



# **Selected Management Articles**

## **Total Quality Management**



# **TOTAL QUALITY MANAGEMENT**

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# TOTAL QUALITY MANAGEMENT

## INTRODUCTION

In 1986 an Executive Order directed federal agencies to implement Total Quality Management (TQM) as a means of becoming more productive by 1992. The concept of TQM is a systematic process for applying quantitative methods and human resources to improve the quality of products and services. It is characterized by a structured approach to problem solving and a participatory work style that involves input from every employee at every level to achieve total quality.

This bibliography, Total Quality Management, was developed for EPA managers and staff for use in understanding, communicating and implementing TQM. Citations with descriptive abstracts identify journal articles, books and reports, and are grouped under the following topics: Benefits of TQM, TQM in the Public Sector, TQM in the Private Sector, Implementing TQM, and TQM Readings: Management Books.

Citations were selected for their relevance to the special interests of EPA staff. This bibliography was compiled using the following databases, accessed through DIALOG, a commercial database vendor: ABI/INFORM, MANAGEMENT CONTENTS, NTIS, PTS NEWSLETTER DATABASE and BOOKS IN PRINT.

Other EPA Headquarters Library Management Bibliographies are listed at the back of this bibliography. For additional management information services, contact Anne Twitchell, Head Reference Librarian, EPA Headquarters Library, 382-5922, or e-mail address A.TWITCHELL.

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# **EPA HEADQUARTERS LIBRARY MANAGEMENT COLLECTION**

## **LIST OF MANAGEMENT BIBLIOGRAPHIES**

1. **TOTAL QUALITY MANAGEMENT**  
by Anne Twitchell, December 1989  
EPA/IMSD-89-009
2. **LEADERSHIP: QUALITY MANAGEMENT FOR THE FUTURE**  
by Anne Twitchell, September 1989  
EPA/IMSD-89-005
3. **COMMUNICATION SKILLS FOR EFFECTIVE MANAGEMENT**  
by Anne Twitchell, June 1989  
EPA/IMSD-89-003
4. **EFFECTIVE PERFORMANCE APPRAISALS**  
by Anne Twitchell, March 1989  
EPA/IMSD-89-002
5. **OFFICE OF THE FUTURE: THE MANAGER'S ROLE**  
by Anne Twitchell, December 1988  
EPA/IMSD-88-013
6. **OFFICE OF THE FUTURE: THE CHANGING ROLE OF  
SECRETARIES**  
by Mary Hoffman and Anne Twitchell, revised May  
1989
7. **MANAGEMENT TRANSITION**  
by Mary Hoffman and Anne Twitchell, September  
1988  
EPA/IMSD-88-007
8. **MANAGING IN THE PUBLIC SECTOR**  
by Mary Hoffman, March 1988  
EPA/IMSD-88-003
9. **RESISTANCE TO CHANGE**  
by Mary Hoffman, December 1987  
EPA/IMSD-87-011
10. **INTRAPRENEURSHIP: THE EMERGING FORCE**  
by Mary Hoffman, September 1987  
EPA/IMSD-87-009
11. **SUPERVISORS AND HUMAN RESOURCES MANAGEMENT**  
by Mary Hoffman, June 1987  
EPA/IMSD-87-006
12. **TECHNICAL EXPERT TURNED MANAGER**  
by Mary Hoffman, March 1987

## **I. BENEFITS OF TQM**

### **Working Like a Chef: People Is What Business Is All About**

Crosby, Philip B.

Quality v28 n1 pp.24-25 January 1989

Manufacturing employees generally must get the items they produce inspected throughout the entire process. This constant reconfirmation is an expensive and inefficient way of doing things. These people need to be trained to handle the whole job and given the responsibility for its completion. They also need to understand the requirements of the job and feel that others have the confidence that it is all going to turn out right. Management is responsible for making this happen. Most executives in the US have never really learned that people are what business is all about; these executives look for magic systems that will produce defect-free work and all other desirable aspects of business. However the road to quality involves determination, education, and implementation. Formally structured education is required so that everyone receives exactly the same conceptual message while learning the details of their own roles. Implementation happens when employees realize that management is serious about quality and is going to pay attention to its people. (ABI/INFORM)

### **Total Quality Management in Business - And Academia**

Stuelpnagel, Thomas R.

Business Forum v14 n1 pp.4-9 Fall 1988/Winter 1989

Total Quality Management (TQM) is an improved management process that originated in the US and was perfected in Japan. In a large measure, industry and government are making the change directly with the assistance of private and government training organizations. Universities should become aware of the revolution that is occurring in the TQM field, develop TQM master plans, and work toward developing study and curricula in support of TQM. Quality is defined as giving customers what they have a right to expect. This is achieved with a system designed to keep the customer continuously in the product cycle. Additional features of TQM include: 1. using statistical methods to control both management and product processes, and 2. making all processes in the management, product, and service chain subject to continuous improvement. TQM provides the opportunity for all employees within the organization to participate as team members, to help, to be heard, to be rewarded, and to excel. Diagrams. Graphs. References. (ABI/INFORM)

### **What Makes Deming Run?**

Modic, Stanley J.

Industry Week v236 n12 pp.84-91 June 20, 1988

At 87, W. Edwards Deming continues to attract business executives at his seminars. Deming's success began in 1950 when he traveled throughout Japan to espouse his ideas in the area of statistical methodology of quality assurance. Japan now considers him its "father of quality control." However, in the US, Deming was not widely received for many years. Author Nancy R. Mann believes that the US concept of quality control is an impediment to understanding Deming's concepts. Although an estimated 8,000 persons will participate in Deming's seminars in 1988, not enough management-level people will be included. Ford Motor Co. has consulted with Deming and obtained successful results from his recommendations. Ford's chairman, Donald Petersen, states that Deming was emphatic in outlining top management responsibilities to the other employees. Deming considers self-inflicted problems to be more serious than those created through competition. Employee motivation programs, production quotas, and employee ratings are shunned as unnecessary. Deming contends that his concept works in service industries as well as manufacturing and cites his input in the 1940 US census as an example.

(ABI/INFORM)

### **Eternal Success: Lead Your Employees to Quality**

Crosby, Philip B.

Success v35 n5 pp.60-61 June 1988

One way to get people in an organization to do things right, thereby achieving amazing results, is to develop and improve leadership. Causing people to perform their assigned task completely, at the correct time, is management's job. The people involved are the ordinary employees, not the exceptional ones. Having information about correct procedures is the key to performing a job right. Whether the job is done completely is the difference between a mediocre workforce and an outstanding one. Employees need to know all the ways a task is measured, as well as the nature of the task. Points for a manager to remember in leading employees to greater quality include: 1. thinking about quality in terms of earnings per share, 2. remembering that people take quality as seriously as the manager, and 3. realizing that quality control tools are only indicators. (ABI/INFORM)

**Deming's never-ending road to quality.**

Hodgson, Alan

Personnel Management v19 July 1987 p.40(7)

The management philosophy of US consultant W. Edwards Deming was a factor in Japan's post-war reconstruction, and now US and British firms are beginning to follow suit. Deming believes that management must foster conditions for continuous improvement. Efficient use of inputs can be obtained by bringing the customer into the firm, and by creating partnerships with both workers and suppliers. Efforts must be concentrated on what services or products the customer needs. Top management must redevelop its own purposes, skills, and knowledge. Change is to be regarded as a positive step rather than mere defect correction. Deming argues that it is hard to know in advance what defect levels customers will tolerate, and that continuous improvement depends on the dignity of the worker. The contribution of statistical process control in reducing confusion and focusing on real problems is described. (Management Contents)

**The Eternally Successful Organization**

Crosby, Philip B.

Quality v26 n3 pp.102 March 1987

Quality will be required to make a much more demanding contribution to the corporation in the next few years. Current interest on the part of corporate management in quality is the result of market forces, rather than the logic of quality proponents. In this turbulent environment, management must guide the organization in a clear path to produce consistent, quality results. What must be established is the "Eternally Successful Organization," which has 5 characteristics: 1. Everyone does things right the first time. 2. The organization grows steadily and profitably. 3. New products and services appear when they are needed by the customers. 4. Change is treated as an opportunity, and the purpose and effect of a change is communicated to everyone. 5. People enjoy working there. The foundation for an eternally successful organization is a clear understanding of the quality management concepts, which includes conformance to requirements, prevention, zero-defects performance standard, and measurement by money. (ABI/INFORM)

### **The Issues in Quality: Quality--Management's Choice**

Crosby, Philip B.

Quality Anniversary Issue pp.Q78,Q80 1987

Some 25 years ago management did not concern itself with quality, and the concept of zero defect was unthinkable. However, a large factor in generating an interest in quality was helping management calculate the costs of doing things wrong. When high quality goods became available from overseas, management sought higher quality from its quality control personnel who then inspected or tested harder. The techniques and efforts of quality control have little effect on quality which is the result of the complete management process in a company. US management has relearned that customers and employees are basic to business and that quality management can save a company and industry. Senior executives know that they cannot rely on a technical function to take care of policy matters and that products and services have to be produced consistently free of defects. Prevention is becoming a normal part of operations in every function.  
(ABI/INFORM)

### **Why Do Companies Pursue Total Quality Management?**

Atkinson, Philip E.

Management Services (UK) v30 n11 pp.8-12 November 1986

The managers of Western manufacturers must plan strategically to maintain traditional markets. For example, the arrival of Nissan in the UK will force British manufacturers to meet higher quality standards in order to compete successfully. Consumers today place a higher value on quality than on loyalty to home-based manufacturers or on price. As a result, organizations will need to improve quality to survive. Traditional quality control techniques are inadequate, however. Rather, managers should recognize that quality is created through design and that many quality problems originate in service or administrative areas. The cost of quality is composed of 3 key elements: 1. the cost of errors, 2. the cost of inspection, and 3. the cost of prevention. A company's total quality drive must involve the development of a planning mentality that focuses on problem prevention. Preventive actions will reduce the overall cost of quality. Charts.  
References. (ABI/INFORM)

### **Crosby, Deming, Juran Three Preachers, One Religion**

Lowe, Ted A.; Mazzeo, Joseph M.

Quality v25 n9 pp.22-25 September 1986

Organizations involved in quality improvement face 2 challenges: 1. They must focus on improving the quality of the process that produces the product. 2. They must assure ongoing quality improvement throughout the company. Action taken to address these challenges often begins with the management philosophy of a quality expert such as W. Edwards Deming, Joseph M. Juran, or Philip B. Crosby. The concepts of these 3 quality experts can provide guidance for firms in establishing a world-class quality culture. Each expert emphasizes: 1. management commitment to quality control, 2. creation of a structure and a strategy to guide the quality improvement process, 3. education and training, 4. quality measurement, 5. removing sources of problems, and 6. instilling ongoing improvement. Within these areas, Deming places particular emphasis on management's responsibility to give employees meaningful work and on the use of statistical techniques to control processes. Juran stresses project-by-project implementation and the "breakthrough sequence," while Crosby's special focus is on the transformation of quality culture. Companies should use these concepts to devise their own unique approaches. Charts. ABI/INFORM)

### **In Pursuit of Total Quality**

Snee, Ronald D.

Quality Progress v19 n8 pp.25-31 August 1986

Many companies have decided that the best way to institutionalize the fundamentals of quality control is to use the total quality approach and focus all their resources on meeting the needs and expectations of their customers. The management of total quality can be divided into 3 components: 1. philosophy, 2. policies and procedures, and 3. tools. The successful implementation of total quality requires identification of the 4 key ingredients of total quality: 1. quality and care of customers, 2. people and teamwork, 3. constant improvement and innovation, and 4. management leadership. A synergism between management and quality technology must exist to produce total quality. Research and development plays an important part in total quality management by helping to develop products that satisfy customer requirements and by discovering new ways to improve quality. Tables. References. (ABI/INFORM)

**Quality: Managing the Modern Company**

Feigenbaum, A. V.

Quality Progress v18 n3 pp.18-21 March 1985

Quality control programs are ways of managing a business and focusing engineering, production, and sales on user needs. Three characteristics of the marketplace make quality control necessary: 1. A customer-selective market exists to a degree that has not been seen for a long time. 2. Development and introduction of new products are occurring more rapidly. 3. There is increasing international distribution of company quality leadership. Management should be committed to: 1. improve the quality process itself, 2. make quality improvement a basic habit that is relentlessly pursued, and 3. establish the principle that quality and cost are complementary, not conflicting. General Systems Co. has experience with several levels of quality control. Total quality management products have shown excellent return on investment because: 1. quality products have higher sales and market penetration, 2. productivity improvements result from quality control, and 3. major improvement in true cost of quality generates increased positive cash flow. (ABI/INFORM)

## **II. TOM IN THE PUBLIC SECTOR**

### **EPA explores Superfund management idea**

Superfund v3 N14 July 3, 1989

EPA is studying ways to apply the ideas of management guru W. Edwards Deming to Superfund contractor management and PRP oversight.... If all goes well with the idea, the agency would apply it to the Alternate Remedial Contract Strategy contractors over over the following six months and then possibly to potentially responsible parties.... Deming developed his management approach to help keep U.S. industry churning during World War II and to help rebuild post-war Japan. His approach remained popular in Japan and is regaining popularity in this country. The idea is to improve process efficiency continually, starting with the biggest problems and working toward the smallest. The approach requires statistical process control to measure problems and their resolution. And it requires total employee involvement to find solutions. Employees must not only do their assigned tasks; they also must seek to understand the process they work in and look for ways to improve it.... A key resource for EPA is the National Institute of Engineering Management and Systems, which aims to apply Deming's approach to engineering consulting and other service industries. (PTS Newsletter Database)

### **Promoting Quality in the Public and Private Sectors**

Reynolds, Larry

Management Review v78 n5 pp.16-17 May 1989

There are 2 separate, but interrelated, questions that come to mind when discussing quality and government: 1. Is government doing the right thing? 2. Is government doing it right? Curt Reimann, director of the Malcolm Baldrige National Quality Award and one of the federal government's top advocates for high quality in the marketplace, says that the concept of quality is a weapon in the overall competitiveness issue. The Baldrige award, which honors private sector companies that have improved the quality of their products and services, is more than an award it is a movement, according to Reimann. Paul Sweetland, acting director of the newly created Federal Quality Institute (FQI), works to promote quality within the government. FQI has a major mandate: to change the corporate culture of the federal government to one of "total quality management." Efforts of FQI staff are reinforced by a White House executive order that makes quality management an official government policy. (ABI/INFORM)

## **How We Changed Our Accounting**

**Woods, Michael D.**

**Management Accounting v70 n8 pp.42-45 February 1989**

In 1985, when Rear Admiral John H. Kirkpatrick assumed command of the 6 US Naval Aviation Depots, he inaugurated the use of total quality management as a means of improving service to the fleet and the country. The goal of any total quality system is to improve the usefulness of the final product and to reduce product costs. The Navy depots attempt to do 4 things to improve the quality (usefulness) of the cost accounting products: 1. Collect costs by process. 2. Assign costs to production and service processes according to the degree to which those processes incur costs. 3. Whenever possible, allow the internal customer to demand only those internal products or services desired. 4. Assign process costs to products according to the degree to which the products "use" the processes. There have been no failures by any of the accounting total quality teams. The primary improvements at one depot have been lower labor rates, improved business systems, technology advancements, and timely service to the fleet. Diagrams. (ABI/INFORM)

## **A Look Ahead**

**Costello, Robert B.**

**IEEE Spectrum v25 n12 pp.68-69 November 1988**

In pursuing a major cultural change in how it conducts business, the Department of Defense (DOD) has initiated strategies that will: 1. bolster defense industrial competitiveness, 2. instill "total-quality management," 3. introduce new technology into US weapon systems faster, and 4. combat the rising costs of its major systems, the loss of key production capability, and the manufacture of many products of dubious quality. The DOD's implementation of manufacturing process technology should reduce the price of products and raise their quality. Instead of dictating to industry how to design or how to manage, contract requirements on all new weapon systems will begin to be specified by the DOD in terms of the results desired. Under another streamlining initiative--the Model Contractor Program a few contractors are being selected to serve as prototype sites or to demonstrate ways of improving business practices. (ABI/INFORM)

### **The Federal Quality and Productivity Improvement Effort**

Burstein, Carolyn; Sedlak, Kathleen

Quality Progress v21 n10 pp.38-41 October 1988

A Presidential Executive Order designed to improve the quality and efficiency of the service of federal agencies by 1992 depends upon a total quality management (TQM) infrastructure. Of 19 agencies participating in the TQM effort, the top 3 performers are the Internal Revenue Service, the Naval Air Logistics Command (US Navy), and the US Department of Agriculture's Forest Service. Productivity and quality improvement programs are expected to be initiated in nearly 700 federal programs between 1987 and 1992. Of 36 services targeted for improvement in 1987, thirty-four reported results, 29 of which improved quality and timeliness. While there was no single element that accounted for the improvements, strategies included: 1. automation, 2. work simplification, 3. coordination of organizational units, and 4. incentive programs. To establish a quality culture in government, a comprehensive educational program is needed that can be implemented over several years. Although future governmental programs are expected to offer multiagency and multiprogram services, present challenges include uneven support from top management and deficient customer orientation. Tables.  
(ABI/INFORM)

### **Total Quality Management**

Ray, James W.

Journal for Quality & Participation v11 n2 pp.22-24 June 1988

The Europe Division of the US Army Corps of Engineers has developed a process--Europe Division total quality management (EQM) to attain a higher degree of success and survivability. The founding principle of EQM was based on the customer and has led to a new definition of quality. Quality is achieved when the expectations of customers are met 100% of the time. A small group of motivated employees were sent for training at a 3M Corp.-sponsored program; this group of facilitators developed their own process for teaching a new brand of quality to every member of the organization. The EQM "phase one" is a process of awareness during which employees are asked to focus on themselves as a means toward achieving a product or service. The 2nd phase, quality unit improvement process (QUIP), teaches the team about communication and problem solving. QUIP is the practical side of the total quality management theory, with some 300 QUIP groups in the Europe Division. Early results assessing the impact of EQM indicate that sick leave declined 30%; other successes were felt to be attributable to the EQM process as well. (ABI/INFORM)

**The Federal Productivity Improvement Effort: Current Status and Future Agenda**

Burstein, Carolyn; Sedlak, Kathleen

National Productivity Review v7 n2 pp.122-133 Spring 1988

Two years ago, an Executive Order was signed with the goal of making agencies in the executive branch significantly more productive by 1992. The order directed agencies to: 1. implement total quality and productivity management practices, and 2. make incremental improvements each year in the quality, timeliness, and efficiency of their products and services. A principal effort of the program, which is directed by the Office of Management and Budget, has been to define and develop a program of Total Quality Management (TQM). Attributes of TQM include: 1. a customer orientation, 2. emphasis on teamwork, 3. performance measures, and 4. accountability. Almost 700 programs that employ nearly 2 million federal workers have been targeted for improvement between 1987 and 1992. Of the 30 services beginning improvement programs in 1987, 27 made quality and timeliness improvements or met their established standards. Agencies have prepared productivity improvement plans on another 164 services for 1988 and 1989. Tables. Charts. Graphs. (ABI/INFORM)

**The Quality Process**

Perry, Linda

Modern Healthcare v18 n14 pp.30-34 April 1, 1988

Much attention is being given to meeting customers' definitions of quality at an increasing number of hospitals. To build organizations that focus on quality, some hospital marketers and planners are using a 3-part process that consists of: 1. determining customers' definitions of quality, 2. designing systems that allow individual departments and employees to meet the customers' expectations, and 3. designing statistical measures to evaluate the hospital's performance. One concept for achieving total quality management is to add value at each step in manufacturing or service delivery. Implementing quality process has created the appealing by-product of cost savings as noted by Thomas R. Gillem of Hospital Corp. of America. In order to work, total quality management must be supported by top management. The hospital's management also must be willing to devote sufficient resources to quality. Another approach to quality, called extended product-line management, attempts to place several services in a single program based on customers' wants. Once designed, the program is organized and promoted as a single product line. Tables. (ABI/INFORM)

## **Quality Assurance in the Equal Employment Opportunity Commission**

Mead, Polly; Rasmussen, Elizabeth; Seal, John

National Productivity Review v5 n4 pp.363-375 Autumn 1986

The Equal Employment Opportunity Commission's (EEOC) model of quality assurance is explained. It balances improvement in the management of work and the leadership of people for total quality management. Concepts upon which this program is based are: 1. careful statistical measurement of work, 2. the development of participative management, and 3. the assessment of internal and external client perceptions of service quality. The program has been developed in phases to allow testing of implementation strategies. The steps in implementation are: 1. initial site visit, 2. establishment of the management quality circle (MQC), 3. quality leadership training for managers, 4. team building, 5. MQC analysis of work flow and quality standards, 6. quality measurement, 7. interventions, and 8. employee involvement. In 1984, a quality assurance project was implemented at the Baltimore District Office of the EEOC, and data show improvements in quality for 9 intake products and for 5 investigative products. Tables. Graphs. References. (ABI/INFORM)

## **Improving Federal Work Quality**

Thomas, Clarence

Bureaucrat v15 n2 pp.31-34 Summer 1986

The Equal Employment Opportunity Commission (EEOC) began a quality assurance program in 1983. The program adapted such Japanese industrial management techniques as quality circles, systems concepts, and statistical control procedures to EEOC's own functions of investigation, litigation, and management support. The program, which is being introduced as part of a long-range effort to couple higher quality delivery of services with increased statistical results, depends upon the full commitment of career staff to giving equal weight to improving the management of work and leadership of people. Achieving total quality management requires: 1. clear definition of products and standards, 2. prevention rather than inspection, and 3. leadership and management by participation in decision making. Interim results show reductions in: 1. data error rates, 2. case review and rework time, 3. planning errors, and 4. customer response times. This program shows the benefits of delegating management authority from political areas to career management, which motivates all employees by encouraging creativity, innovation, and quality. (ABI/INFORM)

### **III. TQM IN THE PRIVATE SECTOR**

#### **Quality Management at Weyerhaeuser**

Loewe, Dennis A.

Management Accounting v71 n2 pp.36-41 August 1989

At Weyerhaeuser Co. (Tacoma, Washington), quality is defined as providing customers with products and services that consistently meet their needs and expectations. The components of total quality management - leadership, customer needs, employee involvement, and processes - provide a basis for constructing a new management system. In a total quality management system, traditional management styles must change. Paying attention in a systematic way to customer complaints perhaps is the most effective way to gain a competitive advantage. Employee involvement is a management process that must be led, taught, and modeled by managers. Thus, everyone accepts responsibility to examine their job and to find better ways to do it. Well-defined processes form the foundation for an actionable quality management program. Charts. Graphs. Tables. (ABI/INFORM)

#### **Total Quality Management Gives Companies a Way to Enhance Position in Global Market**

Pfau, Loren D.

Industrial Engineering v21 n4 pp.17-21 April 1989

One of the approaches to improving quality and productivity that is being explored by many organizations is the philosophy of Total Quality Management (TQM). The basic premise of TQM is that any product, process, or service can be improved upon, and that a successful organization is one that consciously seeks out and exploits improvement opportunities. An organization employing TQM actively pursues and encourages improvement at all levels and views change as a natural, continuous part of its activities. TQM is only effective when all activities and personnel in an organization are fully integrated into TQM implementation. Organizations implementing TQM require improved communications to support the improvement process. Each organization must tailor its approach to exploit its strengths and concentrate on its weaknesses. Charts. Diagrams. References. (ABI/INFORM)

## Quality: A Corporate Responsibility

Syrett, Michel

Director (UK) v41 n12 pp.84-86 June 1988

Quality control, regarded by most major UK and US companies as vital to future success, is being increasingly approached with a "total management" concept. A MORI survey of UK and US executives, published by Crosby Associates, reveals that most American executives rank quality ahead of profit, cost, and schedule as a critical criterion. Likewise, two-thirds of leading British industrialists surveyed saw a clearly defined quality strategy as essential for companies. MORI chairman Robert Worcester has stressed the extent to which Europe lags behind Japan and the US in the race for enhanced quality. Steve Smith of the PA Consulting Group points to some principles behind total quality management techniques: 1. investment in prevention, 2. management leadership, 3. shared responsibility, 4. establishment of standards, 5. companywide opportunities for improvement in quality, and 6. continuity of efforts to ensure high quality. (ABI/INFORM)

## Managing for Quality

Juran, J. M.

Journal for Quality & Participation v11 n1 pp.8-12 March 1988

After World War II, the quality of products in the US declined as manufacturers tried to keep up with the demand for civilian products that had not been produced during the war. At the same time, the Japanese adopted a number of strategies for creating a revolution in quality. For example, upper managers took charge of leading the revolution, and all levels and functions underwent training in management for quality. The result of the Japanese quality revolution was a massive increase in the exportation of Japanese goods. This had a considerable impact on the US. It is evident that quality competitiveness in the 21st century will not be achieved unless a new approach, often called companywide quality management, is adopted. Some needed responses and activities involved in companywide quality management include: 1. Serve internal customers. 2. Extend the quality effort to all products and processes. 3. Increase awareness of the costs of poor quality. 4. Accelerate quality improvement. 5. Make quality planning pervasive. 6. Use complete quality control. (ABI/INFORM)

## **The Total Quality Management Resource**

Gibson, Thomas C.

Quality Progress v20 n11 pp.62-66 November 1987

DuPont's Polymer Products Department has installed a total quality management (TQM) process. While implementing TQM, the company realized that it would need to actually change the way people think and act. A number of months were spent trying to determine how to do this. DuPont learned that, as managers realize that they are being judged on how well operations are improved, they seek someone to teach them about cost of quality and other improvement methods. What results is an honest, management-driven effort to put in place the people who will become tomorrow's quality professionals. TQM is a process for change and improvement applicable to all aspects of the organization. In seeking the end product of business excellence and worldwide competitive leadership, DuPont emphasizes: 1. customer focus, 2. safety, 3. quality, 4. an open operating environment, and 5. international scope. Operating principles have been written concerning these areas. The TQM resource is responsible for teaching workers how to live by these principles, and it does so by offering methods for identifying areas for improvement and eliminating chronic problems, as well as maximizing product consistency. (ABI/INFORM)

## **Corning zeroes in on total quality.**

Wagel, William H.

Personnel v64 July 1987 p.4(6)

Corning Glass Works initiated a 'Total Quality Management System' (TQMS) program in Jan 1984 in order to compete more effectively with other glassware manufacturers. Over 25,000 Corning employees worldwide have participated in TQMS at the company's 58 locations, attending 'awareness' and problem-solving workshops and job-skill courses offered in six languages. Each Corning unit or plant has initiated a quality improvement group for local guidance of TQMS. TQMS is based on four 'total quality' principles: (1) meeting customer requirements, (2) striving to produce error-free work, (3) managing by prevention, and (4) measuring by the cost of quality. Corning's five-year business plan established in 1986 calls for a 90 percent reduction in each business unit's two or three most important errors, increased emphasis on employee training, and establishing standards of product quality and service that are equal or superior to the quality of competing products as well as earlier Corning product lines. (Management Contents)

**"The Chairman Doesn't Blink"**

Karabatsos, Nancy

Quality Progress v20 n3 pp.19-24 March 1987

In a recent interview, James R. Houghton, chairman and chief executive officer of Corning Glass Works, discussed his commitment to quality. That commitment is illustrated in the fact that he is 1987 chairman of National Quality Month, an effort intended to heighten awareness in the US about total quality. Total quality entails meeting customers' requirements, and everyone in the company must be involved in this. Corning has been fortunate to have outstanding quality executives. All Corning employees have gone through the initial quality training, which concentrates on the definition of quality and the basics of the firm's total quality management system. Phase 2 of the training gives people specific skills for applying total quality to their work. Corning's approach to reducing the cost of quality is to measure that cost on specific, key problems. Corning needs its employees to support the company's direction, policy, and goals. References. (ABI/INFORM)

#### **IV. IMPLEMENTING TOM**

##### **Moving Toward Systems Integration**

Pace, Larry A.

Survey of Business v25 n1 pp.57-61 Summer 1989

Employee involvement (EI) is a process for empowering members of an organization to make decisions and to solve problems appropriate to their levels in the organization. EI is regarded by most Total Quality Management (TQM) authorities as a necessary ingredient for overall organizational effectiveness. While EI is an individual process, TQM is generally perceived as a companywide approach intended to bring under control all the processes and systems of the organization. EI means living with creative solutions and the resultant variety of approaches, while TQM strives for a standardization of work processes and outputs. According to Edward E. Lawler, III, there are 3 general categories of EI: parallel suggestion involvement, job involvement, and high-involvement work systems. To be effective, the form of involvement must be congruent with the current organizational operating systems, culture, and climate and the organization's strategy. Charts. (ABI/INFORM)

##### **The Buyer-Supplier Relationship in Total Quality Management**

Lascelles, D. M.; Dale, B. G.

Journal of Purchasing & Materials Management v25 n2 pp.10-19  
Summer 1989

A study examined the main barriers that hinder the development of an effective buyer-supplier relationship in quality management. The data were obtained from 300 UK firms that supply products to 3 major customers in the automotive industry and from field work carried out in buyer and supplier organizations. The barriers that were identified include: 1. poor communication and feedback, 2. supplier complacency, 3. poorly defined and unstructured supplier quality improvement programs, 4. the credibility of buyers as perceived by their suppliers, and 5. misconceptions about purchasing power. Before beginning a formal supplier development program, a purchasing organization must review those aspects of its own operation that can adversely affect supplier performance, such as purchase specifications, communications, training, and organizational roles. Tables. References. (ABI/INFORM)

## **Quality Management: Something More Than Super Quality Control**

Crosby, Philip B.

Executive Excellence v6 n5 pp.13-14 May 1989

More people are talking about quality management in any form, but most people think this involves working harder at quality control. Quality management is oriented around preventing, while quality control is aimed at measuring, containing, and controlling. Quality management is about people; quality control is about things. To understand and implement quality management, a company must recognize that: 1. all work is a process, and 2. what is delivered to the customer is the result of the entire operation. Quality control concepts have placed the major emphasis on appraisal, which is after the fact. When management insists on defect-free work and takes action to cause this to happen, its world starts to change for the better. It is necessary to use a managerial system called the Quality Improvement Process. Components of this system include: 1. management commitment in such areas as measurement and awareness, and 2. bringing suppliers into the improvement process. Diagrams. (ABI/INFORM)

## **Quality of Management & the Management of Quality**

Robson, Mike

Journal for Quality & Participation v12 n1 pp.70-73 March 1989

The management role remains the weakest area in most companies that have initiated the total quality management (TQM) process. Companies often establish a quality council or steering group to manage the process, which can put the concept on the fringes of the organization, rather than in the center of business as usual. People who choose to be involved in various quality activities may form a members-only type attitude that serves to isolate them from the rest of the organization. In addition, a quantity at all costs ethic hinders the acceptance of TQM. Major changes in management are required for the successful implementation of TQM. Management must convince the organization's people that it is dedicated to the process and that the status quo must go. A formal recognition scheme should be established. Key tools such as the group problem-solving process allow managers to work with their subordinates in developing TQM in an organized manner. Diagrams. (ABI/INFORM)

**Total Quality Management: Eight Lessons to Learn from Japan**  
Atkinson, Philip E.; Naden, Jim  
Management Services (UK) v33 n3 pp.6-10 March 1989

Total quality management (TQM) extends far beyond the philosophy and practices of quality control and quality assurance. TQM is a strategy concerned with the changing fundamental beliefs, values, and culture of a company. In November 1988, twenty executives from the UK manufacturing industry went to Japan to visit some of the most successful companies in the world and to examine TQM, the strategy that had enabled these firms to become world leaders. Eight lessons to be learned from Japan are: 1. All managers and operatives must be highly committed to training and education. 2. The approach of foolproofing, designed to produce zero defects, must be utilized. 3. To be successful, the ideas that quality circles pursue must be put into action, reinforcing the behavior of all circle members. 4. An organization's communication must have a high profile. 5. Robotics and automation should be used when necessary to reduce error. 6. Progress should be illustrated visually. 7. Quality must be deeply rooted in both service and manufacturing functions. 8. Long-term planning is required. Tables. Equations. Appendix. References. (ABI/INFORM)

**Total Quality Management: A Guide for Implementation**

(Draft report)

Emhart ATI, Reston, VA.

Sponsor: Office of the Deputy Assistant Secretary of Defense for Logistics, Washington, DC.; Office of Personnel Management, Washington, DC. Training Management Assistance Branch.

PB89-181929/XAB Report No.: DOD-5000.51-G

February 15, 1989 81p.

The guide provides information to facilitate Total Quality Management (TQM) implementation. TQM is a managed process of continuous improvement. It calls for cultural change in organization through instituting a broader vision of management encompassing improvement of every process critical to organizational success. The improved performance is directed toward satisfying such cross-functional goals as quality, cost, schedule, and technical performance. TQM integrates fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach focused on continuous process improvement. The activities focus on providing customer/users with products and services that consistently meet their needs and expectations. Each TQM element is institutionalized by implementing a structured approach to

continuous process improvement through training at each level, starting with top management. Essential TQM elements include: obtaining management commitment; establishing a steering group and/or focal point to provide direction and control of the improvement activities; and providing training of personnel (NTIS)

#### **A New Attitude Toward Quality**

Mishne, Patricia P.

Manufacturing Engineering v101 n4 pp.50-55 October 1988

Managing for quality means a sweeping overhaul in corporate culture and a radical shift in management philosophy. Usually, several years are needed to plan and implement a program so that managers and workers are comfortable with statistical analysis tools. At Allen-Bradley Co., no one wanted to implement the Total Quality Management System (TQMS) introduced by management. After widespread training, the TQMS now is used in every operating department, and recertification into the system is required annually. Ford Motor Co. is requiring all of its suppliers to be part of its Q-1 Preferred Quality Supplier Program by 1990 or lose Ford's business. Compared to these large companies, a recent survey found that some smaller companies have had significant improvement from quality management efforts. To improve results, these companies should avoid what Armand V. Feigenbaum, president of General Systems Co., calls the 4 deadly sins of some approaches to quality. Charts. (ABI/INFORM)

#### **Kanban and Deming's 14 Points**

Landon, Wanda G.

Quality v27 n9 pp.50,52 September 1988

The Japanese concept of kanban can be a useful tool for implementing W. Edwards Deming's 14 points for quality assurance in manufacturing. Kanban is a Japanese word meaning "visible record." Kanban is a means of pulling parts through the assembly process; production is initiated only when a worker receives a visible cue that assembly is needed for the next step in the process. With the kanban method, the production line stops if one of the key processes fails to produce quality parts. This enforces 2 of Deming's points: 1. refusing to accept defects, and 2. giving workers the tools to ensure quality. The kanban method also promotes other Deming points, such as teamwork and the constant commitment to improving quality. Charts. (ABI/INFORM)

### **Where Are We Headed?**

Rieker, Wayne S.

Journal for Quality & Participation v10 n4 pp.32-36  
December 1987

A well-implemented employee involvement program will go a long way toward solving the US problem of lack of competitiveness and inadequate productivity. The concept will take many directions in the future, including the implementation of: 1. self-managing teams, 2. quality of work life teams, 3. labor-management cooperative committees, and 4. employee stock ownership programs. Employee involvement must address the economic success of the enterprise if it is to be considered successful. Further, quality and customer satisfaction must be the primary focus of the future. This quality improvement must encompass all aspects of the firm's operation and management, addressing such things as statistical process control. The concept of Total Quality Management (TQM) implies the creation of a participative environment where everyone is involved in making quality improvement decisions. Adoption of the TQM concept is essential and can be achieved only through employee involvement. Japanese experiences affirm the gains to be realized from the incorporation of employee involvement. (ABI/INFORM)

### **Deming's Parable of the Red Beads**

Walton, Mary

Across the Board v24 n2 pp.43-48 February 1987

W. Edwards Deming is a powerful force in the movement for quality in manufacturing. At his seminars, Deming performs an experiment with red and white beads to illustrate his ideas. Using members of the audience as representative production-line workers, Deming demonstrates several lessons: 1. Variation is part of any process. 2. Planning requires prediction of how things and people will perform. 3. Workers work within a system that is beyond their control; thus, it is the system, not their individual skills, that determines how they perform. 4. Only management can change the system. 5. Some workers will always be above average, some below. Graphs. (ABI/INFORM)

W. Edwards Deming: shogun of quality control.

Ross, Barbara

FE: the Magazine for Financial Executives v2 p.24(8)

February 1986

The statistician W. Edwards Deming is in favor of long-term supply contracts that result in confidence and trust between the supplier and the buyer. Deming has been given wide acclaim for helping the Japanese with their management style. Top management must eliminate fear from the work environment. Usually there is a difference in the way a job really is and the way the supervisor sees it. (Management Contents)

#### A Change in the Management System

Conway, William E.

Survey of Business v19 n3 pp.17-18 Spring 1984

Nashua Corp. (Nashua, New Hampshire) accomplished a revolution in its operating management system by following the philosophy and techniques of statistician W. Edwards Deming. This revolution has increased the quality and reduced the costs of Nashua's goods and services. The Deming method has 4 principal components: 1. imagineering, which is the process of visualizing how things would be if everything worked right all the time, 2. the human relations program, which creates a climate whereby employees at all levels work together constantly to improve operations, 3. broad use of statistical methods, including the use of simple charting techniques to define and solve problems, and 4. broad use of industrial engineering techniques to simplify work, improve efficiency, and reduce waste. Major fundamental gains in product quality are achieved through project management and use of sophisticated statistical methods. (ABI/INFORM)

**V. TOM READINGS: MANAGEMENT BOOKS**

(Those starred are available in the Headquarters Library Management Collection; please inquire about accessing the other titles.)

**Attaining Manufacturing Excellence: Just-in-Time Manufacturing, Total Quality, Total People Involvement**

Hall, Robert W.

New York: Dow Jones-Irwin, 1986 300p.

**\* Commit to Quality**

Townsend, Patrick L.; Gebhart, Joan E.

New York: Wiley, 1986 189p. HD66.T6

**Company-Wide Total Quality Control**

Mizuno, Shigeru

UNIPUB-Kraus International, 1987

**Customer Satisfaction Through Total Quality Assurance**

Grenier, Robert

Wheaton, IL: Hitchcock Publishing Company, 1988 290p.

**The Deming Guide to Achieving Quality & Competitive Position**

Gitlow, Howard; Gitlow, Shelly

Englewood Cliff, NJ: Prentice-Hall, 1987 192p.

**\* Deming Management Method**

Walton, Mary

New York: Putnam Publishing Group, 1986

**Deming Route to Quality & Productivity: Road Maps & Roadblocks**

Scherkenbach, William W.

Washington, DC: CeePress Books, 1986 154p.

**Implementing Total Quality**

Cullen, J.; Hollongum, J.

New York: Springer Verlag, 1988 150p.

**The Keys to Excellence: The Story of the Deming Philosophy**

Mann, Nancy R.

Santa Monica, CA: Prestwick Books, 1987 138p.

**Let's Talk Quality: Ninety-Six Questions You Always Wanted to Ask  
Phil Crosby**

Crosby, Phil B.

New York: McGraw-Hill, 1989 224p.

**Out of the Crisis**

Deming, W. Edwards

Cambridge, MA: MIT CAES Publication, 1986 507p.

**Quality Is Free: The Art of Making Quality Free**

Crosby, Philip B.

New York: McGraw-Hill, 1979

**\* Quality Without Tears: The Art of Hassle-Free Management**

Crosby, Philip B.

New York: McGraw Hill, 1984 192p. (also audiocassette)

TS156.6.C764

**Right Every Time: Using the Total Quality Approach**

Price, Frank

Brookfield, VT: Gower Publishing Company, 1989 270p.

**Survival of the Fittest: Total Quality Control & Management  
Evolution**

Shores, Richard A.

Milwaukee, WI: ASQC Quality Press, 1988 295p.

**Some Theory of Sampling**

Deming, William E.

New York: Dover, 1984 602p.

(Reproduction of 1950 edition)

**Statistical Adjustment of Data**

Deming, William E.

New York: Dover, 1984 261p.

Reproduction of 1943 edition

**TQC Wisdom of Japan: Managing for Total Quality Control**

Karatsu, Hajime

Japanese Management Series

Melrose, MA: Productivity Press, 1988 125p.

**Total Quality: An Executive's Guide for the 1990s**  
Ernst & Whinney Quality Improvement Consulting Group  
APICS Series in Production Management  
New York: Dow Jones Irwin, 1989 185p.

**Total Quality Control, 3rd edition**  
Feigenbaum, Armand V.  
New York: McGraw-Hill, 1983 768p.

**Total Quality Control for Management: Strategies & Techniques from Toyota & Toyoda Gosei**  
Nemoto, Maseo  
New York: Prentice-Hall, 1987 270p.

**Total Quality Management**  
Chase, R. L.-Editor  
New York: Springer-Verlag, 1988 255p.

**Total Quality Management**  
Oakland, John S.  
New York: Nichols Publishing Company, 1989 336p.

**What Is Total Quality Control?: The Japanese Way**  
Ishikawa, Kaoru  
Englewood Cliffs, NJ: Prentice-Hall, 1985 215p.