



THE QUALITY CONUNDRUM

How Indian Industry is managing quality

By Surinder Kapur

The Deming advantage

Dr W Edward Deming (1900-93) was a professor, a writer, a lecturer and a statistician who helped improve production in the US during the Second World War. But he is best known for his towering body of work in Japan, where on invitation from the Japanese Union of Scientists and Engineers, he taught senior managers the principles of Statistical Process Control, a forerunner to Total Quality Management (TQM). Under his stewardship, "Made in Japan" became synonymous with quality of the highest standard.

Today, the Deming Prize — especially the Deming Application Prize that is given to companies that have achieved distinctive performance improvement through TQM — has exerted an immeasurable influence directly or indirectly on the development of quality control and management. The Deming Prize is like the Nobel Prize or the Booker for the manufacturing industry. Until 1997, not one Indian company had received this prize. But since 1998, Indian companies started figuring in the Deming prize list with Sundaram Clayton's Brakes Division first claiming the honours. Eight years on, India boasts of 16 Deming Award winners.

Following Deming's theories requires a paradigm shift from the traditional "control and command" methods of management. According to him, the normal management practice of problem-solving leads to short-term improvements that gradually deteriorate and achieve less and less. If management continues to work as hard, if not harder than before, but without improving the process, the results are worse. Process control is important, since a process once set will produce the same results consistently. For instance, at a Sona Group company, we tried to reduce rejection at the customer end by tightening in-

house inspections. After a while, the internal rejection level was so high that we struggled to manage the inventory of defectives. The reworking cycle was so cumbersome, it took us a year to overcome the backlog. If we had instead worked on improving our processes so that all rejections were minimised — rather than tried to solve the problem of customer rejections — we would have fared much better.

Sundaram Clayton started its TQM journey under very difficult circumstances in the late 1980s.



FOLLOWING DEMING'S 10 PRINCIPLES REQUIRES COMPANIES TO MAKE A PARADIGM SHIFT FROM "COMMAND AND CONTROL" TO PROCESS IMPROVEMENT

The company integrated Deming's 10 parameters into its policies, people, processes and products. The result showed on its market share, profit and sales index, sales per employee and value added per employee.

Of course, it isn't the only company that has reaped the advantages of following the Deming way. Sona Koyo, another Deming Prize winner, makes use of quality tools such as exactness, visualisation, Poka Yoke, operations standards, PDCA (plan-do-check-act), TPM, Group Kaizen, Deep

Analysis and Management for Objectives. During the period these initiatives were launched, aggressive cost reductions ensured that operating profit margin increased from 8 per cent (2002) to 12.1 per cent (2004). The return on net worth went up from 12.6 per cent to 21.2 per cent and is expected to have touched 27.5 per cent in 2005. Return on capital employed rose from 15.9 per cent to 21.3 per cent and should have crossed 24 per cent in 2005. And revenues increased from Rs 175.5 crore to Rs 234 crore.

Continuous improvement and complete involvement of the company leadership have been the hallmark of the organisations that have received the Deming Award. At Brakes India, for instance, continuous improvement in business processes has been institutionalised and the company has been reaping the benefits ever since. It has reduced returns by customers to a third of the original figure, concerns of "high intensity" are down to zero while the overall number of concerns are at one-sixth the original frequency. Brakes India's foundry division's focus on new product development and application of CAD/CAM technology helped it reduce lead times to almost 25 per cent of the original level.

The companies that won the Deming have all focused on 100 per cent employee involvement, process improvement and all have had the complete dedication of their leaders to the purpose and objective of implementing TQM practices in order to become global companies. They have created truly global companies and have proven that quadrupling the number of such companies over the next two years is completely within the realms of reality. 📌

Dr Surinder Kapur is chairman, CII Mission for Manufacturing Innovation, and chairman and managing director, Sona Koyo Steering Systems