

Results of Investigation of Irregularities in Panasonic
Industry's Product Quality and Measures to Prevent
Reoccurrence

Panasonic Industry Co., Ltd.

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Contents

Part 1 Introduction

- 1 Background to This Issue
- 2 Positioning and Structure of This Report

Part 2 Root Cause Analysis and Recommendations for Preventing Reoccurrence by the Committee

Part 3 Aiming to Prevent Reoccurrence at PID

Part 4 Endeavors to Prevent Reoccurrence at PID

- 1 Fostering a Mindset Focused on Compliance and Quality Assurance
 - (1) Strong Determination and Unstinting Effort on the Part of Management Executives
 - Taking the Initiative and Serving as Models, with Unwavering Commitment to "Safety First, Quality Second, Production Third"
 - Ensuring That an Understanding of the Essence of Quality Assurance Permeates the Company
 - Education to Foster the Proper Mindset at Each Level (Top Management, Business Unit Directors, General Managers, Managers)
 - 2 Mechanisms That Reflect Frontline Voices and Allow the Job to Be Done Properly
 - (1) Visualizing and Sharing Concerns and Problems
 - Workplace support using WIP and HELP boards
 - Strengthening of mechanisms for early discovery and correction of improper acts
 - (2) Transparency, and strengthening of project management and gates to include management executives
 - Visualization and follow-up of development and strengthening of managerial decisions
 - 3 Strengthening Quality Departments and Taking Action During Development Steps to Prevent Irregularities from Occurring or From Reaching the Customer
 - (1) Strengthening of Check Functions and Ensuring Effectiveness
 - Elimination of quality irregularities risk through three tines of defense under business unit/plant, business division, and headquarters
 - (2) Quality Personnel Development and Creation of Systematic Rotations
 - Visualization and follow-up of development and strengthening of managerial decisions
 - (3) Constructing a System to Check for Conformity with Customer-required Specifications and Regulatory Certification at Each Step
 - Using IT, Deploy an Evidence Confirmation System to Prevent Omissions and Reduce Workload
 - (4) Preventing the Reoccurrence of Irregularities Relating to Official Standards for UL Certification

Part 5 Conclusion

Part 1 Introduction

1 Background to This Issue

In January 2024, Panasonic Industry Co., Ltd. (Headquarters: Kadoma-shi, Osaka; Representative Director, President: Shinji Sakamoto) (“**PID**”) reported that it had identified instances of irregularities in connection with registration of certification by UL Solutions (“**UL**”), a third-party safety science organization, for molding materials, encapsulation materials, and electronic circuit board materials manufactured and sold by PID’s Electronic Materials Business Division.

To ascertain the full extent of the issue, PID, in January 2024, established an external investigation committee composed of external experts (the “**Committee**”) and since then has cooperated with the Committee in conducting a thorough investigation. Much time has been required for investigations of quality irregularities other than the UL certification issue, and as a result, it has taken until November to report the root cause analysis based on the results of the investigation into the issue and the measures to prevent reoccurrence.

2 Positioning and Structure of This Report

This report summarizes PID’s measures to prevent reoccurrence, taking into account the root cause analysis and recommendation on measures to prevent reoccurrence by the Committee.

In parallel with the investigation by the Committee, PID, itself, gave repeated consideration to the structural factors contributing to the issue while also analyzing how to prevent reoccurrence. After receiving the investigation report from the Committee (the “**Investigation Report**”), PID took the investigation results and recommendations very seriously, and PID decided resolutions regarding measures designed to prevent reoccurrence of the issue. It is on such basis that PID hereby issues this report. Through the implementation of these measures, PID will make every effort to recover the public’s trust.

Below, PID will outline the root cause analysis and recommendations for preventing reoccurrence by the Committee with which PID has cooperated in the investigation (see Part 2 below), explain the results of an analysis aimed at preventing reoccurrence at PID (see Part 3 below), and announce its measures to prevent reoccurrence (see Part 4 below).

Part 2 Root Cause Analysis and Recommendations for Preventing Reoccurrence by the Committee

The Investigation Report cited the following matters as “recommendations for preventing reoccurrence” based on the root cause analysis of the quality irregularities at PID:

1. Insufficient understanding of the essence of quality assurance
2. Insufficient education concerning quality assurance
3. Attitudes of certain executives
4. Issues in building an organization to do the job properly
 - (1) Was it based on the belief that humans are tempted to seek the easy way?
 - (2) Was it assumed that quality irregularities were inevitable?
5. Limitations in the structure and operations of the quality departments
 - (1) Headquarters quality department
 - (2) Business division quality departments
 - (3) Plant quality departments
6. Inefficiencies in quality compliance system
 - (1) Inadequate procedures within business divisions and business units
 - (2) Insufficient collection of information on official standards by the headquarters
 - (3) Insufficient checks by the headquarters
 - (4) Inadequate rules for addressing quality irregularities
7. Individuals in the organization were not incentivized to speak up
8. Approach to interacting with customers
9. Management’s insufficient awareness of quality compliance

Please refer to the Investigation Report for details.

In order to prevent reoccurrence of the irregularities, the Committee made the following recommendations:

Recommendation 1: Measures to address insufficient understanding and education on the essence of quality assurance

- (1) Review education content
- (2) Developing prerequisites for ensuring compliance with rules

Recommendation 2: Measures for building an organization to do the job properly

Recommendation 3: Measures to strengthen quality departments

Recommendation 4: Enhancing and reinforcing the quality compliance system based on independence of business units

Recommendation 5: Management’s commitment

Taking into account the recommendations by the Committee, PID will promote endeavors to implement the measures necessary to prevent reoccurrence.

Part 3 Aiming to Prevent Reoccurrence at PID

PID deeply regrets that insufficient awareness on the part of certain management executives about quality assurance resulted in the series of irregularities. PID will continue to analyze the root causes that led to these circumstances and, to work to ensure that no such irregularities ever occur again, will promote reoccurrence prevention based on a commitment by management executives and their initiatives by serving as models.

In light of the results of the root cause analysis of what led to the irregularities at PID and the investigation results set forth in the Investigation Report by the Committee, PID ascertained that the following issues need to be addressed and considered the ultimate direction of its measures to prevent reoccurrence in the following manner.

Issues Need to Be Addressed:

1. Insufficient understanding about the essence of quality assurance
2. Organizational culture does not encourage proper conduct
3. Limitations in the structure and operations of the quality departments and inadequacies in quality compliance systems

Measures to Prevent Reoccurrence:

1. Fostering a mindset focused on compliance and quality assurance (in response to Recommendations 1 and 5 set forth in Part 2 above)
2. Mechanisms that reflect frontline voices and allow the job to be done properly (in response to Recommendation 2 set forth in Part 2 above)
3. Strengthening quality departments and taking action during development steps to prevent irregularities from occurring or from reaching the customer (in response to Recommendations 3 and 4 set forth in Part 2 above)

Changing Mindsets and Constructing Systems		
Insufficient understanding about the essence of quality assurance	Fostering a mindset focused on compliance and quality assurance	
	<u>Strong determination and unstinting effort on the part of management executives</u>	Recommendation 1
	- Taking the initiative and serving as models, with unwavering commitment to “Safety first, quality second, production third”	

	<u>Ensuring that an understanding of the essence of quality assurance permeates the company</u>	Recommendation 5
	- Education to foster the proper mindset at each level (top management, business unit directors, general managers, managers)	
Organizational culture that does not encourage proper conduct	Mechanisms that reflect frontline voices and allow the job to be done properly	
	<u>Visualizing and sharing concerns and problems</u>	Recommendation 2
	- Workplace support using WIP and HELP boards	
	- Strengthening of mechanisms for early discovery and correction of improper acts	
	<u>Transparency, and strengthening of project management and gates to include management executives</u>	Recommendation 2
	- Visualization and follow-up of development and strengthening of managerial decisions	
Limitations in the structure and operations of the quality departments and inadequacies in quality compliance systems	Strengthening quality departments and taking action during development steps to prevent irregularities from occurring or from reaching the customer	
	<u>Strengthening of check functions and ensuring effectiveness</u>	Recommendations 3 and 4
	- Elimination of quality irregularities risk through three lines of defense under business unit/ plant, business division, and headquarters	
	<u>Quality personnel development and creation of systematic rotations</u>	Recommendation 3
	- Making rules that define promotions and roles and clarifying terms of office	
	<u>Constructing a system to check conformity with customer-required specifications and regulatory certification at each step</u>	Recommendations 3 and 4
	- Using IT, deploy an evidence confirmation system to prevent omissions and reduce workload	

Figure [Policy direction for measures to prevent reoccurrence]

Part 4 Endeavors to Prevent Reoccurrence at PID

In light of the root cause analysis and recommendations on measures to prevent reoccurrence by

the Committee, PID formulated the following measures to be undertaken to prevent reoccurrence.

1 Fostering a Mindset Focused on Compliance and Quality Assurance

(1) Strong Determination and Unstinting Effort on the Part of Management Executives

- *Taking the initiative and serving as models, with unwavering commitment to “Safety first, quality second, production third”*
- *Ensuring that an understanding of the essence of quality assurance permeates the company*
- *Education to foster the proper mindset at each level (top management, business unit directors, general managers, managers)*

PID has, up to now, informed employees that they are to conduct work according to the policy of “Safety first, quality second, production third,” but such policy has not been sufficiently enforced. To reinforce such policy and have employees behave in a way that will realize such policy, PID believes that, first and foremost, education is essential. Further, PID is aware again of the need not only for employees to receive such education, but also for management executives to serve as models for such behavior. Thus, management executives, recognizing the need to serve as role models, will prioritize not cost and deadlines but quality, will apply without wavering a policy of “Safety first, quality second, production third,” will take a stance of endeavoring to eradicate quality irregularities, and will serve as models, thus promoting quality assurance activities with strong determination.

Additionally, in order to further deepen understanding of the essence of quality assurance, under the headquarters’ leadership, education will be thoroughly conducted at each managerial level, from top management to the leaders of each department. Education on quality will be implemented for each level in accordance with the responsibilities and roles of the relevant level and positions, and periodic education (at least once a year) will be introduced, thereby strengthening the internal quality-related education systems.

2 Mechanisms that Reflect Frontline Voices and Allow the Job to Be Done Properly

(1) Visualizing and Sharing Concerns and Problems

- *Workplace support using WIP and HELP boards*

One factor that did not allow work to be executed properly was insufficient visualization and sharing of employee concerns and problems that led to the risk of irregularities. Situations arose where, because employees were burdened with these work-related concerns and problems, their work fell behind, and employees were unable to do their job properly in order to resolve the issue. In order to improve this situation, each work site will utilize a WIP (Work In Progress/Process) board (task management tool that applies Kanban board) to help visualize work delays, and adopt a mechanism where problems are taken up and necessary and sufficient support (HELP) reaches employees burdened by these problems. Thus, mechanisms will be in place that promote face-to-face communication between supervisors and subordinates while they assist each other. Through the establishment of HELP boards that share problems that require cooperation with other divisions and having management executives serve as models for departments across the company by making decisions that prioritize quality, PID aims for prompt and efficient solutions.

- *Strengthening of mechanisms for early discovery and correction of improper acts*

The cases discovered by this investigation were not escalated as internal reports, and there were also cases that were not appropriately escalated or corrected for long periods of time. Assuming that

there may be situations where it is difficult to speak up for whatever reason, PID will rebuild mechanisms that make it easier for employees to speak up and continue with initiatives to take up employee voices, aiming to discover and correct improper acts early. Specifically, as regular and constant mechanisms, PID will rebuild the internal report web page so that employees are reminded of the existence of the internal reporting hotline and so that it is indicated clearly and in an easy-to-understand manner that whistleblower protection will be ensured, thus improving awareness of the internal reporting hotline and lowering the psychological hurdles to making internal reports. Further, PID will establish a window at each business division to receive reports regarding improper acts reported at a workplace and aim to clarify and make known corresponding rules and foster knowledge and corresponding skills. In addition, for risk areas and subjects identified from analysis and audits of cases identified through these regular and constant mechanisms, PID will occasionally conduct surveys secured with impartiality and interviews based upon results of such survey and will continue efforts to take up overlooked frontline voices.

(2) Transparency, and Strengthening of Project Management and Gates to Include Management Executives

- *Visualization and follow-up of development by development dashboard and strengthening of managerial decisions*

Both the construction of appropriate management systems that aim to achieve customer requirements and the sharing of issues in developing products with high customer requirement levels were insufficient. Thus, at each decision point for planning, development, and mass production, PID will introduce objective determinations, such as expert reviews. Further, degree of development difficulty will be clearly defined based upon difficulty levels of projects or safety-related matters, and such follow-ups will be implemented according to degree of development difficulty as high-ranked development will be followed by the headquarters department. Further, a development dashboard that lists the project status of headquarters departments and business divisions as a whole will be introduced, and follow-up by management executives of project status (such as progress, degree of development difficulty, among other things) will be implemented.

3 Strengthening Quality Departments and Taking Action During Development Steps to Prevent Irregularities from Occurring or From Reaching the Customer

(1) Strengthening of Check Functions and Ensuring Effectiveness

- *Elimination of quality irregularities risk through three lines of defense under business unit/plant, business division, and headquarters*

PID has been implementing quality audits centered on visualization of and improvement of on-site problems, in the wake of these recent occurrences of quality irregularities, even though it is a characteristic of PID that its business divisions, in particular business units, have strong independence, in order to strengthen the check function so that the business divisions and the headquarters can adequately fulfill their audit responsibilities (the three lines of defense). In October 2024, PID has undertaken to revamp its quality audit system to a system centered on the Audit Departments newly established within the headquarters quality departments.

Specifically, (i) as the first line of defense, each plant will visualize the output of work performed based on Quality Management System (QMS) at the plant and perform a self-check to ensure that there are no deviations in the work; (ii) as the second line of defense, a business division quality department will supervise/instruct, from a viewpoint independent from the plant/business unit, to check whether there is a risk of quality irregularities in plant activities; and (iii) as the third line of defense, the headquarters quality department will, from a viewpoint independent from the business division, conduct an audit on the plant situation regarding the efficacy of the checking activities performed by the business division quality department on the plant. The headquarters quality department will enhance the

effectiveness of checks overall by visualizing the output from each plant/business unit and monitoring the status of plant/business unit quality control reviews.

(2) Quality Personnel Development and Creation of Systematic Rotations

- *Making rules that define promotions and roles and clarifying terms of office*

For quality control activities, in order for quality control personnel to be able to fulfil the maximum potential of their roles, PID will review definitions of roles for each position. Specifically, PID will establish standards on the promotion of personnel and strengthen personnel development through education based on defined roles. Further, by defining the term of office for which a person in charge of quality can continue to serve as a person in charge of a department, PID will implement rotations of personnel that crosses business division boundaries, and endeavor to reform the closed-off nature of business divisions and revitalize the organization overall. By clarifying the implementation of rotations and definitions of roles, PID will ensure the standardization of work and transparency of quality control activities. Furthermore, by promoting the coordination of quality functions among business divisions, PID aims to contribute to improving the quality of the organization overall.

(3) Constructing a System to Check Conformity with Customer-required Specifications and Regulatory Certification at Each Step

- *Using IT, deploy an evidence confirmation system to prevent omissions and reduce workload*

Despite instances of unevaluated or unachieved customer requirements, PID justified their conduct by saying that there were no safety or performance problems or determined that there were no quality problems in products delivered to customers. To address those circumstances, PID will provide design guarantees with a degree of tolerance that takes into account manufacturing variations and deterioration. PID will objectively determine the feasibility of customer requirements in light of data and expert review. Further, adjustments will be made with customers regarding any customer requirements that are difficult to fulfill, and when such adjustments are difficult, the matter will be escalated to management executives who will then make adjustments directly with the customer. Additionally, PID will construct a system for complying with customer requirements where, after agreement is reached with the customer, the state of attainment of all customer requirements from placement of order to mass production can be consistently managed.

Further, by deploying IT systems for technical regulations as well as certification, PID will strengthen compliance with the many laws and regulations for each destination and product and will reduce the workload involved in updating of laws and regulations and renewal of certifications.

(4) Preventing the Reoccurrence of Irregularities Relating to Official Standards for UL Certification

The factors behind the occurrence of irregularities in connection with UL certification and other official standards include the fact that circumstances continued where official rules were not properly understood, and the fact that, because the departments responsible for obtaining certification carried out sample management for the certification process, there was an opportunity for irregularities to occur. To improve such situation, PID will continue to consider the construction of mechanisms for gathering information on amendments to the rules of official standards and for implementing training for business division employees involved in official standards (all employees, including those in charge and frontline engineers), to prevent problem from occurring due to lack of knowledge. Additionally, as a mechanism for sample management that does not allow any opportunities for irregularities to occur at the new product development or mass production stages, PID will construct a mechanism for effective checks

to be performed by three departments, where, when the sample production department, which is independent from the certification acquisition department, produces the sample based on the certification specifications, the quality department witnesses the production and immediately receives the samples. Further, for development of new products, PID will construct a mechanism that does not allow delivery of final products without obtaining certification that needs to be obtained for the products under development.

Part 5 Conclusion

In light of the irregularities and all facts discovered as a result of thorough the Quality Inspection Activities and the investigation by the Committee, in order to check, prevent, and promptly discover and correct quality irregularities, PID will not only strengthen mechanisms to assure quality through work processes specified by the company, but is also moving ahead with measures for personnel education, organizational culture, and governance systems that support such mechanisms. The various measures to prevent reoccurrence above will be taken up by PID as a top priority, and the progress of such measures will be monitored by the top management and disclosed on the PID website.

Going forward, PID will endeavor to prevent reoccurrence with the management executives leading initiatives and serving as models. PID is committed to making every effort to enhance the company's culture and will endeavor to regain the trust of its customers and the rest of society.

End