

Raising Quality Levels and Ensuring Product Safety

Management System

Based on the management philosophy that its founder espoused—that the company should strive “to contribute to society through its products and services while always placing the customer first”—Panasonic, as a leader in global trends, engages in manufacturing while continuously improving its various systems and mechanisms to raise quality levels and ensure product safety.

As a part of its fundamental policy regarding product quality, Panasonic has established a Basic Rules for Quality Administration under the Chief Quality Officer (CQO). Using the Panasonic Quality Management System, Panasonic is engaged in continuously improving the quality of the company’s products, with a perspective that puts the customer first. In October 2016, Panasonic enacted standards of duty for its medical equipment manufacturing and sales business to promote a smoother and more appropriate performance of duties involved in the manufacturing and sales of medical equipment.

Panasonic expresses profound regret for the accidents involving FF-type kerosene heaters and reflects the lessons it has learned when ensuring the safety of its products. The company regards product safety to be its top management priority. Furthermore, to improve the level of safety of its products, Panasonic strives to ensure product safety in line with changes to its businesses or products, led by its groupwide Corporate Product Safety Committee.

Policy

Panasonic’s Groupwide Quality Policy states that the company will “truly serve customers by way of providing products and services that continuously meet and satisfy the needs of customers and society.”

The company has also established a basic policy regarding the autonomous code of conduct for product safety. (This basic policy was approved at a meeting of the board of directors—held on June 27, 2007—of what was then called Matsushita Electric Industrial Co., Ltd.) Under this policy, Panasonic actively strives to ensure the safety of its products, keeping to its principles of “the customer comes first” and of maintaining a “super-honest” attitude.

▶ Basic Policy Regarding the Autonomous Code of Conduct for Product Safety
<http://www.panasonic.com/jp/corporate/management/code-of-conduct/quality-policy.html>
*Japanese Only

The Panasonic Code of Conduct also states, in its “Product Safety” section, that the company will strive to ensure the safety of its products.

▶ Panasonic Code of Conduct, Chapter 2: Implementing the Code in Business Operations; II-2. Product Safety
<http://www.panasonic.com/global/corporate/management/code-of-conduct/chapter-2.html#section2-2>

Regulations

Quality Management System

To establish self-sufficient quality assurance processes in each company, business division, and overseas subsidiary, Panasonic published its Quality Management System (P-QMS) Guidelines in 2004. Each of these business units then formulates its own quality management system, based on these guidelines.

P-QMS complements the requirements of the ISO9001 standard with Panasonic’s own quality assurance methods and experience to create a quality management system that aims to deliver the level of quality that the company demands.

Based on its implementation of the P-QMS, Panasonic strives to continuously improve the quality of its products.

In fiscal 2014, Panasonic drew up and began applying the Automotive Quality Management System Development Guidelines (the Automotive P-QMS) to its automotive parts business.

Furthermore, in fiscal 2016, coinciding with the incorporation of the 2015 revisions to ISO9001 into the P-QMS Guidelines, Panasonic established standards for each of its business areas—consumer electronics, automotive, housing, and devices—specifying which portions apply groupwide and which portions apply to specific businesses, with the aim of moving toward compliance within all its business areas.

Education

To thoroughly spread Panasonic’s approach to quality among its employees, the company holds training for all quality managers at its companies, business divisions, and overseas subsidiaries, based on the concept of “learning about Panasonic quality.” Panasonic also holds its Quality Control Circles World Conference to improve the quality control skills of on-site employees. At the 54th conference, held in fiscal 2017, 28 quality control circles were picked from a total of 5,008 groupwide circles to compete in a quality control grand prix.

To establish a corporate culture in which product safety is the top priority in manufacturing, Panasonic held product safety training lectures to train product safety experts. To further ensure that this corporate culture, in which product safety is the top priority, reaches all group employees, Panasonic conducts product safety education, such as by providing employees with self-directed learning opportunities, including the Fundamentals of Product Safety e-learning program, and by holding Product Safety Forums, at which employees can consider product safety-related issues through cases seen inside and outside the company.

Panasonic has also established a Product Safety Learning Square at the Human Resources Development Company in Hirakata, Osaka, with the aims of conveying lessons based on actual sites and actual items, and of providing instruction on product safety-related skills. The Product Safety Learning Square offers an opportunity to learn about the actual products that were recalled in the past—such as those recalled after the FF-type kerosene heater accidents—as well as the causes of their problems, the steps taken during the recall, and the measures taken to prevent the essentially unsafe phenomena (including tracking or strength degradation).

In fiscal 2017, 7,073 employees—ranging from new hires to management-level employees—visited the facility (a 110% increase over the previous year), and they resolved to never allow another accident to happen after learning about accidents from the customer’s perspective.



A scene from the Quality Control Circle World Conference



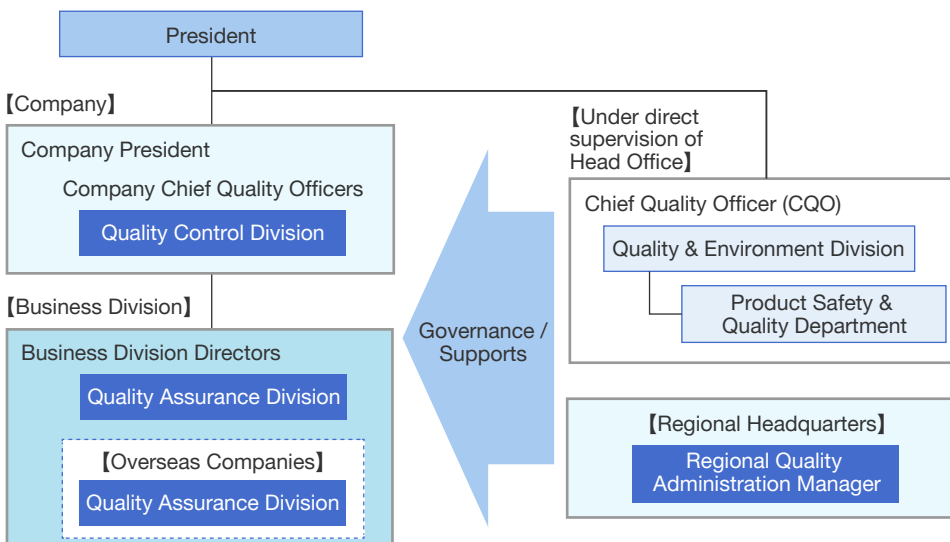
Product Safety Learning Square

Responsible Executive and Framework

The executive officer in charge is Senior Managing Executive Officer Yoshiyuki Miyabe (as of August 2017).

With the support and governance of the Panasonic head office, each company, business division, and overseas subsidiary has implemented systems for undertaking its business with independent responsibility and self-sufficiency.

Quality Management Structure



Since September 2014, regional quality administration managers have been appointed for six regions: North America; Latin America; Europe and CIS; Southeast Asia and the Pacific; India, South Asia, Middle East; and China and Northeast Asia.

These managers monitor regional quality conditions and promptly share information on product safety-related defects with the various business divisions. They also share information on safety standards and safety certifications in their regions, reinforcing the organizational structure of their business divisions.

Committees and Organizations

Activities of Quality Managers Meetings

Panasonic investigates and summarizes groupwide quality improvement efforts and the state of product quality at its CQO Meetings. These meetings are attended by the CQOs from each company and related function persons. At the meetings, the attendees discuss how Panasonic should handle quality over the medium and long terms, and they decide on policies and actions meant to further strengthen the foundation of quality for the whole group.

Panasonic also periodically holds Quality Managers Meetings—attended by the quality managers at each company—as a place for more practical discussions on quality policies. These meetings both enhance cooperation within the group and promote quality improvement efforts. Since fiscal 2016, Panasonic has held a Global Quality Managers Meeting for quality managers from around the world. It is an opportunity for these managers to share regional issues and annual plans with companies from other regions, facilitating quality improvement efforts.

Activities of the Corporate Product Safety Committee

To conduct manufacturing with safety as its top priority, in 2012, Panasonic reorganized its groupwide Corporate Product Safety Committee and established a Safety Technology Working Group and a Safety Standards Working Group under its umbrella. Using these working groups, the company began to develop safety technologies and upgrade its product safety standards on a regular basis, in response to the 2005 FF-type kerosene heater accidents.

Because of the growth of various types of robotics products and increasing product safety-related accidents among the elderly, Panasonic is investigating new policies to pursue in regard to these matters.

Activities of the Safety Technology Working Group

The Safety Technology Working Group takes into account, during a product's design phase, the possibility that customers may use products longer than anticipated. It develops scientific evaluation methods for testing the durability of materials used in products—including accelerated deterioration tests—accumulates data, and creates testing databases. In fiscal 2017, the working group shifted its product safety activities from accident response to accident prevention. It drew up thematic plans with an eye on future Panasonic businesses, such as by reflecting considerations for the elderly during product design stages.

Activities of the Safety Standards Working Group

To realize a higher level of product safety beyond just complying with public safety standards, Panasonic has established the Panasonic Corporation Safety Standards (PCSS), consisting of design rules that must be followed when developing products.

The Safety Standards Working Group has reflected in the PCSS what it has learned from the activities of the Safety Technology Working Group, and it has strengthened standards relating to major safety issues, such as long-term use, flame-retarding measures, and fall prevention. In fiscal 2017, it prioritized preventing lithium-ion batteries from catching fire by establishing standards that should be followed for applicable products that use such batteries.

The working group is also making efforts to expand the scope of its product safety standards to actively prevent risks that it anticipates could occur because of the expanded areas in which the company does business. For example, the working group created the Panasonic System Safety Standards (PSSS), which cover energy management and other systems. To ensure the safety of Panasonic's personal care robots, the working group established the Panasonic Personal-care Robot Safety Standards (PRSS).

Global Safety Standard Certifications Obtained

Personal care robot safety certification ISO 13482^{*1} acquired: January 2017

In February 2014, Resyone—a robotic device for nursing care that combines the functionality of a bed and a wheelchair—was the first device worldwide to acquire the global safety standard ISO 13482. Resyone PLUS, which improved on Resyone's convenience, safety, and aesthetics, acquired certification based on ISO 13482 in 2017.

Road vehicle functional safety standard ISO 26262^{*2} acquired: February 2012

Panasonic acquired process certification in the ISO 26262 road vehicle functional safety^{*3} standard from the German third-party organization TÜV SÜD. The body recognized that Panasonic is able to comply with the highest level of safety in the standard, ASIL-D, during the process of developing onboard devices and device software.

*1: The international standard relating to the safety of personal care robots, issued by the International Organization for Standardization (ISO). Three types of robots are covered: physical assistant robots, mobile servant robots, and person carrier robots.

*2: An international standard for road vehicle functional safety that was published on November 15, 2011. The standard sets out four Automotive Safety Integrity Levels (ASILs): ASIL A through ASIL D.

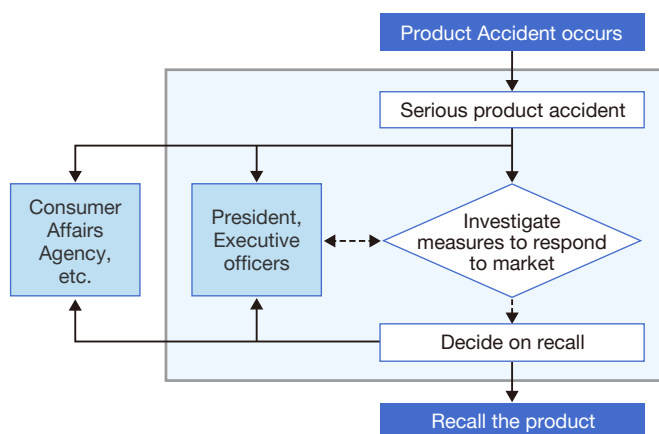
*3: Safety achieved through the working (functioning) of electric or electronic devices, such as microcomputers. Functions include the detection of malfunctions, safe stop controls, and user warnings.

Quality and Product Safety: Major Accidents and Responses

Responding to Product-Related Incidents

In the event that a product-related accident has occurred in the market, Panasonic immediately confirms the facts relating to the incident, and analyzes and verifies its causes. If a product-related incident is deemed to be serious, the group's head office and each of its companies and business sites work together to take appropriate measures to ensure the safety of its customers. Specifically in terms of the first response, the company notifies relevant government bodies, such as the Consumer Affairs Agency, the company president, and senior management, and investigates its plan for responding to the market.

Product Accident Response Flowchart



Serious Product-Related Accident Information

In Japan, Panasonic publicly reports serious product accidents^{*1}, accidents suspected of being caused by products^{*2}, and accidents for which it has been determined that it is unclear whether a product was the cause^{*3}, based on the Consumer Product Safety Act and Panasonic's basic policies, as laid out in its Autonomous Code of Conduct for Product Safety.

*1 "Serious product accidents" are the following accidents specified in the Consumer Product Safety Act:

1. Accidents resulting in death;
2. Accidents resulting in serious injury or illness (injury or illness requiring at least 30 days of treatment), or accidents resulting in permanent injury;
3. Carbon monoxide poisoning;
4. Fires (confirmed as such by firefighting authorities).

*2 "Accidents suspected of being caused by products" are defined as follows:

- Accidents relating to gas devices or kerosene devices (including accidents in which it has yet to be determined whether the product was the cause);
- Accidents relating to products other than gas or kerosene devices for which it is suspected that the product was the cause.

Panasonic promptly releases information on these types of accidents.

*3 "Accidents for which it has been determined that it is unclear whether a product was the cause"

This refers to accidents announced by the Consumer Affairs Agency as accidents for which it cannot be determined whether a product was the cause.

Of these accidents, Panasonic publicly releases information on those for which the Product Safety Group of the Consumer Affairs Council of the Ministry of Economy, Trade and Industry has determined that it remains unclear whether a product was the cause.

List of Information Concerning Serious Product-Related Accidents

<https://www.panasonic.com/jp/corporate/info/psc.html>

*Japanese Only

Other Initiatives for raising quality levels and ensuring product safety are Introduced in the following website

<https://panasonic.com/global/corporate/sustainability/safety.html>

Quality and Product Safety: List of Awards

Recipient of the METI Minister's Award at the Tenth Best Contributors to Product Safety Awards (November 2016)

Eco Solutions Company received the METI Minister's Award (the highest honor) in the Large Manufacturer and Importer Category at the METI's Best Contributors to Product Safety Awards. The company was awarded this prize due to its high ratings in the following criteria:

- 1) "The company's efforts in permeating, expanding, and implementing risk assessment, by training and certifying risk assessment experts, even overseas";
- 2) "The company's efforts in in-house standardization by developing technologies for evaluating product quality coupled with risk assessment";
- 3) "The company's investigations of fundamental accident-prevention measures through analyzing the mechanisms that cause accidents by tracing accidents back to their causes and conducting reproduction tests."

This honor came for the second consecutive year, following PanaHome receiving the Director-General for Commerce, Distribution, and Industrial Safety Policy Award in 2015.



* This awards program was launched by the Ministry of Economy, Trade and Industry (METI) in 2007 with the aim of encouraging private enterprises to make a greater commitment to improving product safety, as well as to firmly establish the concept of the value of product safety in society as a whole.

Recipient of the 2016 IAUD Award, Gold Award (December 2016)

Panasonic received a gold award at the 2016 IAUD Awards, sponsored by the International Association for Universal Design (IAUD), for its "Accessibility improvement efforts towards 2020." This award recognized Panasonic's work in relation to the 2020 Tokyo Olympics. This is the fifth consecutive year that the company has received a gold award.

Panasonic received the highest number of awards among all recipients, having been nominated for 14 IAUD Awards and receiving the silver award for the Panasonic Home Elevator 1608 JOYMODERN S200V, the Multilingual Speech Translation System, and the G3 Series, Rechargeable In-The-Ear Hearing Aid.