most important strategy for achieving those objectives was to reallocate personnel, based on our policy of putting

the right person in the right job.

For example, because the new plant had been extensively automated, we had transferred surplus people from the production floor to non-production departments. We now called them back, retrained them, and assigned them to packaging lines, the brewing floor and maintenance groups. This enabled us to increase our annual production capacity from 300,000 to 400,000 kl. In addition, we reduced our subcontracting fees by seconding some of our indirect employees to work with the outside companies that we commissioned to perform work such as by-product treatment and the in-plant transportation of products, containers, etc. We also reappointed other indirect employees to our in-plant R & D facilities to work as supplementary staff. This personnel reshuffle enabled us to increase our annual beer production per employee by a healthy 35%, from 1,400 to 1,900 kl.

### **Improving Packaging Line Operating Rates**

Producing as much beer as possible at the Yokohama Plant results in various economic advantages, including that of reducing transportation costs. Also, we had begun operating our packaging lines 24 hours a day on a 3-shift system with the aim of making maximum use of the site.

However, the packaging lines did not operate steadily when the new factory was started up, and raising their operating rates became an important issue. When we introduced TP Management, we classified the stoppage time for these lines into three categories: rest time (planned shutdowns), lost time (temporary unplanned stoppages) and downtime (stoppages due to problems such as equipment failure), and developed strategies for reducing the rest time to appropriate levels and minimizing the lost time and downtime. The time freed up as a result of this initiative was used productively, not only

for making more beer but also for employee training and communication. This led to improved skills and greater mutual understanding among our employees, which in turn helped to greatly increase the packaging lines' operating rates.

### **Employee Satisfaction**

Japanese industry has recently been paying more and more attention to the question of employee satisfaction (ES), which has become an important issue because of the shortage of younger workers and the changing lifestyles and values of the younger generation. Ensuring a high quality of life and comfort for employees will be an important topic for factory management in the future. This means that companies will have to tackle various problems such as creating better working environments, reducing overtime, increasing employee motivation, and raising people's skills and abilities.

When the new Yokohama Plant was started up, its employees were insufficiently skilled to cope with the level of work demanded by the new automated systems, and this is why some were forced to do more than 100 hours' overtime per month. We were therefore faced with an urgent need to improve employees' skills through extra training and reduce the amount of overtime worked.

### **Enhancing Skill Training and Reducing Overtime**

With the aim of becoming able to maintain stable operation of the Yokohama Plant with its extensive use of FA equipment, we embarked on a systematic human resource development program with the twin objectives of one in every two operators being able to operate the equipment with ease and one in every two operators being able to handle two or more processes. With this in mind, we began by establishing assessment criteria for evaluating single

and multiple skills and devised mechanisms for enabling individual employees to improve their own skill levels with definite targets. For example, to be ranked A for FA skills, a worker must be able to do the following for the relevant process :

1. Operate the FA equipment with ease.
2. Set and change the process conditions.
3. Modify the process software as necessary.

The following steps were taken to increase the number of A-ranking operators :

1. Appoint human resource development leaders in the workplace.
2. Nominate trainers to conduct training in the workplace.
3. Hold training programs using FA simulation equipment.

Thanks to these training initiatives, the proportion of A-ranked operators increased from its original 5% to 20% by 1993. People's motivation improved significantly as they became able to operate the FA equipment more easily, and this also helped greatly to improve productivity, with a particularly marked effect on the packaging line operating rates.

Next, we tackled the problem of reducing the amount of overtime worked. As already mentioned, many people were working more than 100 hours' overtime when the plant was started up. However, on introducing TP Management, we set ourselves the goal of reducing the average overtime to a maximum of 25 hours per month by 1993, the third year of the plant's operation, and developed individuals strategies for achieving this good. We have set out target even lower this year, at 15 hours, and are proceeding steadily toward this goal.

One of the key points of TP Management is to have managers and ordinary employees work together to develop strategies. We achieved this by establishing an "1800 Project Team" (a committee of workplace representatives charged with reducing the number of hours worked by each employee to 1,800 per year) and conducting discussions in committees composed of managers and workers.

These committees developed various strategies for achieving the overtime objective. These included introducing a system of flexible working hours for administrative departments, encouraging people to take time off in lieu whenever they had to come in on holidays, designating certain days as "zero overtime days", introducing a timekeeping system for meetings, establishing "silent hours" during which people could work undisturbed, encouraging people to plan when to take their paid holidays, and introducing a system by which workplace leaders advise people on how to reduce their overtime. We also provided a "leisure room" where employees could use the time saved to relax and enjoy various pastimes, helping to reduce their stress levels and improve their health.

#### **Consumer Satisfaction, Fresh-in-Time Production and Just-in-Time Distribution**

Achieving consumer satisfaction (CS) is also of course a vital issue, and offering attractive products to consumers is a matter of life or death for a commercial business. For the beer industry, providing consumers with beer in the freshest possible condition is the major consideration.

The fresh-in-time (FIT) system is a computerized information system that enables us to plan our production based on forecasts of market demand. The system analyzes information on daily production, inventory levels, delivery and stock forecasts and draws up

production schedules, enabling us to supply the right amounts of beer to the market while maintaining minimal stock levels in the plant.

The establishment of JIT distribution system was just as important as achieving FIT production. As the number of different brands of beer increased, the time taken to load the trucks in the factory also increased, sometimes taking as much as several hours. We therefore set ourselves the goal of reducing the time any truck spends in the plant to 45 minutes or less. To achieve this, we built an automated distribution center and computerized our entire products shipment operation. We also developed new information systems such as a truck flow control system and a warehouse inventory control system, combining these to create a comprehensive distribution information network. By linking the FIT and JIT systems, we have been able to reduce the amount of time any of our final products spend in the factory to a maximum of 3 days.

#### **From Bottom-Up to Top-Down**

Japan's production industry faces a number of issues that must be resolved. At the same time as establishing a high level of productivity that will enable its products to compete with foreign offerings in terms of both quality and price (FS), it must improve the quality of working life of its employees (i.e., create better working environments and reduce overtime) and increase employee motivation (ES), as well as continuing to provide high-quality products and responding to increasingly sophisticated consumer demand through new-technology and new-product development (CS). All of these are important issues from the standpoint of putting the customer first. It must also try to increase social satisfaction (SS), not only by addressing people's concerns about environmental protection

(pollution prevention and the disposal of industrial waste), but also by, for example, opening parts of its factory sites to the public and creating local "oasis" in areas with a high population density and few green spaces like the Tokyo metropolitan area. It will no longer be sufficient for factories simply to go on making things as in the past.

It is extremely important to see all these questions as issues that factories must address and to treat them as part of the pursuit of total productivity. All eyes are on Kirin Brewery's Yokohama Plant as a "new factory" that has begun to take up these novel challenges at an early stage, and TP Management is an extremely effective system for operating such "new factories," with their broader range of responsibilities.

TP Management is a method of reengineering an organization's existing

management. It hammers out clear strategic objectives covering a wider range of issues than ever before, and selects the steps that must be taken in order to achieve those objectives. It also clarifies the contribution made by each individual strategy to the attainment of the overall objectives, and implements these strategies on a priority basis. Another important feature is the way in which the TP deployment diagram clearly shows every employee how each strategy relates to the overall objectives. As a result of this, the top-down and bottom-up management styles blend smoothly together and the organization's overall productivity increases dramatically.

In traditional Japanese management, senior managers tend to confine their business judgments to generalities, leaving the detailed strategic decisions

and tactics up to experienced middle managers in the workplace and the people under them. In other words, the "bottom up" style of management dominates. Specific strategic decisions therefore tend to depend on the experience and judgement of individuals. Relatively little attention was paid to implementing strategic measures systematically and predicting the effects of individual actions. However, this traditional management style, with its bottom-up emphasis, is becoming unable to cope with the new business environment. Japanese industry's objectives have become very hard to discern, as well as being far more diverse than ever before. In a situation like this, I think that it is becoming more and more important to adopt a management style with a top-down emphasis like TP Management.

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## AOTS' HRD PROGRAM FOR PRIVATE SECTOR DEVELOPMENT IN NEPAL

Dinesh P. Chapagain

Nepal, with its abundance of natural wealth has a high potential for development and growth. The 13.9<sup>1</sup> million economically active population characterized by innate trustworthiness and hard working capacity can give thrust and momentum to the development of the country. Effective and efficient utilization of this Human Resource, however, requires the envisaging of the best possible ways and means to garner desired benefits. Historically, the British could and did use the Nepalese people, then known as 'the Gurkhas', as the most efficient fighting force by strengthening and mobilizing their innate characteristics- ie., trustworthiness and hardworking capacity.

However, the performance of the Nepalese people vis-a-vis the modern demand of development and growth, has not been up to the mark. This is underlined by the placement of Nepal in the eighth position above the bottom of the least developed countries, with gross national product (GNP) per capita of only US\$ 190<sup>2</sup>

This situation posits certain questions :

1. Have the Nepalese people, the Gurkhas of yore lost the traditional values of hard work and trustworthiness of their ancestors ?
2. Are the Nepalese people only capable of doing paid mercenary work and not fit for economic activities ?

3. Has the lack of knowledge and skills among the economically active Nepalese people stifled their motivation and constrained potential human performance ?

The time has come to test these and make the development environment of the country conducive for utilizing the innate character of the Nepalese for the country's economic development.

How can this transformation be brought about ? It is possible only when human resource development policies, programs, and plans are altogether guided by this mission.

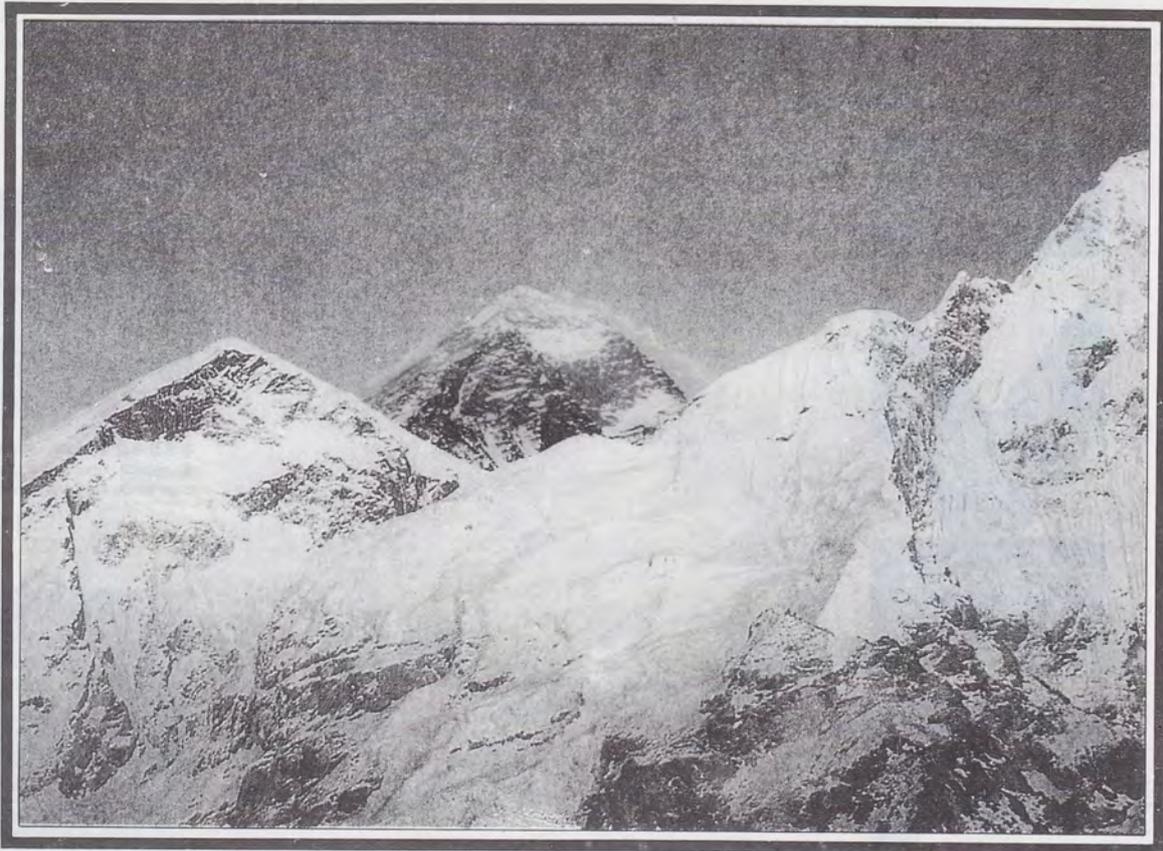
At present, when globalization and market-based growth phenomena have established their viability the world over, Nepal has also taken the path of economic liberalization for liberating the forces of development and growth in the country. It is an axiom that economic development is possible when private sector gets involved in increasingly wider range of economic activities. It has also been proved that the private sector, both formal and informal, are efficient and can generate more productivity than government and public sectors.

The following mathematical equation<sup>3</sup> depicts the relationship of organizational productivity with knowledge, skill, attitude of the people and the situation



1. CBS. Statistical Pocket Book Nepal, 1996- Polution between age 15 to 64 as on 22 June 1996.
2. The World Bank Report, 1995- Basic Indicators Table 1
3. J. W. Newstrom & Davis - Organizational Behavior, Mc Grqw=hill, Inc. 1993

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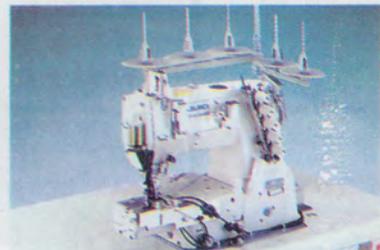
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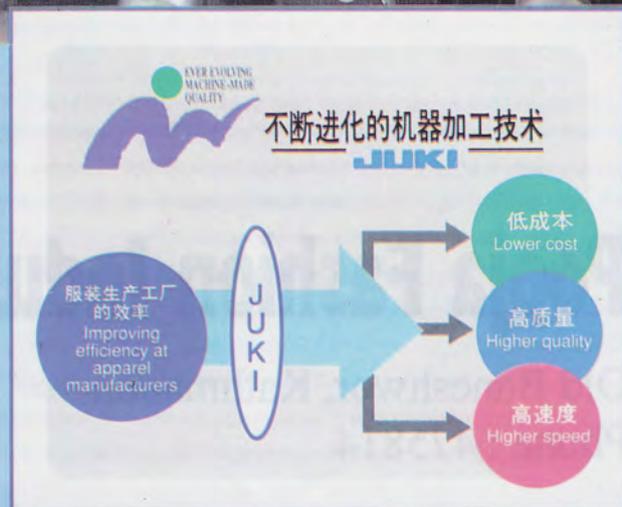
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involved in human resource development in Nepal, primarily in the private sector.

$$\text{Organization Productivity} = \text{Human Performance} \times \text{Resources}$$

Where,

$$\begin{aligned} \text{Potential Human Performance} &= \text{Motivation} \times \text{Ability} \\ \text{Motivation} &= \text{Attitude} \times \text{Situation} \\ \text{Ability} &= \text{Knowledge} \times \text{Skill} \end{aligned}$$

AOTS was established in 1959 in Japan with the support of the Japanese Ministry of International Trade and

of training with AOTS. No training is totally free of cost. In Japan, AOTS provides trainees with comfortable accommodation and learning facilities at the training centres in Tokyo, Yokohama, Nagoya and Osaka which can accommodate upto 900 persons in total.

AOTS, at present offers the following training programs<sup>5</sup>.

**1. REGULAR TRAINING PROGRAM**

**Specialized Technical Training**

AOTS provides assistance to the Japanese host companies for technical training companies in Japan. These types of training are mostly on-the-job training and prior to the actual training, the candidates are enrolled in the AOTS general orientation course to learn Japanese conversation, background of the Japanese industries, technology, culture, etc.

**Management training**

Under its regular training program, AOTS also provides management training to the candidates of developing countries in such fields as corporate management quality management, production control, export marketing, and so on.

In the present open economic situation, thus the skill and ability of the Nepalese workforce working in the private sector can play a vital role to improve productivity of the individual organizations, or individual enterprises. Which ultimately helps economic growth of the country. Nepal needs real help in this regard. With increasing inputs of knowledge and skills the motivation of private sector enterprises can register a sea-change in their motivation, ultimately leading to higher performance as dynamic players in the economy.

In this regard, the cooperation of Japan to upgrade the skills and ability of the Nepalese workforce is really noteworthy. There are many forms of cooperation channeled by Japan to improve the quality of life of Nepalese people. Japan International Cooperation Agency, well known as JICA, is one of the agencies which is very much involved in this work. According to the bulletin published by JICA, till 1993, a total of 1564<sup>4</sup> Nepalese people belonging to different fields ranging from agriculture, health, forestry, fisheries to cottage industries and cooperatives have undergone various trainings. Moreover, as these trainings are directly awarded to public sector or the government line agencies, these have helped in upgrading the skills of manpower working in these sectors.

The Association for Overseas Technical Scholarship (AOTS) is another Japanese organization which is also actively

Industry. It is a non-profit organization working for the purpose of promoting technical cooperation for the industrialization and development of developing countries and enhancing mutual understanding and friendly relationship between those countries and Japan. AOTS has already trained about 69,000 persons in Japan from about 150 countries and regions. The activities of AOTS are mainly financed by government subsidy and private sector company contributions.

AOTS training programs mainly focus on skill upgrading of employees of manufacturing and service industry from developing countries. No training is offered in agriculture and medicine nor is any academic study included in the programs. The training participants must be citizens of developing countries within the age bracket of 20 to 50 years, and having qualification of university graduates or have equivalent professional experience. Furthermore, the trainings are conducted on cost sharing basis, that is, the participant's company or the Japanese host company shares the cost



4. JICA, JICA in Nepal, 20th Anniversary 1994

5. AOTS, Guide to AOTS bulletin, 1995

**2. SPECIAL TRAINING PROGRAMS**

On behalf of the Japanese Government, UNIDO and APO, AOTS implements special training courses in the field of their request.

**3. OVERSEAS TRAINING PROGRAMS**

AOTS sponsors training programs in overseas developing countries in cooperation with Japanese or overseas companies to conduct training to the local candidates as per the local requirements. In this type of training program, AOTS despatches specialized lecturers overseas to conduct the training programs.

Besides these programs, AOTS also conducts overseas Technical correspondence Programs. Pre-Departure Japanese Language Training Program and Trainer's Training Programs for Japanese Instructors. Recently, AOTS

has stated providing assistance to conduct Inter-Alumni Resource Exchange Program.

The AOTS trainees after returning back to their home countries have established alumni societies active around the world, carrying out various activities to generate multiplier effects from their own training in Japan. Nepal AOTS Alumni society is one of them.

Nepal AOTS Alumni Society (NAAS) - a non-profit voluntary organization was registered in 1991, with members who had undergone training conducted by AOTS, Japan. The main objective of this society is to facilitate human resource development programs of its parent organization, AOTS.

To-date, in total 977 Nepalese trainee have

already been trained in different skills under various training programs. The first trainee went to Japan for training in 1968 and 125 persons were trained during 1968 to 1990. After the establishment of the Society, ie. from 1991 till October 1996, other 852 trainee were already trained under various programs.

The following table depicts the summary of the number of trainee trained under various programs of AOTS.

**During the Period 1968-1990**

<b>Training in Japan</b>	
1. AOTS Regular Technical Training Program	85
2. AOTS Regular Management Program	1
3. APO Management Training Program	36
1. UNIDO In-Plant Group Training Program	3
<b>Total</b>	<b>125</b>

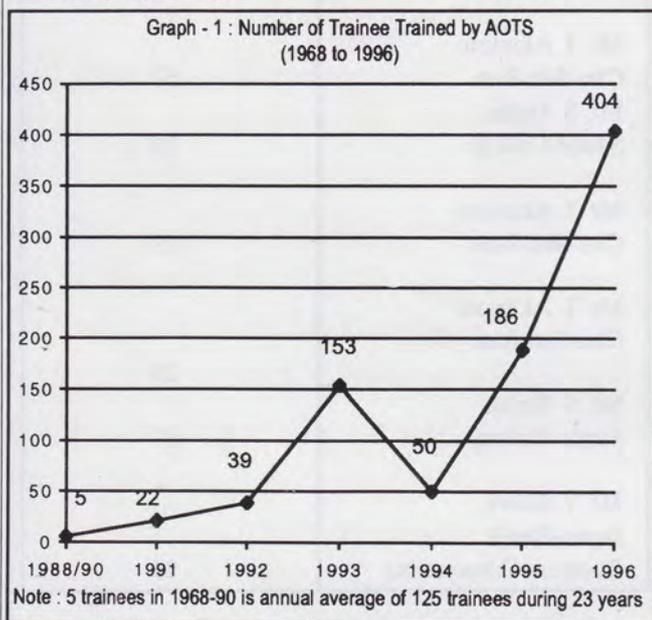
**During the Period 1991~1996**

<b>Human Resource Development Programs</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>Total</b>
<b>A) Training in Japan</b>							
1. Alumni Scholarship Technical Training Program (ASTTP)	2	1	3	2	1	1	10
2. Alumni Scholarship Management Training Program (ASMTTP)	3	2	1	4	4	2	16
3. AOTS Regular Technical Training Program (ARTTP)	11	10	3	2	na	na	26
4. APO Management Training Program (APOMTP)	1	4	3	3	na	na	11
5. Program for Nepalese Entrepreneurs (PNEE)	x	x	x	20	39	16	75
<b>B) Training in Nepal</b>							
6. Lecturing Tour by Japanese Experts (LT)	x	x	128	13	29	43	213
7. Overseas Training Program (OTP)	x	x	x	x	60	191	251
8. In - house Management Training program (IMTP)	x	12	x	x	x	50	62
9. Domestic Lecturing Tour (DLT)	x	x	x	x	22	41	63
10. In - house Japanese language Classes (IJP)	x	8	12	x	x	5	25
11. In - house Computer Training Programe (ICTP)	x	x	x	x	x	10	10
12. Inter-Alumni Resource Exchange Program (IAREP-1)	x	x	x	x	28	43	71
<b>C) Training in South -Asian Region</b>							
13. Inter- Alumni Resource Exchange Program (IAREP -II)	5	2	3	4	3	2	19
<b>Total</b>	<b>22</b>	<b>39</b>	<b>153</b>	<b>50</b>	<b>186</b>	<b>404</b>	<b>852</b>
na - not available							

The above table reveals some important facts to be noted.

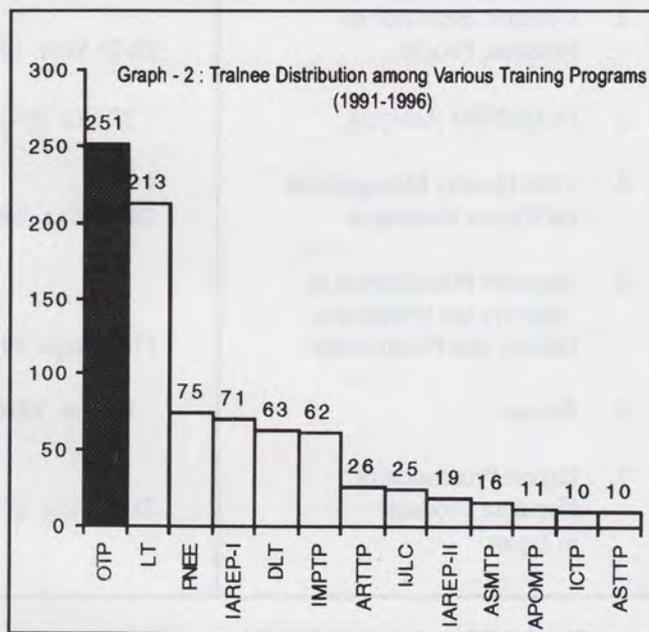
**1. Training Trend during 1968 - 1996**

The Trend Graph - 1 regarding number of trainee trained by AOTS (1968-1996) shows that AOTS, Japan is assisting in developing human resources of Nepal increasingly, especially, after the establishment of its Alumni Society in 1991 and even more so in the recent years 1995 and 1996.



**2. Trainees Distribution in Various Training Programs**

The pareto Graph - 2 regarding trainee distribution in various training program (1991-1996) shows that the no. of trainees are highest, 251 (29%) in Overseas Training Program (OTP) and then Lecturing Tour by Japanese Expert (LT), 213 (25%) followed by Program for Nepalese Entrepreneurs (PNEE), 75 (9%).



**Overseas Training Program (OTP)**

AOTS has organized till now four overseas training programs in Nepal.

Subject	Period	No. of Candidates	Cooperating Agency
1. Production Management of Grament Factory	2 -7 July 1995	60	JUKI Corporation. Japan
2. Construction Project Management	21 - 26 Jan. 1996	62	Shimizu Corporation. Japan
3. Hotel Management	4 -9 Aug. 1996	65	Himalaya Kanko Kaihatsu Co. Ltd. Japan
4. Production Management of Garment Factory	8 -13 Sept. 1996	64	JUKI Corporation. Japan

In 1997, AOTS is planning to conduct overseas training programs in printing technology and tourism marketing management with special focus on hotel management in Nepal.

## Article

### Lecturing Tour by Japanese Experts (LT)

AOTS has despatched seven lecturers to organize seminars in various subjects in Nepal.

Subject	Period	Lecturer	No. of Participants
1. Recent Trends in Japanese Business management	10-11 Feb. 1993	Mr. I. Ohara Chu-San-Rend	55
2. Dynamic Behavior to Motivate People	22-23 Sept. 1993	Mr. T. Akimoto Chu-San-Ren	57
3. Profitability Analysis	22 Oct. 1993	Mr. S. Fujita Sanno College	16
4. Total Quality Management for Export Promotion	28-29 Oct. 1994	Mr. T. Akimoto Chu-San-Ren	13
5. Japanese Management to Improve the Workplace, Quality and Productivity	11-12 Sept. 1995	Mr. T. Akimoto Chu-San-Ren	29
6. Kaizen	13 Mar. 1996	Mr. S. Fujita Sanno College	17
7. Export Promotion of Nepalese Products to Japan	21-22 Aug. 1996	Mr. T. Ikawa Japan-Small Business Corporation	26

In 1997, AOTS is planning to send experts from Japan to conduct seminars in Nepal on corporate strategic management and workers motivation.

### Program for Nepalese Entrepreneurs (PNEE)

AOTS has already provided training to 75 Nepalese entrepreneurs in 4 groups

Subject	Period	No. of Participants	Venue
1. Introduction to Japanese Business Management	7-20 Dec. 1994	20	Yokohama Kensu Centre. Japan
2. Introduction to Japanese Business Management	27 Feb-10 Mar. 1995	16	Yokohama Kensu Centre. Japan
3. Introduction to Japanese Business Management	20 Nov. - 8 Dec. 1995	23	Kansai Kensu Centre. Japan
4. Introduction to Japanese Business Management	9- 22 May 1996	16	Kansai Kensu Centre, Japan

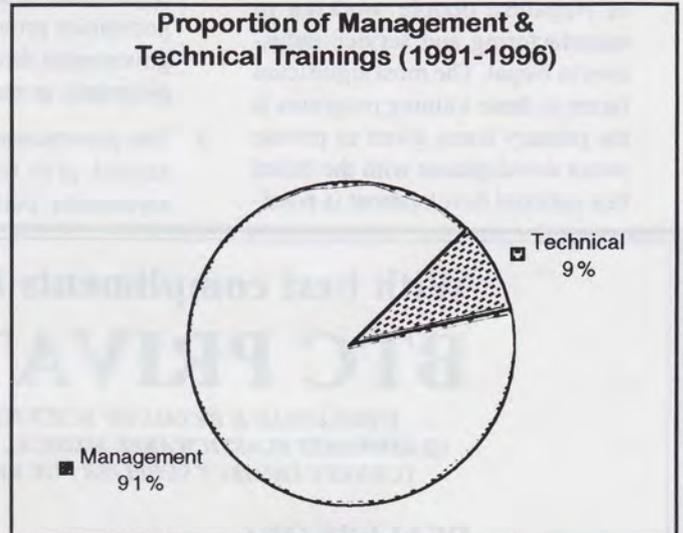
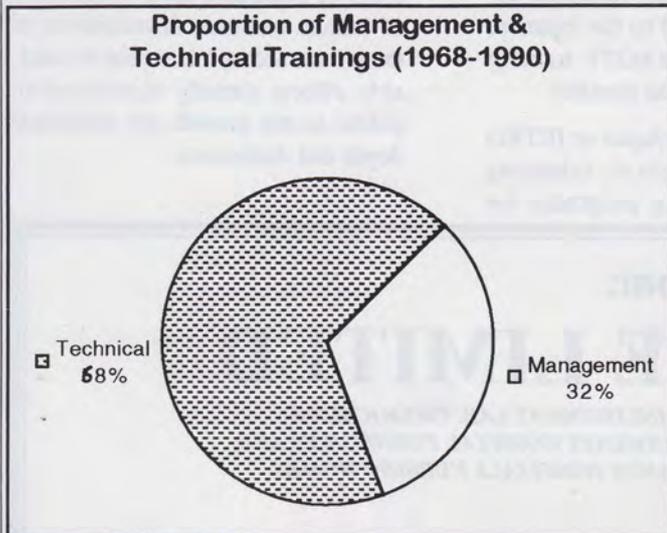
Beside these, right now, a fifth group of 23 Nepalese entrepreneurs of export - oriented garment factories are in Japan for 10 days entrepreneurship training program.

**3. Management and Technical Training Ratio**

The Pie-Graph-3 regarding proportion of management and technical trainings (1968 ~1990 and 1991 ~1996) depicts

one noteworthy fact that the distribution scenario of trainees of management and technical trainings registered a shift in favor of management training between the periods 1968 ~ 1990 to 1990 ~ 1996.

graph-3



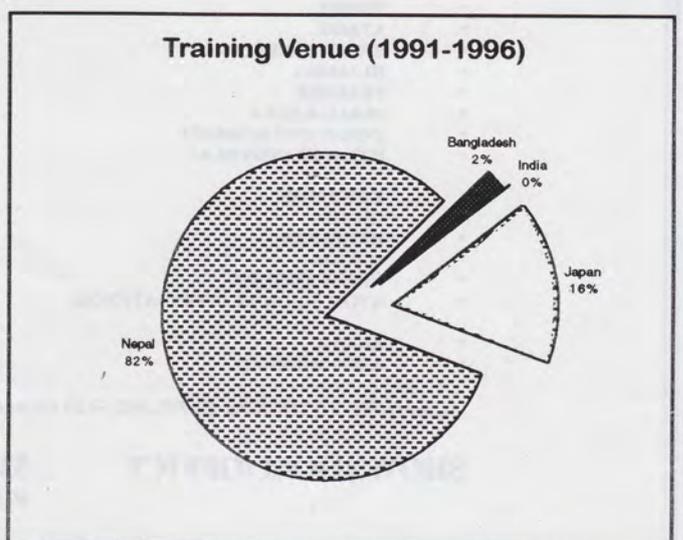
In the 1968 - 90 period, management trainees were only 32% of the total, whereas in 1991 -96 period, the percentage increased to 91%. More and more entrepreneurs now want their middle level and top level managers to be acquainted with Japanese management techniques and tools.

information is that, recently, in the 1991~1996 period, most of the trainings are held in Nepal. Previously, before 1991, all trainings were held in Japan. During 1991 ~1996 period, about 27% of the trainees were trained in Japan, where as 17 persons were trained in Bangladesh and 2 persons were trained in India (Graph-4). The regional training programs were conducted under Inter- Aumni Resource Exchange Program of AOTS.

**4. Training Venue**

Another noteworthy fact we can derive from the training

Graph - 4

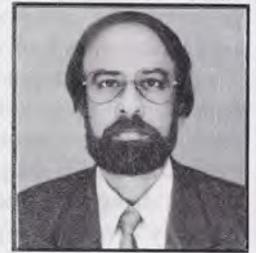


## FLIRTING WITH TQM

### Many blunders are often done by Asian companies embarking on TQM

Kamran Moosa

Vice Chairman, AOTS Lahore Regional Centre  
Managing Director, Pakistan Institute of Quality Control



**T** for Total, *Q* for Quality, and *M* for Management. *Sounds* simple, but it is not clear to most people. Every day brings a new book, seminar, or article that adds a new perspective to the subject. Companies are increasing their budgets for TQM facilitation, yet most of them are not getting anywhere. TQM literature available in the West or Japan, does not address many issues affecting companies in Asian countries, such as: illiteracy, low living standards, employees high turnovers, unpredictable government policies, high inflation rates, strikes, 15-20% interest rates on bank loans, unavailability of appropriate human resources, export of intellectuals to developed countries, competing with sub-standard product imitations in markets, and non-availability of basic testing and calibration laboratories. Of course, the nature of their severity differs in each country. This is why many Asians, after listening to a lecture on TQM, laugh if they understand it, or look more puzzled, if they do not. Those who really understand, accept, and then practice it correctly are only a hand full of self-motivated senior executives, who have the 'champion's' attitudes, and have had successful careers. Those who consider TQM to be only a buzzword, are either ignorant, or below average professionally. Champions have to learn minor details, therefore they can not afford hypocrisy while dealing with this subject. They are innovative, and hungry for knowledge and experience. Others think that they know more than sufficient. Therefore, they carry a long list of justifications for why TQM cannot be implemented. TQM makes a champion perfect, but does not make everyone a champion.

TQM is gaining importance every day due to a continual increase in the global

business volume, resulting in more cross-boundary trade and improvement in the living standard in many countries. As a result, customers from around the world are regularly demanding better products and services than ever before. Competition is becoming tougher, and so is managing business.

The desire for excelling starts from individuals, and then spreads into business competition. In today's business the richest is considered to be the winner. Technology is a tool for achieving this. Competition is a catalyst in the growth of business, provided it is fair. It is often not possible to easily acquire technology with limited resources. However, it is easy to acquire knowledge on management systems.

In the divide between the rich and the poor, money is controlled by the rich, and flows from the rich to the poor. In the divide between the developed and the under developed countries, superior technology is the main controlling factor. It is controlled by the company or country who owns it. The *real* technology is a *most guarded secret*. Its key elements are *not* available in the published literature. It can only be acquired through experience, skills, expertise, benchmarking, and applied research, and these are never available easily, or cheaply.

Excellence in products and services is like the tip of an iceberg, whose under water hidden portion is technology. A product can not survive without its technological base. Therefore, an imitator, who produces products without technological development always produces products inferior in quality. The race in the market is for excellence and easy availability. These require a

strengthening of the technological base, in addition to improvements in the management systems. The TQM literature and seminars of today focus on *Management Systems* and usually ignore technological improvements. TQM as defined today, is only a mechanism for involving people in making improvements with all management tools. It does not include any technical or technological tool, or contain any *Production or Quality Methodology* for producing any product or adding features to it. The only ones who are benefiting from today's TQM programs are the ones who already own the necessary technological improvement capabilities.

Analyses of Asian countries do not show any unified approach towards quality. This, in addition to the restricted flow of technology, leads companies in these countries to adopt random acts of total quality management.

Business growth has created an obsession for competition in most Asian countries. International trade considers each country (as a company) by what it has to offer to the world market. Quality, productivity, cost, trust, ease in business dealings, and efficient delivery are the main criteria for selecting a country's products. Due to the unique socio-economic situation, each country has to design the best mechanism compatible with its own environment.

Competition is forcing companies to win by continually presenting new, innovative and exciting products and services of the highest quality, that people really want and need, and are within their affordable price range. Competition leads the weaker producers into bankruptcy. Less resourceful companies have little lead time to make improvements. Under

the pressure of losing competition, most Asian companies look up to TQM tools as their savior, and try to adopt and adapt them without considering their specific needs. These companies are not market driven, but are 'TQM program' driven ! Market driven products and services regularly demand very rapid changes, improvement, and additional features. These are impossible to provide with inferiority in technology. As a result, most companies with traditional technologies will soon become obsolete.

There are many implications of international trade in Asia. These include : demands by customers for more stringent product standards, European Conformity Mark, ISO 9000, technical competency of registrars and laboratories, mutual recognition in bilateral trade, and the country's label. A strong Quality Infra-structure, and its operational mechanisms are vital for the development of quality in any country.

Many developing countries lack the appropriate infra-structure for integrated quality and its promotional and control activities. This creates problems and a lack of trust in both the suppliers and customers of that country. An integrated model of national quality infrastructure is required in every country, which should include : leadership, resources, regulatory aspects, educational aspects, promotional aspects, and appropriate technical facilities and competency in testing and calibration.

In a national research on TQM carried out by the author in 1995-96 (in a selected group of reputable Pakistani companies), it was found that the most quality conscious companies are practicing only 33% of TQM Tools. The strongest practiced tools were : Management by Policy, followed by TPM, Information Sharing, Sampling, ISO 9000, Quality Circles, and SPC. The least practiced tools were : Test of

Hypothesis, Seven New QC Tools, Quality Award Criteria, 5 S's, Benchmarking, and Re-engineering. The methodology adopted were via ISO 9000, Juran Road map, and MBNQA. The main difficulties encountered by these firms were : resistance, lack of time, non-availability of resources, lack of clarity of TQM and its tools, and an unhelpful attitude of outside sources.

People develop habits from their culture. Every country has unique culture that influences the habits of its people. Traditions, social behavior, culture, education, technology, and religious affiliations strongly influence the formation of habits. The pace of progress and overall improvement in socio-economic development depends upon the habits of the people and their leaders. Every nation has to identify the best habits compatible with its growth. Guidance is always available from within. Right guidance leads to success, and success leads to happiness.

***Wishing the 7th Annual General Meeting of  
NEPAL AOTS ALUMNI SOCIETY  
a grand success***

**June 27, 1997**



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## APPLICATION OF QC ACTIVITIES IN A NEPALESE INDUSTRY

(A CASE OF GMI)

**Ramesh Man Singh**

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**Bharat Kunwar**

*Deputy General Manager/GMI, QC Promotion Officer*



### BACKGROUND

Promotion of QC activities in Nepal have mainly been confined to in-company and public seminars, training courses and talks. The concept of systematic problem solving through participatory approach in industrial and business sector is virtually non-existent. Implications of participatory approach, bottom-up decision making, etc. have been matters beyond the comprehension of entrepreneurs and were generally considered undesirable lest workers become "smart". Entrepreneurs and managers were supposed to be know-all, the shop floor workers were supposed to work and not think. "Smart" workers were "threats" to the management. With this sort of skewed mentality prevailing in the industrial sector, few QC activities practiced here were just flashes in the pan. Japanese style of problem solving through QC activities is something everyone has heard of and is greatly admired. The leaders and the know-alls publicly exhort the virtues of the Japanese system and preach that one should emulate the Japanese for the industrial and economic growth of the nation. But that's where things stop!

However, there have been some industrial houses which had attempted to implement QC circles in their companies with the help of external facilitators. The handful of these enterprising companies, however, could not actually arouse significant interest to sustain their program and tap the full benefits that could have been reaped from them. In this respect, the Godavari Marble Industries where QC activities are being successfully implemented, shines as a case with high optimism for their sustainability.

### IMPLEMENTATION OF QC ACTIVITIES AT GODAVARI MARBLE INDUSTRIES P. LTD.

The Godavari Marble Industries, a mining industry managed by the MC Group since the last two decades, is situated in the southern end of the Kathmandu valley at the lap of the picturesque Phulchoki mountain. The company is engaged in the production of beautiful Italian grade marbles and aggregates with large export market in India. There are about 500 employees in the company, the majority of which are either illiterate or have received education equivalent to primary school standards.

The CEO of the company is the driving force behind the QC activities in the factory and has lent whole hearted support to its promotion. It started with the CEO approaching BISCONS,

a management development consultancy firm, to establish some form of Japanese style of management in the company. BISCONS proposed a continuous workplace improvement program for developing TQM culture in the company to meet its productivity and quality improvement needs.

As the initiating activity of TQM, QC activities were first introduced into the company at the shop floor level in October 1996. The main objectives were :

- to bring out the hidden talents and improve the creativity of the employees and quality of their problem solving capability;
- to improve leadership and supervisory skills of supervisors at the grassroots level;
- to improve human relations; and
- to improve product quality and productivity.

### Organization Structure For Implementation

The structure of the QC Circle activities composes three levels: [Refer to Figure 1 : Organization Chart for QC Activities]

#### 1. The Steering Committee (SC)

The SC is the highest authority in the structure of QC activities within the company. It consists of the CEO, the GM, the DGM and the production manager. The DGM has been entrusted with the responsibility of a QC promotion officer. The committee lays down policy issues, objectives and strategies, gives decisions and support to improvement suggestions of the QC circles. The committee meets once a month.

#### 2. Cross Functional Committees (CFC)

The members of these committees are the production incharge, the production manager and the QC promotion officer. The CFCs facilitate the QC programs regularly to establish coordination between policy management and QC circles. There are two CFCs at present, and they meet jointly once a week.

#### 3. QC Circles (QCC)

QCCs (referred to as clubs by the workers in the company) carry out small group activities within the respective departments tackling problems and devising improvement schemes within the framework of the policy issues handed down by the SC. The circle members consist of the labour, operators, floor supervisors and the production incharge.

The QCCs have been meeting consistently twice a week. At present, there are eight QCCs working actively in their respective areas.

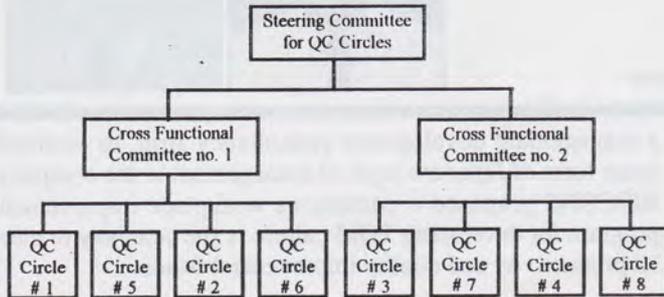


Figure 1 : Organization Chart for QC Activities

**Implementation Procedure**

1. Top management orientation on Japanese style of management concepts and practices were carried out in three working meetings covering the following topics:
  - Concept of Kaizen and Japanese management system
  - Human oriented management procedures
  - Policy management, cross-functional management and small group (QC) activities
2. 13 key personnel comprising of middle level management were trained as facilitators twice a week for two months. The interactive workshops covered the following topics:
  - Management By Quality: Concept and practice
  - Leadership techniques in conducting QC Circle meetings
  - Establishing goals, standardization, etc.
  - The PQCDMS factors of productivity
  - Importance of problems based on facts
  - Seven Tools of QC
  - The 5 'S' technique
  - Systematic problem solving procedure
3. The QC activities have been concentrated on the following four major policy issues identified by the steering committee :
  - Breakage of marble slabs
  - Quality of polished marbles
  - Inventory of marble blocks, work in process and polished marble
  - Cleanliness in the factory
4. Worker representatives who volunteered to become the QCC members were briefed about QC circles.
5. Meeting venues for individual QC circles were selected and necessary tables, chairs, boards, etc. were made available.

6. Initially 4 circles were organized in December as pilot circles after two months of holding the educational training program for key personnel. By April 1997, four more circles were added.
7. At present, the QCCs are involved in the following eight themes :
  - Breakage of unpolished marble after edge cutting process
  - Breakage of polished marble after polishing process
  - Defect in size of polished marble
  - Defect due to broken edges in polished marble
  - Housekeeping in gang saw area
  - Housekeeping in heating room, circular saw area and mini workshop
  - Inventory of rough slabs
  - Inventory of dressed blocks

**Improvement Through QC Activities**

1. So far, through the QC activities, the following improvements have been observed :
  - Dressed and undressed blocks arranged according to Block Arrangement Plan
  - Rough marble slabs arranged according to Rough Slab Arrangement Plan
  - Breakage of rough slabs and tiles after edge cutting process reduced from 7.64% to 1.01%
  - Marble dimension defect reduced from 4.36% to 0.05%. [Refer to the case study on Circle 4 which is responsible for minimizing size defect.]
  - Process capability of edge cutting machine # 8 improved by bringing the process limit of the machine within the specification limit [+/-0.5] set by the company
  - Waste minimization and disposal plan implemented to make the gang saw area clean.
2. Continuous efforts are being made to improve the productivity and quality in the following areas :
  - Cycle time of mono blade dressing machine determined to reduce the idle time and auxiliary time of the machine
  - Cycle time study of circular saw dressing machine being carried out
  - Efforts to minimize marble edge breakage after surface polishing
  - Efforts to minimize breakage of marble slabs and tiles during polishing and subsequent sorting and packaging process.

## CASE STUDY ON QC CIRCLE CIRCLE 4

Name of the QC Circle : Quality Ko Lagi Ekta Club

Problem Issue : Quality Improvement

Objective : To minimize defects in the marble slabs

Theme : Minimization of production of marble slabs and tiles not conforming to standard dimensions

### Circle Members :

1. Mr. P. Dahal	Shift in-charge / Circle leader
2. Mr. B. L. Goyal	Dispatch officer
3. Mr. K. Magar	Machine operator
4. Mr. R. Bista	Machine operator
5. Mr. B. B. Magar	Machine operator
6. Mr. D. Bista	Inspector
7. Mr. G. P. Gautam	Supervisor
8. Mr. C. B. Ranjit	Engineer / Facilitator

### Definition of the Problem :

Godawari Marble Industries produces marble slabs and tiles in 10 standard dimensions ranging from 100 mm by 100 mm to 600 mm by 900 mm. Rough slabs produced by gang saw machines are cut into various dimensions by the edge cutting machines. Accurate dimensions are very crucial when laying out the marble tiles on the floors and walls. Tolerance of +/- 1 mm in size had been accepted by the company although the acceptable tolerance in the market is said to be +/- 0.5 mm. The company had been facing complaints frequently from customers, architects and marble laying masons about erratic size inaccuracies. The edge cutting machines were producing marbles whose size even exceeded the acceptable tolerance limit.

### Reasons for Selecting the Problem Theme :

The feedback received from the sales department as reflected by complaints from customers and marble laying masons generated the urgency to tackle this quality problem. The steering committee gave priority to this policy issue and set the tolerance at +/- 0.5 mm. The circle took up this problem after preliminary data collection from the seven different operating edge cutting machines.

### Problem Solving Procedure :

- The reasons for the quality defects of the marble slabs in terms of their conformance with set specification were discussed in brainstorming sessions by the circle members. The members listed the various sub-causes and drew a cause and effect diagram. [Refer to Figure 2 : Cause and Effect Diagram]
- The circle members designed check sheets to collect daily data of 10 days in the course of their work to identify the present trend of quality defect in size. Percentage of defective size was as high as 4.36%. Likewise, quality defect occurrence in individual edge cutting machines (EC) was also pinpointed. Percentage of defect ranged from 0.25% in EC # 5 to 7.21% in EC # 8.
- Through the brainstorming and cause and effect analysis, the circle members brought out the recommendations for improvement in minimizing size defects. These recommendations are presented in the table.
- The circle members decided that they would first tackle the problem of stoppers. Stoppers are devices set at specific points and are used as determinants in cutting marbles in specific sizes. On detailed study of the stopper devices used in the seven different EC machines, they were found to be vulnerable to pressures from marble slabs when set to cut. They had become loose, worn out and rusted. The members also observed that the operators were not always applying uniform firmness while setting the slabs against the stoppers. (Refer to Figure 3 : Edge Cutting Machine)

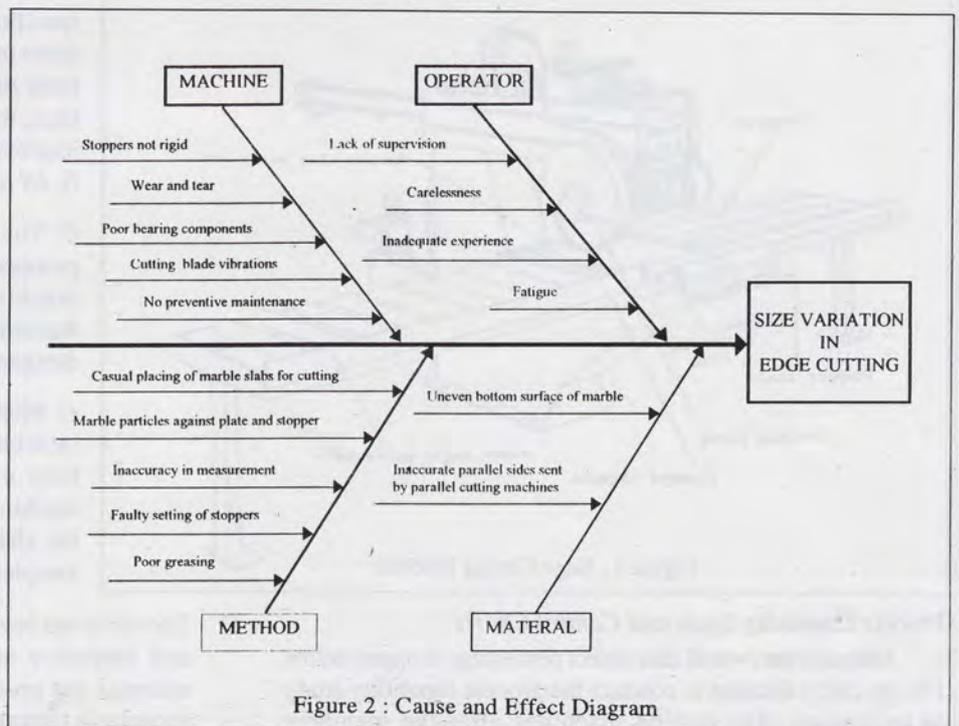


Figure 2 : Cause and Effect Diagram

Defects	Suggested Remedial Actions
1. Stoppers	i) Reset the stoppers ii) Tighten the bush iii) Change worn and torn stoppers iv) Need to determine the frequency of adjustment
2. Bearings	i) Change worn and torn ones ii) Regreasing
3. Operators	i) Awareness raising on size defects arising from their individual machines ii) Reminding to be more cautious about particles before placing marble slabs iii) Proper placing of marble slabs against the side plates and stopper iv) Training to measure and maintain data of marble sizes v) Training to reset stoppers when required
4. General	i) Regular maintenance ii) Adequate lighting arrangement

Table : Suggestions for Problem Solving

- e) After implementation of improvement measures on stoppers, daily data was collected of two weeks (23rd December to 3rd January, 1997) to gauge the result. Defects dropped down to 1.2%. [Refer to Figure 4 : Pareto Charts for Situation Before and After Improvement] The effect of improvement is quite obvious as seen in the comparative illustration of the pareto charts. The group then set a target of further lowering the defects to 1%.
- f) After implementation of other improvement measures including strict supervision of operators, the analysis of daily data as of 23rd April, 1997 revealed the defect percentage dropping down to 0.05%. [Refer to Figure 5 : Trend of Improvement]

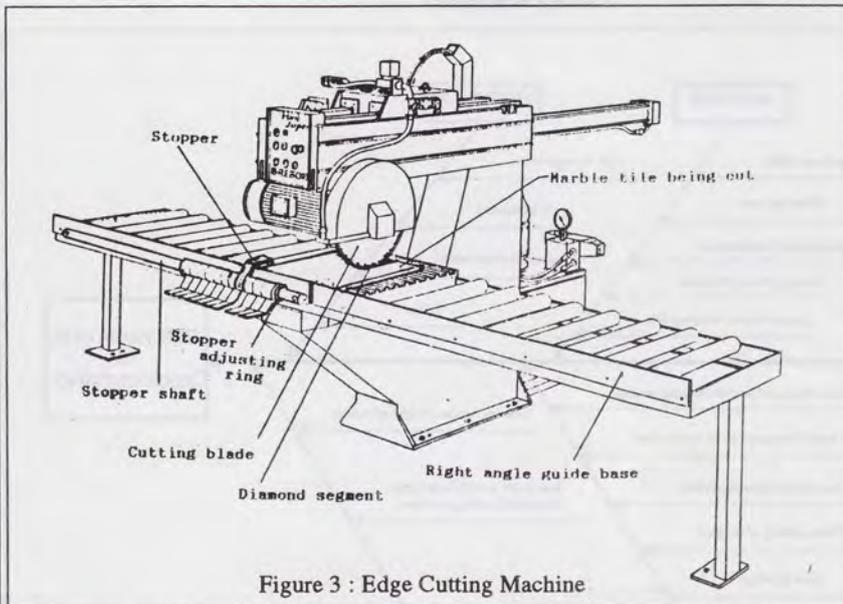


Figure 3 : Edge Cutting Machine

**Process Capability Study and Control Charts :**

Although the overall size defect percentage dropped below 1%, the circle decided to conduct the process capability study of individual edge cutting machines after the members

undertook training in determining variations in size and distinguishing between the specification limit and actual process capability limit. The EC # 8 machine was selected for the study since the particular machine was identified as having produced the maximum quality defective marble among other edge cutting machines.

- a) Data on a total of 150 samples of 300 mm dimension marble of two hourly production of EC # 8 during the period 2053.10.26 to 2053.11.2 (February 8~13) were collected. The analysis of the histogram subsequently drawn revealed that the mode for the 300 mm size shifted to the left, i.e., lower than the mean. The process limit ranged from +0.4 to -1.0, whereas, the specification limit desired by the market and adopted by the circle was +/- 0.5 mm. [Refer to Figure 6 : Histogram I]
- b) Similar 150 data were collected from 2053.11.21 to 2052.11.23 (March 4~6) after necessary adjustment of the stopper in EC # 8, and from 2053.11.28 to 2053.11.30 (March 11~13) after changing a bearing component of the machine. Further exercise was carried out with data collection from 2053.12.4 to 2053.12.6 (March 16~18) based on strict supervision.
- c) The analysis of the histograms drawn after every stage of improvement revealed that while the mode shifted at -0.3 of the mean, all the samples were within the specification limit with size variation narrowing down to 0.5 mm. With the shifting of the process limit of the machine within the specification limit, the process capability of the machine was improved. [Refer to Figures 7, 8, 9 : Histograms II, III and IV]
- d) The circle has decided to improve the process capability of the rest of the edge cutting machines by conducting similar studies. Accordingly, a control chart (x, R) has been designed.
- e) Monitoring of size variations produced by individual machines has been going on with the help of control charts placed next to the machines. The operators of each machine plot the charts based on two hourly measurement samples.
- f) The circle has been going about standardizing the process and frequency of resetting the stoppers and others to maintain the process capability of machines within the acceptable tolerance limit.

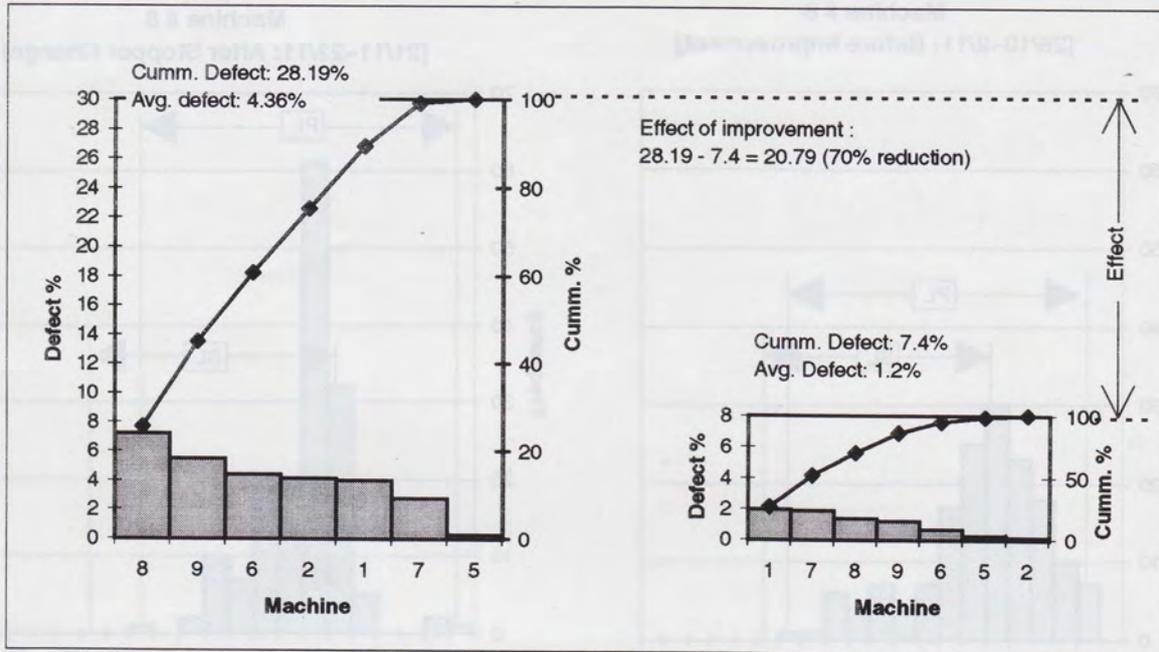


Figure 4 : Pareto Charts for Situation Before and After Improvement (Survey period : 4 weeks)

Size Defect % [After Edge Cutting]

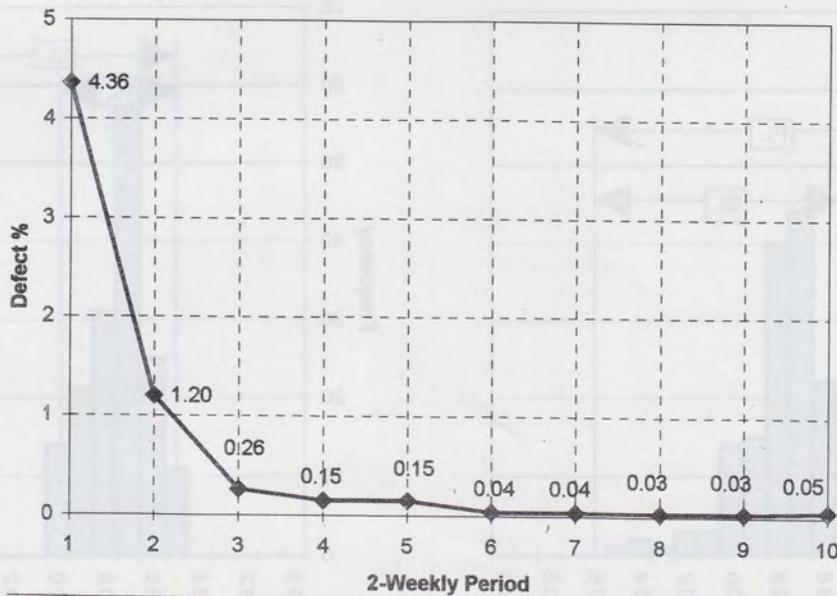


Figure 5 : Trend of Improvement (12th December 1996 to 23 April 1997)

**GMI: Marble Size (300 mm) Histogram  
Machine # 8  
[26/10~2/11: Before Improvement]**

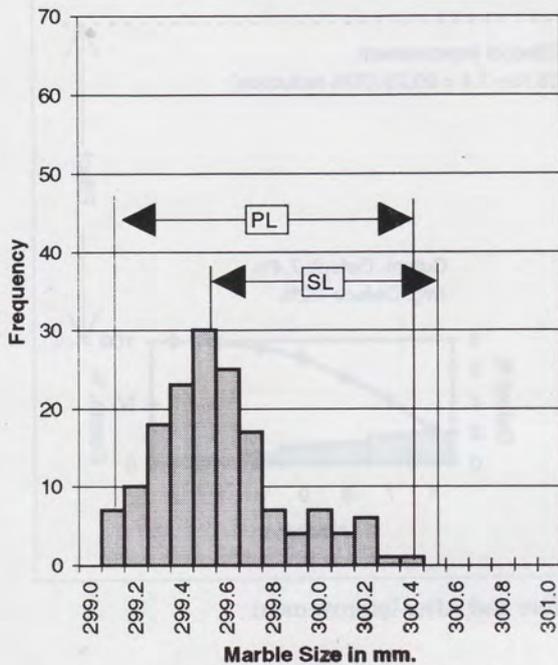


Figure 6 : Histogram I

**GMI: Marble Size (300 mm) Histogram  
Machine # 8  
[21/11~23/11: After Stopper Change]**

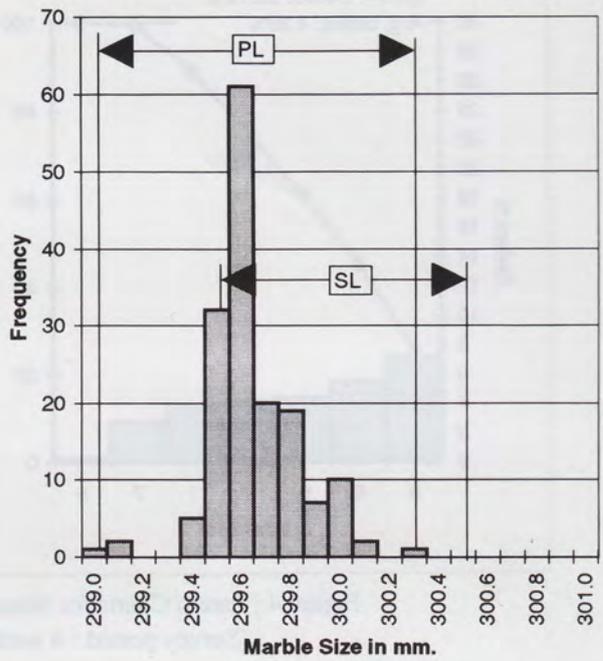


Figure 7 : Histogram II

**GMI: Marble Size (300 mm) Histogram  
Machine # 8  
[28/11~30/11: After Bearing Change]**

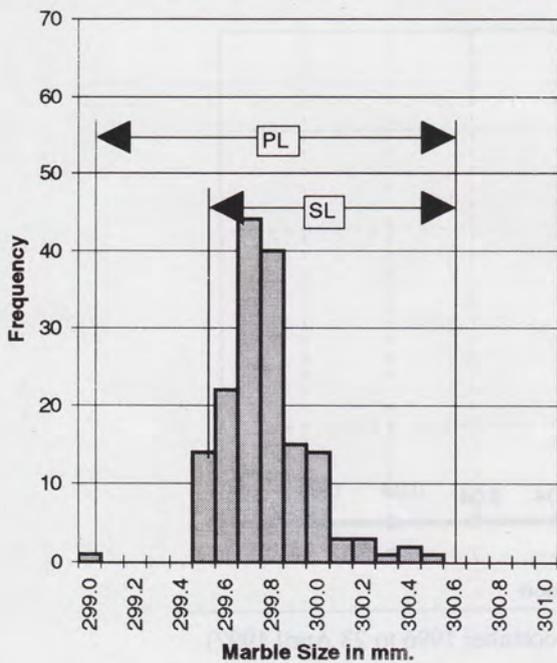


Figure 8 : Histogram III

**GMI: Marble Size (300 mm) Histogram  
Machine # 8  
[4/12~6/12: Only Supervision]**

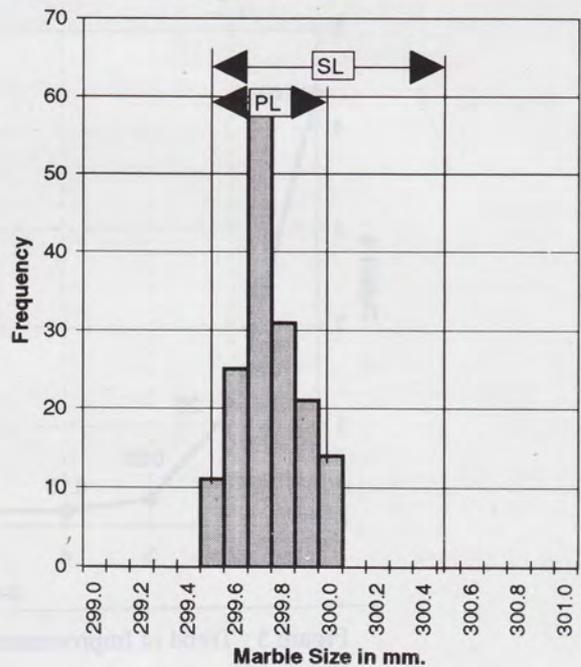


Figure 9 : Histogram IV

## TOTAL QUALITY CONTROL (TQC)

**Kumar Prasad Khanal**  
Production Manager  
Royal Drugs Limited

### A) Introduction :

One cannot think about the special features of production management in Japanese Companies without including the concept of quality control.

Quality control was introduced to Japan from the U. S. after World War II. Dr. W. E. Deming was the first American, who introduced what is called Statistical Quality Control (SQC) which includes control charts and sampling. Later Dr. J. M. Juran developed it from his experience and it is what we call Total Quality Control (TQC). The concept of TQC system is that necessitates the co-operation of all people in the company, including top management, managers, supervisors and workers in all areas of corporate activities such as market research and development, product planning, design preparations for production, purchasing, vendor management, manufacturing, inspection, sales and after services as well as financial control, personnel administration and training and education. Quality Control carried out in this way is called Company Wide Quality Control (CWQC).

QC Circles (QCC) developed as a typical activity in the concept of Total Quality Control. QC activities are carried out collectively by groups of workers in the work place. It is a work oriented system that makes it possible to solve problems and at the same time, it is a participatory, people oriented system to use workers' creativity. Various methods were developed like seven QC tools (Pareto diagram, CE diagram, Histogram, Control charts,

Scatter diagram, Graphs and Check lists). QC Circle activity takes place according to the so called Deming Cycle or PDCA cycle which involves the steps "Plan - do - check - act". To conduct analysis, C- E diagram or so called 5 M's (Man, Machine, Material, Measurement and Methods) are employed.

### B) The four Aspects of TQC

1. It is performed by all personnel :- When a company practices TQC, everyone from the CEO, directors, division and section managers, chief clerks, staff and supervisors right down to shop-floor workers must participate and every individual must practice QC. Good products can not be made if anybody in any division or department tries to escape his or her responsibility by saying, "QC is nothing to do with me"
2. It is performed in every division :- It is vital for every division within the company/organisation to practice QC in order to fulfill its individual function. This applies to every division without exception, including general affairs, accounting, product planning, design, engineering, production, sales and services.
3. It is performed at every stage :- In providing customers with merchandise or services that they will be delighted to purchase, various steps must be taken to create such products or services. Markets must be surveyed, products must be planned, designed, manufactured,

and sold, and after sales service must be provided.

4. It is performed comprehensively :- While TQC naturally centers on the management of quality, we must also perform cost control, production management, schedule control, safety management and personnel development simultaneously.

### C) TQC ~ Slogans

A company can survive and make profit only by providing satisfaction to its customer with its products and services. Towards this aim, the fundamental rules propounded as TQC slogans are as follows :-

- Quality first not profit
- The next proces is your customer
- Management by facts
- Process control
- Priority conciousness
- Recurrence prevention
- Respect humanity

#### Quality First

"Quality first" means putting quality above everything else in order to create highly satisfactory goods and services which the customers will be attracted to buy and delighted to use.

In other words, "Quality first" means giving priority to improving quality and giving it pride of place before sales, cost, or productivity. It is based on the understanding that an uncompromising commitment to the "Quality first" results in lower cost and higher productivity which in turn generates profits.

**The following points are important in turning the quality first philosophy into reality :**

"Quality First" strategies :

1. Develop complex, highly original new technology
2. Unearth the latent wants and needs of the market place and develop new types of products that will stimulate fresh demand and create new markets.
3. Improve and control process to eliminate defects and produce products that will function as nearly perfectly as possible.

**The Next Process Is Your Customer**

It means thinking of the recipient of the goods or services produced in one's own process as a customer and passing on to them only defect-free products or services. To achieve this, each person must perform his or her assigned duties properly before handing over to the person incharge of the next process.

The seven key points of the "Next Process Is Your Customer" concept :

1. Always think and act from the stand point of the next process
2. Understand the role of your own process
3. Establish good communications with previous and subsequent process
4. Understand the next process well
5. Exchange accurate information through feedback and feedforward.
6. Set clear acceptance and rejection standards
7. Perform rigorous autonomous inspection

**Work With Facts And Data**

It means not making decisions based on just experience and intuition alone but acting in accordance with the facts.

Quality defects arise if we work on the basis of blind conviction. In order to base our decisions and actions on the facts, we must first quantify the situation in the form of data and convert our subjective judgements to objective ones. To identify the facts, it is important to follow the following procedure.

**Identifying the facts :**

- Steps
- 1: Observe the actual location and objects
  - 2: Decide on the characteristics to be investigated
  - 3: Clarify the objectives of collecting data
  - 4: Collect accurate data
  - 5: Carefully analyze the data using QC tools
  - 6: Consider the results and produce accurate information

**Process Control**

It means not merely chasing results but paying attention to the process (i.e., method of working), controlling this, and improving our working systems and methods.

When people first start to practice QC, they often think they have to obtain results quickly. Because of this, they tend to talk about the results rather than the process, making comments like this :

"The number of defects are not going down, what's gone wrong ?"

Although we have given strict orders for the objectives to be achieved, we still can't meet our sales target."

"I have told them time and again to follow the safety procedures, but they still allowed an accident to happen."

In this way, people tend to concentrate exclusively on the results and forget about the process that produces them. But good result can not be obtained until a good process has been established. The

problem is not the result but the process.

Key point for process control :

1. Dissect and improve present working methods.
2. Pay attention to standardisation; standardize the best working methods, teach the standards and see that these are observed.
3. Quality is built in via process, not through inspection. This is what makes it so important to control process properly.
4. Look beyond the results, reflect on the process that produced them, improve working methods and raise the quality of work.
5. Analyse the reasons for any short falls between targets and results and control the cause and effect system.

**Priority Consciousness**

Workplace are filled with problems. There are countless potential pitfalls lying in wait to trap us and make our work turn out badly. It is vital to take action to solve these problems, but limited time and resources make it impossible for us to tackle them all. Therefore we have to prioritize the problems. There are four types of problems :

1. Problems really worth solving
2. Problems requiring a high level of technology
3. Problems requiring care
4. Simple problems

Being priority concious means realizing that although various problems may exist, there are only a very few really important ones. Thus, understanding the priority problems, we will obtain much better results for the same amount of effort.

**Recurrence Prevention**

From any point of view, maintaining process in a stable state is the basis of

a healthy production system. However, trouble often occurs even when we do our best to maintain our process in the stable state. The cause of these occurrences are :

- Worker's inattention
- Equipment failure
- Contamination of raw materials and processes by impurities, dust, and other foreign matter.
- Mistakes in following work procedures.

Therefore, recurrence prevention means identifying the causes of trouble and taking countermeasures against those cause to ensures that they never occur again.

Types of countermeasures :

1. Emergency countermeasures

They deal with the immediate trouble. They are tackled by

changing the method of adjustment, introducing screening inspection, changing the method of operation, and so on.

2. Individual recurrence-prevention countermeasures.

They are permanent countermeasures for dealing with troubles arising in products, processes and work. They are aimed at either the work or process that allowed the problem to go unnoticed. Examples; correcting a die, changing a thickness, or changing a material.

3. Systemic recurrence-prevention counter measures

They improve the system aspect of working methods, mechanism, procedures, technical standards, control standards of organizations, job sequences and so on in order to prevent the recurrence of trouble.

### Respect Humanity

An organisation changes depending on the spirit with which its employees work. They should, therefore be regarded as assets, not as costs.

Since CWQC starts with humanware, human approach for TQC is the prime factor. To continue development of an organisation, individuality of the people working for it must be respected. They should have sufficient autonomy to be able to work freely on their own initiative. They should also be able to exercise their brains and think about their work. The QC activity is the most appropriate tool to attain this goal.

“LAST THING TO SAY”

A company able to build quality into its people is already halfway toward producing quality products.

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## Experience

### Automobile Maintenance Servicing An Experience

Suresh Maharjan

I gained new ideas and technology in Automobile Maintenance and Servicing at the workshop of Eastern Automobiles (Pvt.) Ltd., Karachi, Pakistan from 2nd Dec. 1996 to 22nd Dec. 1996 under the Inter Alumni Exchange Program between (NAAS), Kathmandu and Asia Banka Kaikan Dosokai (ABKD) Karachi, Sponsored by the Association for Overseas Technical Scholarship (AOTS), Tokyo. I learned new concepts about car airconditioning system, wheel alignment, balancing system and final control check system, During my training period, I visited Pak Suzuki Motor Co. Ltd., Pak Suzuki Motorcycles Pakistan Ltd. and Naya Daur Motor Pvt. Ltd. These factory visits boardend my knowledge and concepts about Automobile maintenance



and servicing. This training though short, helped a lot in proper identification of problem. I wish to thank both the alumni societies and AOTS, Tokyo for providing me this opportunity.

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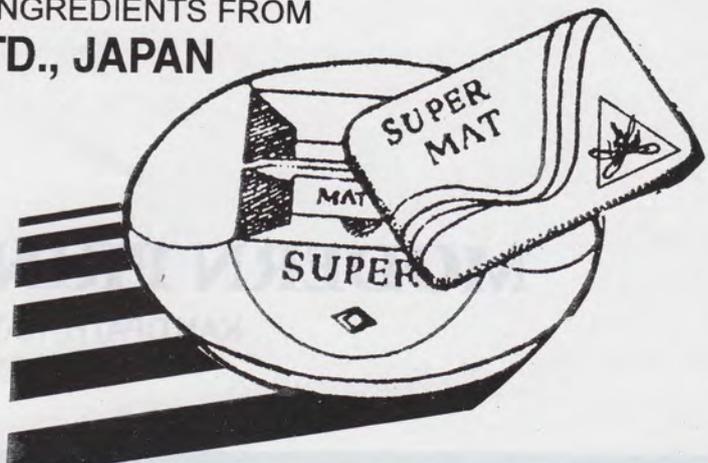
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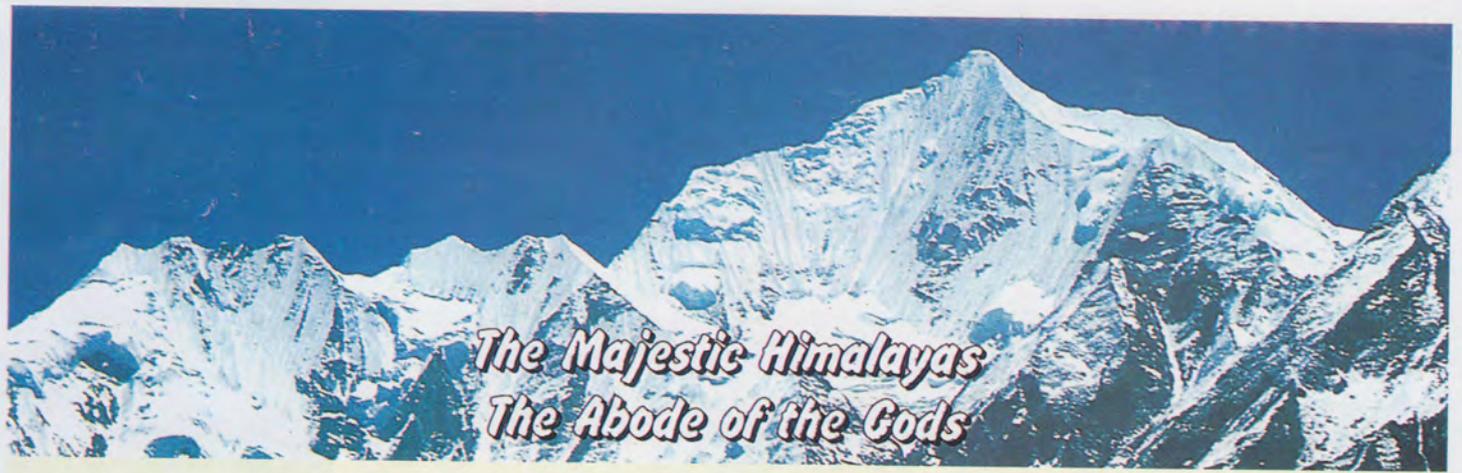
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