

Improving Our Quality Control System

Message from the Chief Quality Officer (CQO)



Ryoichi Aita
Executive Officer
Chief Quality Officer (CQO)

We will be reborn as a company that maintains integrity and will continue striving to regain people's trust.

On April 27, 2020, the Company announced that it had discovered misrepresented test results in inspection reports submitted to customers for some products manufactured by the Company and its subsidiaries. We also announced the establishment of a special investigation committee of outside experts to confirm the facts and study the causes of the problem. The investigation confirmed the delivery of some products made by the Company and its subsidiaries that did not meet the specifications agreed upon with customers. These products included magnetic materials, specialty steel products, and automotive casting products. One cause was found to be misconduct that included rewriting the inspection results related to product characteristics agreed upon with customers. (The cases that initially identified misconduct and the investigation that then revealed misconduct are collectively referred to as the "Quality Assurance Issue." For

details, please refer to "Results of investigation of the Quality Assurance Issue" below.)

It is truly regrettable that such misconduct affected multiple products and took place over a long time, and that we failed to draw on past cases at other companies as an opportunity to correct our own actions. We sincerely apologize once again for the inconvenience caused to our customers, shareholders, and other stakeholders.

The Group has currently set as its highest priority a comprehensive effort to implement measures to prevent any recurrence. Acutely aware that our products and services are used in a wide range of fields in society, we will continue striving to regain the trust of customers by being reborn as a company that maintains integrity in all aspects of its operations.

■ Results of investigation of the Quality Assurance Issue

In April 2020, the Company established a special investigation committee of outside experts to delve into the discovery of misrepresented test results in inspection reports about some products made by the Hitachi Metals Group. The committee spent around nine months confirming facts and identifying causes and announced the results in January 2021.

■ Summary of investigation results

The investigation, which covered all products manufactured by the Group, confirmed the following misconduct pertaining to magnetic materials, specialty steel products, and automotive casting products made since the 1980s.

- Rewriting of test results
- Inspections conducted using inconsistent methods or procedures
- Unimplemented inspections and diversion of converted values and past actual values
- 4M changes* made without customer approval

As a result of such misconduct, the delivery of products that did not meet the specifications agreed upon with customers was confirmed.

* 4M changes: including changes in manufacturing locations, manufacturing facilities, subcontractors, manufacturing processes, and materials ("4M" stands for "man, machine, material, and method")

■ Analysis of causes

The main causes of misconduct are as follows.

1. Causes of misconduct	2. Causes for continuation of misconduct
<ul style="list-style-type: none"> • Acceptance of orders without sufficiently verifying process capabilities, etc. • Lack of awareness about compliance with specifications agreed upon with customers and quality assurance 	<ul style="list-style-type: none"> • Those involved found it difficult to make decisions about public disclosure of misconduct • It became difficult to be aware of the misconduct issue
<ul style="list-style-type: none"> • Pressure to win orders and meet deadlines 	<ul style="list-style-type: none"> • The monitoring function for quality compliance risks was weak, making it difficult to identify the misconduct

Summary of Recurrence Prevention Measures Regarding the Quality Assurance Issue

With regard to the Quality Assurance Issue, we have formulated measures to prevent any recurrence based on recommendations from the special investigation committee.

1. Changes in awareness and behavior to emphasize quality

(1) Commitment by top management and Code of Conduct

We will clearly demonstrate our quality-oriented management commitment, both internally and externally, and top management itself will take the initiative in changing internal awareness and behavior. In our Corporate Creed, we will redefine our management commitment to integrity (sincerity and honesty) in all aspects of management and

business, including compliance, and establish it as part of the Code of Conduct for each and every employee.

(2) Changes in awareness and behavior of all Group employees regarding quality assurance

We will promote employee awareness and behavioral changes with the following measures:

- Re-establish quality assurance rules
- Strengthen quality compliance education

2. Drastically improve quality assurance organizational structure and strengthen its foundation

We will strengthen the governance of our quality assurance organizational structure with the following measures:

(1) Establish the new position of Chief Quality Officer (CQO)

(2) Ensure the independence of the Corporate Quality Assurance Division

(3) Clarify the roles and authority of the CQO and the head of the Corporate Quality Assurance Division

3. Improve quality control processes

We will create clear Groupwide bylaws related to each quality control process, including the treatment of abnormalities, cataloging, design reviews from the development stage to the mass production stage, and handle management of change, and will make the bylaws known to all employees. In addition, we will implement the following measures:

(1) Strengthen decision-making process for new orders

One cause of the issue was that we accepted orders under conditions that did not match our process and production capabilities. As a result, we have now created guidelines for specification agreements with customers and will ensure that they are thoroughly understood. We will also establish a system to continuously check and improve the process and production capabilities at each site to enable stable

mass production. In addition, we will strengthen quality control by clarifying and reinforcing the role of the sales department—the point of contact for exchanging specifications with customers—in quality control.

(2) Build IT system to prevent conduct such as inaccurate rewriting of inspection results

We will invest approximately ¥10 billion to build a system that can automatically generate and manage inspection data appropriately, with minimal human involvement. We will incrementally introduce the system at each manufacturing site by around 2024. Between now and when the system is established and operational, we will take other measures such as stepping up monitoring by increasing the frequency and sample size of integrity audits.

4. Strengthen monitoring and whistle-blower systems for quality compliance

To ensure compliance with specifications agreed upon with our customers, we will establish the following second line and third line of defense in addition to the first line of defense, which is an internal control system for sales, product development, design, and manufacturing. In this way, we aim to improve the effectiveness of our whistle-blower system. We will also strive to conduct multifaceted analyses and evaluations of quality compliance risks while examining and implementing cross-divisional countermeasures. To this end, we will provide opportunities to discuss risk evaluation and countermeasures at

management meetings and other forums. In addition, we will strengthen monitoring by the Audit Committee and the Board of Directors.

(1) Have the Corporate Quality Assurance Division review internal audits (integrity audits) as the second line of defense

(2) Have the Internal Auditing Office conduct audits of the Corporate Quality Assurance Division as the third line of defense

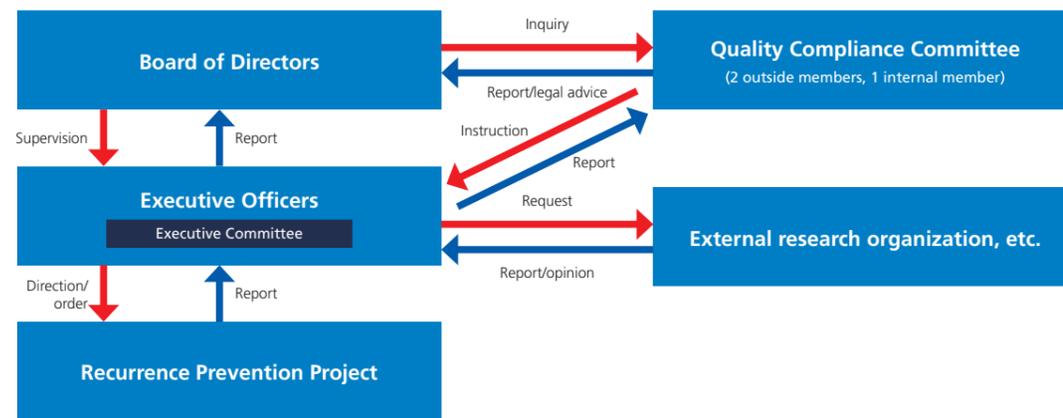
(3) Strengthen the whistle-blower system

In addition, on April 1, 2021, we established the Quality Compliance Committee, whose members include outside experts, to serve as an advisory body to the Board of Directors to solidify and enhance the effectiveness of measures taken by the Group to prevent any future recurrence (see page 10).

Quality Compliance Committee Established as Advisory Body to Board of Directors

On April 1, 2021, the Company established the Quality Compliance Committee, whose members include outside experts, as an advisory body to the Board of Directors for the purposes of strengthening measures to prevent any future recurrence of quality assurance problems in the Group and enhancing the effectiveness of those measures. The committee will conduct additional verification of areas not completed by the special investigation committee, implement recurrence prevention measures, verify the effects of measures, and obtain and provide legal advice.

Relationships with Quality Compliance Committee



Implementing Measures by Recurrence Prevention Project to Prevent Recurrence

Under the direction and supervision of the Quality Compliance Committee, we have set up three working groups (WGs) to implement measures to prevent recurrence: the Technical Problem-Solving WG, Risk Management WG, and Quality Assurance Problem-Solving WG. Specifically, the Technical Problem-Solving WG investigates root causes from a technical perspective (a "why-why" analysis) and works to raise our

process capacity through improvements in the "4Ms" (man, machine, material, method). The Risk Management WG adds "integrity" to our personnel evaluation criteria and provides quality compliance training. The Quality Assurance Problem-Solving WG is responsible for ensuring a secure inspection system and the like.

Recurrence Prevention Project Structure



- Conduct "why-why" analysis to determine the facts and implement countermeasures
- Grasp status of process capacity, yield rate, etc., and improve 4Ms to increase process capacity

- Add "integrity" to personnel evaluation criteria
- Provide ongoing quality compliance education
- Plan and continue town hall-style meetings
- Have the Internal Auditing Office conduct audits of the Corporate Quality Assurance Division
- Have the sales departments strengthen quality control activities

- Make inspection systems secure
- Review quality assurance organizational structure
- Improve internal rules and guidelines

Implementation Status of Measures to Prevent Recurrence of Quality Assurance Problems

Reorganization of quality assurance organizational structure Quality Assurance Problem-Solving WG

Under the supervision of the Chief Quality Officer (CQO), a position newly established in June 2020, employees in quality assurance departments have now been assigned to the Corporate Quality Assurance Division rather than each

business division. This has enabled us to exercise proper checks and balances on the business divisions from the customer's perspective, independent of such pressures as delivery time and cost.

Quality Compliance Month (April 1–30, 2021) Quality Assurance Problem-Solving WG

To ensure that the recent quality assurance issue is never forgotten, we have designated April of every year as Quality Compliance Month and will continue to develop and implement activities accordingly. In April 2021, we conducted quality compliance training, roundtable discussions on quality compliance issues, and self-checks of process inconsistency under the theme "Let's discuss our 'quality' again." It was a good opportunity to reconfirm the actions that the Group should take in the future.



Town hall-style meetings Risk Management WG

We hold town hall-style meetings where senior management and employees communicate in a direct dialogue format to allow us to listen to the voices of front-line workers and reflect their feedback in our management policies. Since June 2020, these town hall-style meetings have mainly focused on quality assurance issues and have prompted lively exchanges of opinions.



4M normalization activity Technical Problem-Solving WG

As part of our quality control activities, we are working to eliminate, reduce, and control unnecessary items, unnecessary conditions, and unnecessary requirements at *monozukuri* sites, with the aim of building "connected processes" that are free of abnormalities related to the 4Ms. In 2021, we applied this initiative to the Yasugi Works and Ibaraki Works and made on-the-spot improvements as much as possible to address the issues we noticed.



Making secure inspection systems Quality Assurance Problem-Solving WG

Rather than using human intervention, where people manually write down measurement values from inspection processes on recording paper or input them into computers, we will build a system that automatically imports the values from measuring instruments into a computer, uses that data to automatically

determine the pass/fail of the product, and automatically prepares a report for submission to the customer. To date, we have conducted detailed design assessments for the system at 28 sites in Japan.