

Raising Product Quality Levels and Ensuring Product Safety

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Management System

Based on the idea promoted by our founder that Panasonic should strive “to contribute to society through its products and services while always placing the customer first,” the Panasonic Group approaches “quality” as something that means more than the quality of the work we do or the products we make. To us, it also means conducting business in a fair and honest at all times, so that we can continue to offer products and services that are better than anyone else’s while upholding our commitment to our customers and society, taking action to ensure the safety and quality of our products and services.

To raise quality levels, we build and operate quality management systems based on the Basic Policy regarding quality for the Group, with each Operating Company being responsible for the quality of its own products. In particular, based on the “compliance with legal and corporate ethics” stipulated in the Panasonic Group Code of Ethics & Compliance, we have made a clear commitment to going beyond observing laws and regulations to uphold industry standards and keep the promises we have made to our customers. We have also been implementing ongoing quality improvements from a customer-first perspective by bolstering checking functions in our development, production and inspection processes through quality monitoring, certification monitoring by third parties, and other means. We optimize all of our manufacturing processes in order to better suit the customer, making sure to ensure product safety and countermeasures against risks during emergencies.

We acknowledge the profound lessons learned from the accidents involving FF-type kerosene heaters, and address ourselves to product safety as a top management priority. Specifically, we apply our unique product safety standards to each product lifecycle phase (from planning and design to service and disposal) for every product to ensure its safety. We also use our group intranet to share information related to the product safety of all Panasonic products in a timely manner to all employees, including persons in charge of quality and design at each Operating Company and in each division.

Reference URL

[WEB Important news about products \(for Japan\)](#)

<https://holdings.panasonic.jp/corporate/about/products-information.html>

Quality Management System

To establish self-sufficient quality assurance processes in each Operating Company and business site, Panasonic Group published its Product Quality Management System (P-QMS) Guidelines in 2004. These Guidelines supplement the requirements of the ISO 9001 standard with the Group's own quality assurance methods and expertise to create a quality management system and have been updated to comply with ISO 9001-2015.

Under the new system that took effect in April 2022 operating Companies and business sites work to implement quality management systems that are uniquely tailored to the business characteristics of each all with reference to these Guidelines, conducting regular quality assessments, quality monitoring, and the like at various levels across Operating Companies and business sites to confirm the progress of those initiatives while also formulating plans for corrective action to be taken when deficiencies are found, all in an effort to continuously improve quality.

These Guidelines stipulate that Operating Companies and business sites must conduct quality monitoring based on the Guidelines. When this internal monitoring is conducted, we check for quality compliance in addition to the checks for each process on the quality assessment checksheet used by Operating Companies. Further, by evaluating what each has achieved through fact-based confirmation from the workplace and other evidence, we work to maintain a qualitative understanding of the effectiveness of the quality management systems at each Operating Company and business site.

To properly address our continually diversifying business areas, each Operating Company operates according to the P-QMS Guidelines and industry standards appropriate to its field, from household appliances, in-vehicle accessories, residential, devices, B to B solutions, pharmaceuticals, services, and more.

Policy

Panasonic Group'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 Group has also established a Basic Policy regarding the Autonomous Code of Conduct for Product Safety. As per this policy, Panasonic actively strives to ensure the safety of its products, while keeping to its principles of "the customer comes first" and of maintaining a "Fairness and Honesty" attitude.

WEB Basic Policy Regarding the Autonomous Code of Conduct for Product Safety (Japanese only)
<https://holdings.panasonic.jp/corporate/about/code-of-conduct/quality-policy.html>

The Code of Ethics & Compliance also states Chapter 4: Our Business Relationships that we should honor our commitments to our customers and to society as they relate to our products and services, and that we must act in the interest of ensuring the safety and quality of our products and services.

WEB Panasonic Group Code of Ethics & Compliance, Chapter 4: Our Business Relationships; 2. Meeting our commitments and ensuring safety and quality of our products and services
https://holdings.panasonic/global/corporate/about/code-of-conduct/chapter-4.html#Sec_02

Educational Training

The Panasonic Group conducts training every year for all quality managers at each Operating Company and business site, with the aim of training key quality personnel to promote quality management innovation. In particular, the Group regularly holds a Business Division Director Quality Workshop for business managers responsible for the quality management systems in their respective divisions, as well other activities geared toward learning about results-driven, quality-based management, including guest lectures and training through case studies.

In addition, each Operating Company conducts its own

Quality Control (QC) Activities through which individuals can come together to learn problem solving methods to be used in the field as part of our efforts toward bolstering quality on the production floor. In FY202, we held our 29th Group QC Circle World Convention. From a total of 4,262 QC circles within the Panasonic Group, 32 (Japan: 20, China: 8, Taiwan: 1, India: 2, Malaysia 1) were selected to participate in the Grand Prix.

In FY202, we held our 79th Product Safety Forum, an event that provides a venue for thinking about product safety using examples from the Group and elsewhere. Since FY202, we have introduced an online meeting system that has allowed us to hold the forum even during the COVID-19 pandemic. We also offer eLearning courses on subjects like the basics of product safety to spread a corporate culture of prioritizing product safety to all Group employees.

The Group has also established a Product Safety Learning Square at the Team & Talent Development Center in Hirakata, Osaka, with the aim of conveying lessons based on actual business sites and actual products, and of providing instruction to enhance product safety-related skills. The Product Safety Learning Square offers an opportunity to see actual products that were recalled in the past—such as those recalled after the FF-type kerosene heater accidents—as well as the internal recall announcements and other information on the causes of their problems, the steps taken during the recall, and the measures taken to prevent the critical unsafe phenomena (including tracking or strength degradation). Furthermore, we also launched the Virtual Product Safety Lab in October 2021, making exhibits available online for free viewing. The Product Safety Lab recreates an actual space that was filmed in 360 degrees to allow viewers to move around that space freely, and even read information panels or watch views by simply clicking on an icon.



Product Safety Learning Square

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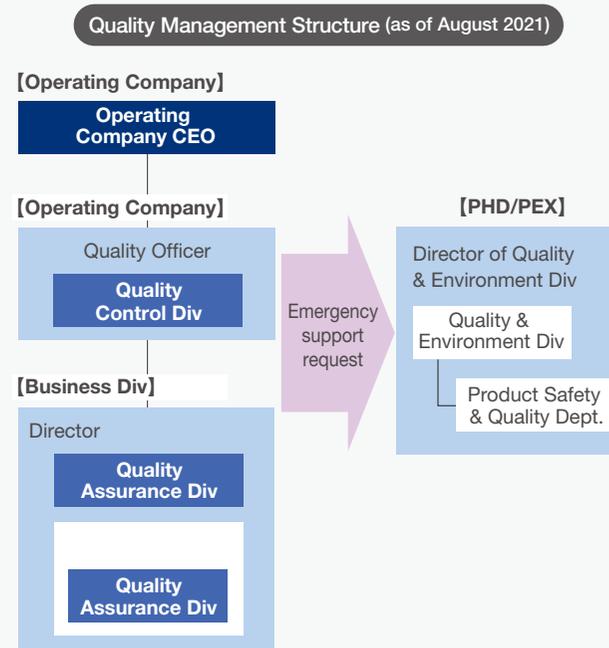
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Responsible Executive and Framework

As of August 2022, the executive in charge of quality is the Group Chief Technology Officer (Group CTO).

Each Operating Company has appointed a quality manager and established systems for undertaking its business with independent responsibility and self-sufficiency.

In addition, Panasonic Holdings Corporation (PHD) and Panasonic Operational Excellence Co., Ltd. (PEX) provide support in response to the requests from the Operating Companies as countermeasures against critical risks for the Group, while expanding quality-related assets horizontally over the Group.



Committees and Organizations

Activities of Quality Managers Meetings

Panasonic Group investigates and summarizes Groupwide quality improvement efforts and the state of product quality within the Group at its CQO Meetings. Group CQO, CQOs from each Operating Company, and persons involved in relevant job functions such as quality and product regulations attend these meetings. Attendees discuss how we should handle quality over the medium and long terms, and they decide on initiatives meant to further strengthen the foundation of quality for the whole Group. Panasonic Group also holds the Quality Committees—attended by the quality managers of each Operating Company—as a place for more practical discussions on quality policies and measures.

Global Safety Standard Certifications Obtained

1) ISO13482

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.

Panasonic AGE-FREE Co., Ltd. has received this ISO certification for two of our products.

- 2014: Personal care robot Resyone (robotic device for nursing care combining the functionality of a bed and a wheelchair, the first device in the world to receive this ISO certification)
- 2017: Personal care robot Resyone PLUS

<https://sumai.panasonic.jp/agefree/products/resyoneplus/> (Japanese only)

2) ISO 26262

An international standard for road vehicle functional safety that was published in 2011. The standard sets out four

Automotive Safety Integrity Levels (ASILs): ASIL A through ASIL D.

- Panasonic Automotive Systems Co., Ltd. acquired certification in the ISO 26262 road vehicle functional safety 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

https://www.jeita.or.jp/japanese/exhibit/2015/1111/pdf/02_Functional.pdf (Japanese only)

Internal Company Rules Concerning Product Labeling

Based on the Manufacturing Industrial Standards for Panasonic Corporation, each Operating Company determines its own approach and guidelines to be followed with regard to the way their products are handled as well as installation and services as appropriate for each product. Specifically, warning label related to the safe use of products and information label on legally designated recycling or disposal methods and other information that helps customer safely use our products and services are specified in the design methods of warning labels and instructions for use, care and installation of products in consideration of preventing customers from misusing.

Product Security

Various products implement software and provide the ability to connect to networks for convenient usage. This makes it necessary to ensure the security of our products to prevent leaks or alteration of information and to prevent damages that may result from a malicious third-party attempting to cause products to malfunction.

At Panasonic Group, we have a specialized department for Group-wide product security which develops guidelines

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to promote security-conscious design, and we ensure the security of our products by streamlining our internal structure and rules, regularly reviewing these so that customers can safely use our products.

■ Collection and Distribution of Information and Employee Training

Product security issues and how to address them change on a daily basis. At Panasonic Group, we collect the most up to date information on product security by joining various security focused organizations, e.g., FIRST*, a forum to share information on security incidents, and attending various global conferences. This information is shared with any relevant divisions and incorporated into training materials for product security to improve the knowledge and awareness of product security throughout the entire Group.

*FIRST: Forum of Incident Response and Security Teams

■ Promoting Product Security from Development

During the development phase of a product, we consider what assets and functions that need to be protected, as well as any potential attacks against them. Products are developed while minimizing these risks. In addition, security experts perform tests (that always include up-to-date attack methods) on the product prior to shipment, to ensure that Panasonic products do not contain any “security vulnerabilities” from both a hardware and software standpoint.

■ Post-shipment Response

As part of the Group’s post-shipment monitoring of our products, we have set up a way to contact us in the event that security vulnerabilities are discovered in Panasonic products after purchase.

When we receive information on vulnerabilities, we immediately verify whether they will impact Panasonic

products. If we find that our products may have security issues because of those vulnerabilities, we ensure the security of the products through updates or similar means and take action to prevent the issue from recurring by establishing a system for checks and similar other measures. We have systems in place that allow the Product Security Center to monitor progress and provide support until the response of the relevant business divisions are complete.

We also have systems in place that make it possible for Panasonic to take a more active role in obtaining information on vulnerabilities and acting on it (rather than waiting for vulnerabilities to be reported) by continually monitoring the latest threats that might affect our products post sale.

* Panasonic Product Vulnerability Hotline

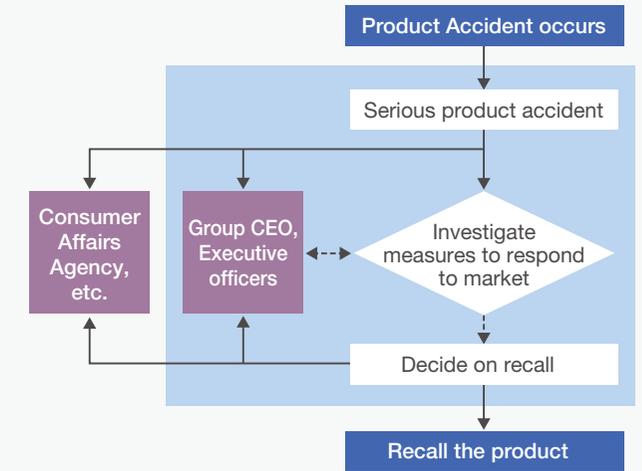
[WEB https://holdings.panasonic/global/corporate/product-security/psirt.html](https://holdings.panasonic/global/corporate/product-security/psirt.html)

Major Accidents and Responses

■ Responding to Product-Related Incidents

In the event that a product-related accident occurs, Panasonic immediately confirms the facts related to the incident, and analyzes and verifies its causes. If the incident is deemed to be serious, a section at PHD/PEX and each of its Operating Companies and business sites work together to take appropriate measures to ensure customers’ safety. Specifically, Panasonic Group’s first response is to notify relevant government bodies such as the Consumer Affairs Agency, as well as the Operating Company President, Group CEO and senior management, who then consider the response policies.

Product Accident Response Flowchart



■ Serious Product-Related Accident Information

In Japan, Panasonic Group publicly reports serious product accidents^{*1}, including 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 the Group’s basic policies per its Autonomous Code of Conduct for Product Safety.

*1. “Serious product accidents” refers to 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 physical impediment;
3. Carbon monoxide poisoning;
4. Fires (confirmed as such by firefighting authorities).

*2. Any of the following:

- 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 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

[WEB](#) **List of Information Concerning Serious Product-Related Accidents (Japanese only)**

<https://holdings.panasonic.jp/corporate/about/products-information/psc.html>

Outside of Japan, Panasonic also identifies and discloses information on product-related accidents based on the laws and guidelines of each country.

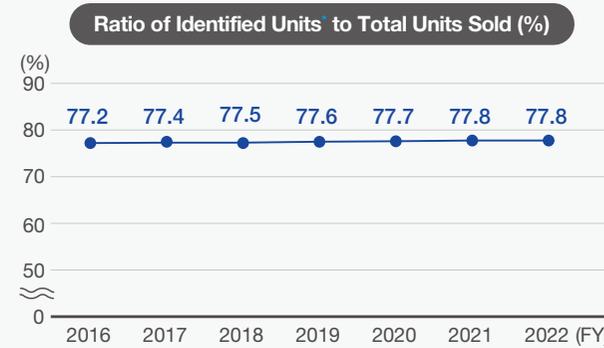
■ Progress in Response to Incidents Related to FF-Type Kerosene Heaters

In 2005, Panasonic undertook emergency measures as a result of product safety incidents involving FF-type kerosene heaters. Seven years have passed since we began the Group-wide product recall. We continue to work, led by the Corporate FF Customer Support & Management Division staff, to prevent any new incidents.

In fiscal 2022, we conducted a campaign to find yet unidentified target products. As part of these efforts, we visited the homes—mainly in Hokkaido, Tohoku, and Nagano—of our customers who had once owned the recalled products, investigated the nearby supply/exhaust pipes, and conducted surveys of retail customers. We are also continuing all our notification campaigns to promote product recalls among customers who had their units inspected or repaired and to confirm product conditions before the winter arrives.

In fiscal 2022, we added 108 units to our list of products discovered or confirmed to have been discarded. In total, 118,422 units have been recorded, bringing the percentage of units identified to 77.8% of units sold as of March 31, 2022. We were still finding products that our customers had continued using, without realizing the heaters' potential harm, meaning that a high degree of risk remains. We will continue our search. In addition to these market-facing efforts, we are undertaking various internal initiatives. We communicate the progress of these activities through the company intranet

in monthly reports. We also pass down the lessons learned from customer safety incidents through lectures given in various training programs and educational materials posted at the Product Safety Learning Square (in Hirakata), the Product Safety Museum (in Kusatsu), and the Learning Center (in Nara), where we educate our employees. We strive to foster a Panasonic Group culture that places product safety first.



* Identified units: This figure includes the number of units recalled, the number of units in use after examination and repair, and the number of units we have confirmed that customers have discarded.

List of Awards

1) Product Safety Awards

The awards program was launched by the Ministry of Economy, Trade and Industry in 2007 with the aim of encouraging private enterprises to be more active about improving product safety, as well as to firmly establish the value of product safety in society as a whole.

FY2021

METI Minister's Award, Large Manufacturer and Importer Category: Laundry and Cleaner Division, Appliance Company, Panasonic Group

[WEB](https://www.meti.go.jp/product_safety/ps-award/3-consumer/h30_award.html#anc-1-1) https://www.meti.go.jp/product_safety/ps-award/3-consumer/h30_award.html#anc-1-1 (Japanese only)

2) AUD Design Award

The awards program was created by the International Association for Universal Design and is meant to recognize groups and individuals who have conducted or proposed particularly noteworthy activities aimed at realizing a UD society in which everyone can live comfortably.

Various products and initiatives of former Panasonic Corporation had received the IAUD Gold Award for seven consecutive years until 2018, in addition to other recognition below:

- FY2022 Panasonic IC Reader with facial recognition, Gold Award, Healthcare and Welfare Design Emergency broadcasting equipment, Security and Public Safety
- FY2021 Silver Award: Panasonic LED Torch Light First Shaving Series, Bronze Award
- FY2019 Walking-exercise robot, Gold Award Smile Bathtub, Gold Award Automated Transport System, Silver Award

[WEB](https://holdings.panasonic.jp/corporate/universal-design.html) <https://holdings.panasonic.jp/corporate/universal-design.html>