



Quality Leadership 100

Source: sanja gjenero

No matter the size of the company, quality is critical. The companies listed in the *Quality Leadership 100* run the gamut from small manufacturers—such as the number 1 company Advanced Instrument Development Inc. with 27 employees to the more than 7,000 employees at Toyota Motor Manufacturing, the company taking second-place honors this year.

Regardless of a company's size, it is the commitment, dedication and tireless effort of its employees—the warriors of quality—that make a difference.

Toyota involves its team members in its quality effort by encouraging employees to take an active role and

Big or small, quality affects all companies.

BY QUALITY MAGAZINE STAFF

using employee ideas and opinions in production processes.

Superior Powder Coating Inc.—this year's number 4 company—controls quality by empowering the work teams. Each group has a leader that is responsible for the area, personnel, parts and quality. Each group evaluates the part quality from the previous operation, eliminating the need for parts to flow in and out of the quality department.

When it comes to quality, knowledge also plays an important role.

Production operators at Yaskawa Electric America Inc.—the number 5 company—have paperless on-line resources at their workstations, including animation and video, which result in highly detailed and up-to-date work instructions for every process step. This allows all components to be verified and approved before they are installed.

Congratulations to all of the companies—and their employees—listed in the 2008 *Quality Leadership 100*.

SURVEY CRITERIA

More than 800 manufacturers participating in the *Quality Leadership 100* were surveyed on criteria such as scrap and rework as a percentage of sales, warranty costs as a percentage of sales, rejected parts per million shipped and

contribution of quality to profitability and shareholder value.

Companies also were evaluated based on the number of quality programs in place; registration to various standards; percentage of employees

dedicated to quality responsibilities; average number of hours monthly that employees receive quality training; and the role quality professionals play in the acquisition of test, measurement and inspection tools, software and services.

1

Advanced Instrument Development Inc.

Melrose Park, IL

It's no secret that medical component manufacturers have high standards, and Advanced Instrument Development Inc. is no exception.

Since its inception in 1969, Advanced Instrument Development Inc. (AID) has focused on X-ray subsystems for other manufacturers. Because the company manufactures medical components, quality is critical.

"Quality is a top priority with us," says Quality Manager Jim Owen. "In fact, everything that goes out the door is 100% inspected."

AID is certified to ISO 9001 and ISO 13485 quality systems, says Owen, who has been with the company for eight years.

Products have included high-speed starters, solid-state contactors, heat

unit integrators, and other similar items. AID has developed a solid reputation among OEMs for the quality of its products.

Today, this 27-person company is the largest independent manufacturer of ionization chambers for diagnostic medical X-ray systems. Most North American equipment manufacturers, as well as many others around the world, use its chambers as original equipment.

The ion chamber is a component in a medical X-ray system. "Our device measures the X-ray beam," Owen says. "It will send a signal to the X-ray system so the patient doesn't get over-exposed. It has to be invisible to the X-ray system."



The Mobil-AID paddle is used in mobile X-Ray systems. Source: Advanced Instrument Development Inc.

In order to be invisible to the X-ray, the component must be completely free of any dust or debris. If any of this material got through, it could appear to be an abnormality on the patient's X-ray. "It's a very critical item," Owen says.

The circuit boards undergo three tests. Because the company is measuring in millivolts and a static-sensitive environment, accuracy is important, Owen says. "That's why we inspect everything very closely."

For more information, visit www.aidxray.com.

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Toyota Motor Manufacturing

Georgetown, KY

Toyota Motor Manufacturing, Georgetown, KY, (TMMK) is Toyota's largest production facility in North America. It employs about 7,000 people in its 7.5 million-square-foot facility, and has the capacity to build more than 500,000 Camrys, Solaras and Avalons each year.

Toyota involves its team members by encouraging an active role in quality control, using employee ideas and opinions in production processes, and practicing kaizen—striving for constant improvement, says Rick Hesterberg, assistant manager of media relations.

"The first word they learn when they walk in the door is kaizen," Hesterberg says. "It's part of our culture. They embrace the opportunity to take ownership."

Whether improvements are related to safety, quality or ergonomic perspective, Hesterberg says that the idea is small, incremental improvements. If the 7,000 people coming to work each day have this in mind, it can yield drastic improvements over time, he says.

Toyota also has implemented quality circles, groups that work on bigger problems.

"You have a better opportunity to tackle bigger problems when you have a team concept," Hesterberg says. "That's the value of working in a quality circle. Networking gives them a much bigger pool of knowledge."

The quality circle program began in 1989 with nine quality circles. In 2007, they had 389 quality circles, or teams, for a total of 1,962 team members, not including administrative employees.

The main idea is that employees are actively involved in the process, and thinking of ways to improve.

Toyota team members treat the next person on the production line as their customer and will not pass a defective part on to that customer. If a team member finds a problem with a part or the automobile, the team member stops the line and corrects the problem before the vehicle continues down the line.

"The 7,000 people working here are doing more than just working on a process. They are their own quality inspector," Hesterberg says.



Final line inspection takes place at the Georgetown, KY, plant. Source: Toyota Motor Manufacturing

This technique has clearly paid off. Among the many awards earned by Toyota Motor Manufacturing, Kentucky, Inc., are four J.D. Power Gold Plant Quality Awards, annual industry awards recognizing vehicle manufacturing plants in North America. Since the awards began in 1990, Georgetown has placed in the top three six times for vehicle quality. In 1996, the Georgetown Powertrain Plant received the J.D. Power Gold Plant Award for Engine Quality. In May of 2001, TMMK received a J.D. Power and Associates Silver Plant Quality Award.

For more information, visit www.toyotageorgetown.com.

3

Utilimaster Corp.
Wakarusa, IN

With a customer roster that includes FedEx, United States Postal Service, UPS, Frito-Lay and Home Depot, chances are you've seen a Utilimaster product. Utilimaster manufactures customized parcel delivery vans (PDVs), walk-in vans and truck bodies.

With the desire to build a delivery solution for both regional and national companies, Richard Klingler, founder of the RV manufacturer Holiday Rambler, created the company in 1973.

With 30 employees, one manufacturing plant and a surplus of chassis, he decided to build light- and medium-duty commercial delivery boxes for cab chassis. By the late 1970s, Utilimaster was rated number one for Ford chassis.

The 1980s saw significant growth for the company, and in 1987 it received the Productivity Award, the highest industrial honor awarded by Congress.

Utilimaster continued to grow through the 1990s by investing in sig-



Utilimaster manufactures customized parcel delivery vans (PDVs), walk-in vans and truck bodies for customers in many industries. Source: Utilimaster Corp.

nificant production facilities.

Today, the ISO 9001 and QS-9000 certified organization continues to provide solutions for specific delivery applications to a range of clients. With almost 1,000 employees, Utilimaster meets the needs of the parcel, baking and snack food, textile, utility and other industries.

Utilimaster works to understand the industry of each of its clients by seeking out potential opportunities in order to deliver solid solutions and practical advice. They begin by finding answers to important questions,

such as: Where is the industry today and where is it headed tomorrow? What are the benchmarks of operational efficiency, productivity and driver safety? What is the impact of regulation and globalization?

For more information, visit www.utilimaster.com.

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Superior Powder Coating Inc.
Elizabeth, NJ

Superior Powder Coating Inc. (SPCI) specializes in high-volume powder coating and electrocoating. Founded in 1989, the contract metal finisher processes more than 150,000 parts per day for many industries, including automotive and military. With three high-volume powder coating lines and one electrocoat line, the ISO 9001: 2000 certified company has 145 employees and operates 24 hours a day.

In 1998 SPCI began its first process improvement initiative, becoming ISO 9002: 1994 certified. "The certification process allowed us to examine every aspect of our business," says John Elskamp, vice president of quality. "By redefining our processes it allowed us to effectively coordinate our efforts, enabling the company to experience a double digit annual sales growth without the hardships associated with business expansion."

Today, SPCI tracks three factors to determine its quality performance. The first is a parts-per-million (PPM) reject

rate for external and internal operations. While the external rate refers to the number of reject parts discovered by customers, the internal PPM rate is reviewed to determine where the company is deficient in its process and where improvement is needed. SPCI's external PPM for 2007 was 3.4 parts per million.

Secondly, SPCI tracks nonconforming material (NCM) costs as a percent of sales to guide it during growth. The last metric is determining SPCI's level of customer satisfaction. SPCI achieves this by annual questionnaires and daily, weekly and monthly contact with employees at multiple levels within the organizations it serves, giving it a more comprehensive view of how it is perceived by customers.

SPCI controls quality by empowering the work teams. Each group has a leader that is responsible for the area, personnel, parts and quality. Each group evaluates the parts quality from the previous operation, eliminating the need for parts to flow in and out of the quality department. The company performs statistical



In 2007 SPCI achieved an external reject rate of only 3.4 parts per million. Source: Superior Powder Coating Inc.

analysis on production data to verify conformity to standards.

The results of these analyses may affect rates at which it processes or monitors its systems.

Ideas for SPCI's continuous improvement program are generated from each department through various vehicles. The work instructions include an area where all employees are encouraged to share their ideas regarding that production item. And training at SPCI is ongoing. The company has identified the requirements for each position in the company, and as an employee grows within the company, he has a clear vision of what is expected from a current position and also the requirements of any future positions.

For more information, visit www.superiorpowder.com.

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Yaskawa Electric America Inc.
Waukegan, IL

Defects are not an option for Yaskawa, a manufacturer of inverter and servo drives, servomotors and industrial robots.

“When it comes to quality, Yaskawa refuses to cut corners as we aim to be the best that we can be in everything we do,” according to the company’s Web site. At the core of Yaskawa’s competitiveness is an all-encompassing commitment to ensured quality. All phases of the company’s business, including research and development, production and quality control, sales and marketing as well as technical service, are committed to delivering top quality products and service. One example of this commitment is Yaskawa’s acceptance into the ISO 9001:2000 family of certified organizations.

Yaskawa constantly tracks and measures product failures in time, which demonstrates a high quality and reliability rate. This field data confirms that Yaskawa exceeds its design targets for reliability.

The company’s obsession with quality and reliability is what drives their design—it is planned and specified just as carefully as the rest of the product; that is what is meant by having quality and reliability “designed in.” High reliability design targets are set based on decades of experience, benchmarking, customer input and industry research. Yaskawa thoroughly tests the reliability of new technologies, the consistency of new materials and the failure rate of every component within its new products to be certain that the new design will achieve the reliability objectives the company demands.

By consciously designing new products based on the learning curve of past designs, Yaskawa has diminished the failures at introduction of the latest 7-series drives to 1/15 that of the 3 series, while the newer 1000-series is even more stringent.

Manufacturing processes are designed to prevent defects. Production operators have paperless on-line resources at their workstations, which result in highly detailed and up-to-



Yaskawa Electric America manufactures AC drives, servomotors, motion controllers and robotics. Source: Yaskawa Electric America

date work instructions for every process step. Complex assemblies are made simple

with the use of animations and video. Therefore, all components are verified and approved before they are installed, and frequent in-process quality checks prevent a unit from moving down the line until quality is assured.

Quality practices the company employs include kaizen, total quality management, certified vendor program and product certification process.

For more information, visit www.yaskawa.com.

2008 Quality Leadership 100

1. Advanced Instrument Development Inc.

Melrose Park, IL

2. Toyota Motor Manufacturing

Georgetown, KY

3. Utilimaster Corp.

Wakarusa, IN

4. Superior Powder Coating Inc.

Elizabeth, NJ

5. Yaskawa Electric America

Waukegan, IL

6. Mid West Forge

Durant, IA

7. Cleveland Hardware and Forging

Cleveland, OH

8. Custom Tool & Manufacturing

Lawrenceburg, KY

9. Kapco Inc.

Grafton, WI

10. Paulo

St. Louis, MO

11. Herndon Products

Maryland Heights, MO

12. Motorola Inc.

Schaumburg, IL

13. A.M.S. Electronics Inc.

Butler, PA

14. Singleton Corp.

Cleveland, OH

15. Zhone Technologies

Oakland, CA

16. Tyco Valves & Controls

Princeton, NJ

17. Woodway USA

Waukesha, WI

18. JTEKT North America

Plymouth, MI

19. Sedco, Div. of Primore Inc.

Adrian, MI

20. Logical Products Inc.

Gurnee, IL

21. HCC Inc.

Mendota, IL

22. General Electric Co.

Stamford, CT

23. Northrop Grumman

Los Angeles, CA

24. Shure Inc.

Niles, IL

25. Parker-Hannifin Corp.

Cleveland, OH

26. Regal Marine Industries Inc.

Orlando, FL

27. Taber Bushnell

Minneapolis, MN

28. Raytheon Missile Systems

Tucson, AZ

29. Zak Inc.

Troy, NY

30. The Wittern Group Inc.

Des Moines, IA

31. Red Lion Controls

York, PA

32. Alco Spring Industries

Chicago Heights, IL

33. LDB Plastics Inc.

Shelby Township, MI

34. Mayes Brothers Tool Mfg.

Johnson City, TN

35. Eldre Corp.

Rochester, NY

36. Coupled Products Inc.

Upper Sandusky, OH

37. Unison Industries

Jacksonville, IL

38. Kensington Windows Inc.

Vandergrift, PA

39. Acutek Inc.

St. Louis, MO

40. Zion Industries Inc.

Valley City, OH

41. HMI Metal Powders

Clayville, NY

42. Acuity Brands

Atlanta, GA

43. Blue Bird North Georgia, a Div. of Blue Bird Co.

Fort Valley, GA

44. Calphalon, a Newell Rubbermaid Corp.

Atlanta, GA

45. Lear Corp.

Southfield, MI

46. Seats Inc.

Reedsburg, WI

47. Winzeler Gear

Harwood Heights, IL

48. Metalsa

Roanoke, VA

49. A.I.D. Corp.

Clayton, GA

50. Lightolier

Fall River, MA

51. Metal Spinners Inc.

Angola, IN

52. TRW Automotive

Livonia, MI

53. Cooper Tools

Houston, TX

54. InnoWare Inc.

Alpharetta, GA

55. Wacker Corp.

Menomonee Falls, WI

56. Group Dekko

Kendalville, IN

57. Berkley Medical Resources

Uniontown, PA

58. BAE Systems

Rockville, MD

59. Miner Elastomer Products Corp.

Geneva, IL

60. Ron Grob Co.

Loveland, CO

61. Accurate Gauge & Mfg. Inc.

Rochester Hills, MI

62. Precision Metal Products Inc.

El Cajon, CA

63. Coordinate Machine Co.

Roselle, IL

64. Kaiser Aluminum

Foothill Ranch, CA

65. Intri-Cut Inc.

Amherst, NY

66. Tessy Plastics

Elbridge, NY

67. MIC Group

Brenham, TX

68. L'Anse Manufacturing Corp.

Lanse, MI

69. Manor Tool & Manufacturing Co.

Schiller Park, IL

70. Proshort Stamping Services Inc.

Brockway, PA

71. Norbert Industries Inc.

Sterling Heights, MI

72. Lovejoy Chaplet Corp.

Hoosick Falls, NY

73. Berry Enterprises Inc.

Clearfield, UT

74. Bridon American Corp.

Wilkes-Barre, PA

75. Southeastern Metals Manufacturing Co. Inc.

Jacksonville, FL

76. Bollinger Shipyards Inc.

Lockport, LA

77. Logan Diesel Inc.

Leslie, MI

78. Nobles Co.

Minneapolis, MN

79. Bionix Development Corp.

Toledo, OH

80. Bodine Electric Co.

Chicago, IL

81. Micro Plating Inc.

Erie, PA

82. Midland Plastics

Chicago, IL

83. R&D Dynamics Corp.

Bloomfield, CT

84. Diamond Electric Mfg. Corp.

Dundee, MI

85. The Black & Decker Corp.

Towson, MD

86. Astro Pak Corp.

Costa Mesa, CA

87. Pave Technology Co.

Dayton, OH

88. Conbraco Industries Inc.

Matthews, NC

89. BorgWarner Inc.

Auburn Hills, MI

90. Elkhart Products Corp.

Elkhart, IN

91. Champion Aerospace

Liberty, SC

92. Stranco Products

Bradley, IL

93. General Pneumatics Corp.

Orange, NJ

94. Smith Equipment, an ITW Co.

Watertown, SD

95. Exide Technologies

Alpharetta, GA

96. Manitowoc Co. Inc.

Manitowoc, WI

97. Tekna USA Corp.

Crystal Lake, IL

98. The Line Group Inc.

Arlington Heights, IL

99. Western Industries Inc.

Winfield, KS

100. Emerson Electronics

St. Louis, MO
