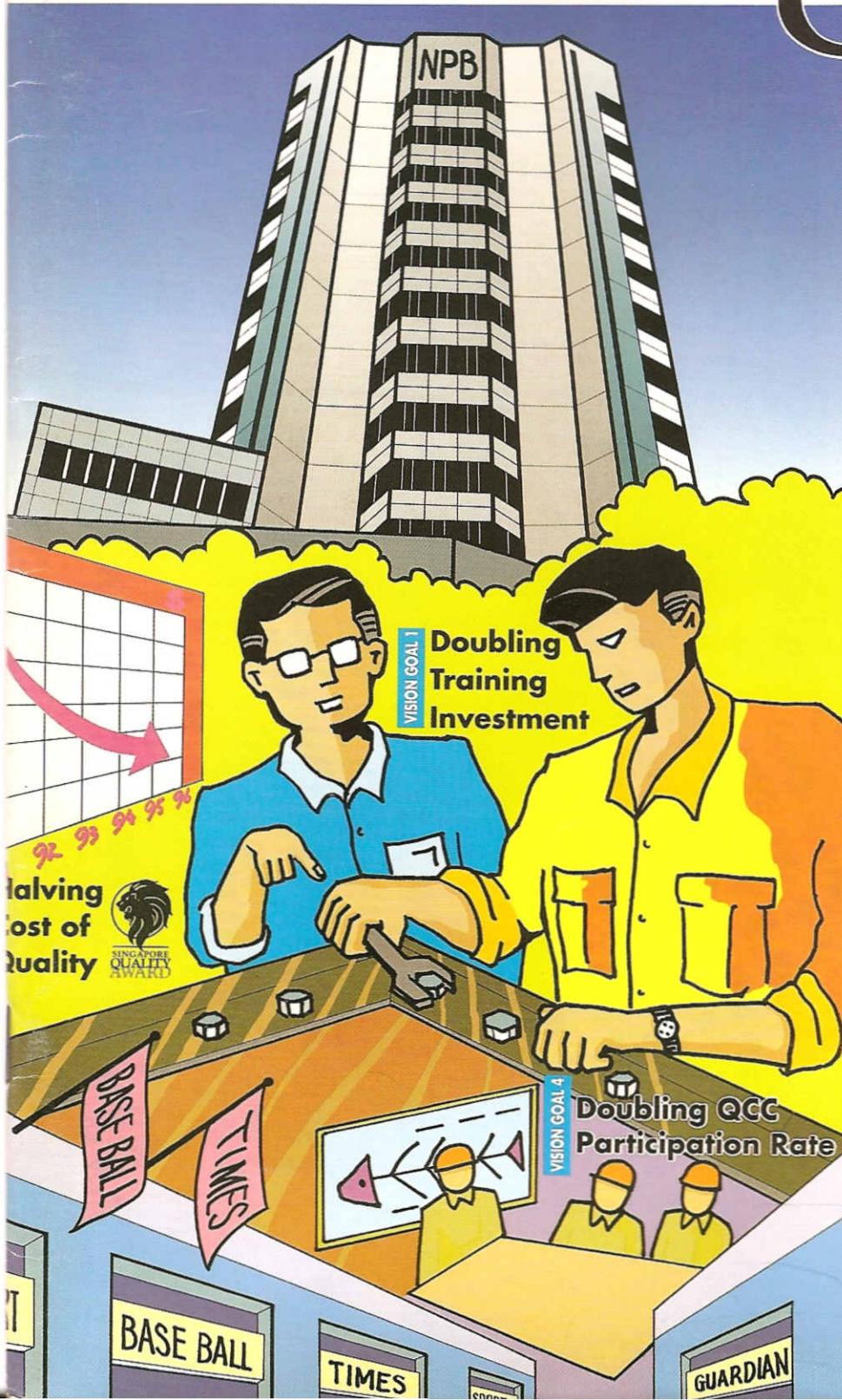


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PRODUCTIVITY

Digest



NPB Productivity Plan

*How
Companies
Can
Benefit*

Mustad™

HOOKS ON TO THE FUTURE

Mustad has set a new direction for themselves... continual improvement and trimming the cost of quality.

Who can imagine earning a living out of fish hook-making? Not to say, having a quality system for this business? But, O Mustad & Son Pte Ltd proves that these are possible and important. They have been making fish hooks for over 160 years now! Their business has flourished around the globe. Thousands of people are building their careers on this livelihood.

Today, they have set a new target for themselves – to continually improve through elimination of undesirable costs and wastes that can disrupt competitiveness.

Since the family business started in 1832, making of fish hooks have been the Norwegian's forte. Mustad's hooks are described as 'the first choice' among commercial and sport fishermen. To cope with business expansion, a Singapore plant was built in 1971 to specialise in the Asia market. Two more subsidiaries were built later in the Philippines and Malaysia in the 1980s. The two subsidiaries specialise in low value added and labour-intensive operations while the Singapore plant concentrates on

making products with higher profit margins. This arrangement has helped cushion the high operation costs in Singapore since workers' wages and the Singapore dollar has escalated several times over the last decade.

As operations move towards high-technology, the management of the Singapore company know that they need a good quality system and skilled workers to complement the advancement. They recognise that quality improvement has to become a daily operation rather than a single project. In Oct 92, they called in consultants, Mr Allan Ung and Mr Wong Wai Nam from the

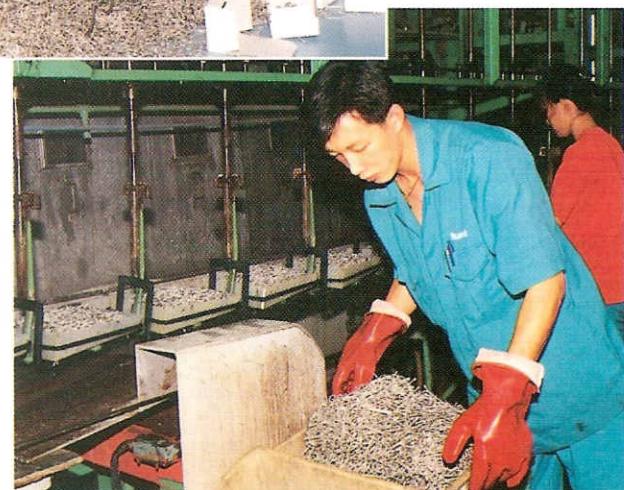
National Productivity Board (NPB) to help implement a company-wide quality programme, the Total Quality Process (TQP).

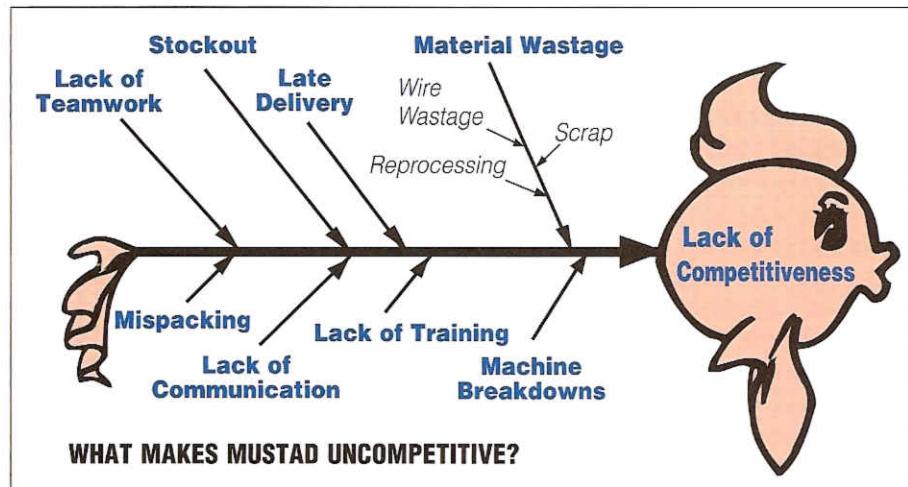
TQP: the Beginning of Change

Thereupon, the consultants conducted a company-wide diagnosis to track down the 'unquality' cost items. The findings were constructed on a giant fishbone diagram and displayed prominently to remind all that lack of teamwork, good communication and training; failure to plan and foresee; insufficient maintenance; wastage; and reprocessing can contribute to non-competitiveness.



Making of fish hooks is no small matter. The process involves chemical treatment, heat treatment and electroplating that require knowledge of chemical and physical sciences and engineering.





A Quality Management Team (QMT) chaired by Mustad's Managing Director, Mr Karl Kurt Meyer, and involving all managers, was formed to oversee the improvement activities.

Mr Chong Chern Sern, the General Manager of Mustad and Deputy Chairman of QMT, said that the original idea of TQP was to get rank and file workers acquainted with the idea of problem-solving. "We were prepared for it to be very much top-dictated. But, to our surprise, the workers got involved very quickly. After six months of induction and training on basic quality concepts, many workers are on their own now, solving problems with only guidance from their manager-facilitators. The TQP programme has provided both the tools and the momentum for operational improvements."

As Mustad took off with the various improvement activities, they found that



TQP has provided both the tools and the momentum to improve Mustad's operations.
~ Mr Chong Chern Sern, General Manager



"Workers are more committed to problem-solving, and they have learned the importance of internal customer satisfaction."
~ Mr Y T Choo, Production Manager

they needed a clearly defined goal for the company. Mr Chong recollected how they worked out a policy statement, "This was to depict our identity, hence we gave it top priority. The QMT brainstormed and came up with several drafts. The best was picked, rephrased, discussed and rephrased over and over...this process led us to the final policy statement that spelt out Mustad's commitment to quality."

The QMT also issued a mission statement, spelling out its purpose and direction: "The Quality Management Team of O Mustad & Son Pte Ltd will meet on a regular basis to support, direct and co-ordinate the Total Quality Process involving all employees in quality improvement."

Six Committees, One Goal

Six committees have been set up with specific roles in the improvement process. They are the Mustad Broadcasting Committee (MBC), the Quality



"Top management has taken TQP as part of management."
~ Ms Goh Soh Hwa, HR Manager

MUSTAD'S POLICY STATEMENT

We, the members of O Mustad & Son Pte Ltd, work together to maintain our position as market leader by being innovative, technologically-advanced and market-oriented, meeting the highest expectations of our customers around the world and carrying out the proud tradition of Mustad, *The Fish Hook People... since 1832.*

Education Committee (QEC), the Safety Committee, the Cost of Quality Committee (COQC), the Corrective Action Team (CAT) and the Suggestion Scheme Committee. Each committee is chaired by a manager or superintendent who reports to the QMT.

For example, the MBC is responsible for publicising and generating interest among employees on TQP activities. It has started a quarterly newsletter, MBC News, and set up TQP notice boards at strategic spots in the plant to keep employees informed of the work and achievements of the various committees.

The MBC also ran a Slogan Competition and invited employees to submit slogans on quality. The winning entries were generously rewarded.

The QEC, on the other hand, takes charge of educating and training the employees on TQP concepts and tools. A training room has been set up and a team of in-house trainers assembled.

They conduct courses such as 5S Facilitator and Practitioners courses, an English course for workers and an Industrial First Aid Course for members of the Safety Committee. Other courses in the pipeline include computer training. The QEC also keeps a collection of reading materials and has joined the NPB Resource Library as a corporate member so that Mustad employees can have access to more reference materials. For new recruits, the QEC ensures that they receive TQP training through public courses run by the NPB trainers.

The Safety Committee has the special role of monitoring and correcting irregularities of all kinds that are potentially hazardous. This is important in Mustad's work environment where high temperatures and high voltages are used to harden and form hooks. The committee maintains and tests safety equipment and conducts regular fire drills.

QC Circles and Their Achievements

Two committees are responsible for working on actual 'improvements'. Members of the COQC collect data on cost of quality to determine the problem areas and trends. Their findings are fed to the CAT who carries out improvement projects through QC Circles. The chief facilitator, Ms Koh Chine Hia from Quality Assurance, together with her team of facilitators, have done an excellent job for the successful running of QC Circles.

To date, eight QC Circles have successfully completed their projects and made presentations at Mustad's first-ever QCC Convention on 18 Mar 94. Four circles were awarded top prizes – with two teams winning the third position – for their exceptional achievements.

The top circle, *Keep Going*, that looked at wastage at the Machine Department, found that the bulk wastage was caused by jammed wire. They redesigned the sensor-breaker contact, improved on the production steps and used a new hook-collecting system. The result was a hefty saving of some \$83,605 a year.

The other circles undertook projects to reduce waste and rejects, improve storage space utilisation, streamline production process, and reduce inconsistency in deliveries. Collectively, their projects were estimated to have saved \$23,000 a year for the company!

The winning circles were rewarded with cash awards ranging from \$1,000 to \$3,000. Mr Y T Choo, Production Manager and Chairman of the CAT, has noticed a positive change in workers' morale and attitude. "The workers are more committed to problem-solving as a result of taking part in QC Circles. They have learned the importance of internal customer satisfaction. Now, everyone pays special attention to making the job easier for the next process. Before, problems were left to the department heads," he said.

Mr Chong added, "Teamwork is another positive effect of QC Circles activities. Working in teams has helped

MAJOR COQ SAVINGS FROM QC CIRCLE PROJECTS AS AT MAR 94

Circle	Project	Annual Savings
Keep Going	Reduce wire wastage in Machine Department	\$83,606
Golden Star	Reduce rejects in Electroless Nickel process	\$23,594
The G-Force	Improve method of degreasing wire blanks	\$ 7,020
Rainbow	Reduce rejects in chemical processing line	\$ 5,592
Film & File	Improve utilisation of storage space for office documents	\$4,266
Combat	Prevent corrosion of hooks stored as work-in-process	\$2,243
Challenger	Reduce discrepancies in deliveries	Reduced discrepancies in deliveries by 1,050 mille (1 mille=1,000 hooks)
Operation Megaohm	Shorten lead time for overhaul of machineries	Improved delivery of machines by 5 weeks

Total dollar savings = \$126,321



Dressed trebles or fishing flies that look more like costume accessories than fish hooks

overcome differences and communication barriers. Even between circles, there is good team spirit. For instance, when a circle encounters a problem, the facilitator of another circle will sit in the previous' meetings to help inject new ideas and share experiences. On the whole, employees recognise that working for the company's goal is more rewarding than just striving for individual success."

Employees have become more forthcoming in making suggestions and participating in company programmes. For instance, the entire company was involved in cleaning and tidying up their

work areas on 5 Mar 94, the 5S Good Housekeeping Day. A Suggestion Scheme Committee was set up to tap the employees' ideas on improving work and quality. This has provided valuable inputs to more improvement projects.

Mustad, the Fish Hook People

Although a new comer to the QCC Movement, Mustad intends to increase the participation rate from the present



Let's clean up!



"Only then, Mustad can truly live up to its reputation and mission of being the *Fish Hook People*." □

30% to 70% over the next two years. "Our immediate goal is to involve more employees in QC Circles. We will work towards this through education and training and providing incentives for participation," said Mr Chong.

"Fish hooks are one of the oldest tools of mankind, but are continuously changed and improved. If we decide to indulge in complacency and stall progress, then someone else will take over our business. We can't afford that. Continual improvements in cost-saving and in product quality are our only solution to productivity and competitiveness.

THE IMPROVEMENTS...

	Before TQP...	After TQP...
Management Commitment	Management agrees that there is a need to improve quality.	Plans for TQP are developed and endorsed.
Quality Management Team (QMT)	Quality Assurance function exists, reports at fairly low level.	QMT meets weekly and measures progress against master plans.
Awareness	Employees not at all aware of TQP.	QMT is sponsoring employee meetings on TQP.
Education	No Quality education exists.	All employees are educated within three months of joining the company.
Goal Setting	Existing goals for the business are not directly improvement-related.	Goals exist for processes, reduction of quality costs, customer satisfaction and TQP implementation.
Process Measurement	No measurement charts are displayed.	Measurement charts are up to date and clearly displayed.
Cost Measurement	Quality costs are unknown.	Regular quality cost assessments are conducted.
QC Circle	Decision to start formal problem-solving.	Department meetings are held to discuss corrections.
Recognition	Management agrees that recognition is important and necessary.	Specific recognition methods are identified.
Individual	Individuals are aware of the need to improve quality.	Individuals participate in QC Circles to support the TQP goals.