

In Response to Inappropriate Conduct in Quality Inspections by Our Subsidiary

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In May 2022, the Company made a public announcement after the discovery that inappropriate acts, including falsification, fabrication and misstatement of product inspection results, had taken place at its subsidiary, Japan Steel Works M&E, Inc. (hereinafter “M&E”).

Given the high level of trust people have in our products, this betrayal of that trust leaves us with a sense of shame.

We offer a wholehearted apology to our customers and other stakeholders for any possible disturbance we have caused them.

It is with the utmost seriousness that we accept the findings of the report of the investigation received in November 2022 by a special investigation committee consisting of external attorneys, and the Group is united in our efforts to make reforms that regain the trust that has been lost.

Reforms will be implemented in terms of both structure and culture.

Whereas products of the Industrial Machinery Products Business Segment tend to be assembled from many parts, M&E’s products consistently remain a block of steel from the beginning to the end of the manufacturing process.

Due to this product characteristic, the divisions involved have been limited and authority tends to be concentrated, a situation that appears to have triggered the improper conduct.

The concentration of authority in a given department makes it difficult for a system of checks and balances to function, a matter that we consider to be a group-wide governance issue, rather than a problem limited to M&E.

We will continue to strengthen governance of the Group, including the establishment of a system of mutual checks and balances, as a Materiality related to the management foundation.

Regarding this particular instance of inappropriate conduct, we will reform the system so that no single department manages everything from specifications and delivery dates to even customer relations, in order to transform the organizational structure so that it can guarantee quality from a company-wide perspective by enabling separate functions to be performed to ensure mutual checks and balances.

In terms of specific measures, in June 2022, in order to strengthen the independence of the quality assurance functions of M&E, a change was made by consolidating the quality assurance functions into a Quality Management Department and placed under the direct control of the M&E president.

Furthermore, in September 2022, the Quality Management Office was established as an organization at Company headquarters, headed by the director in charge of quality management and staffed with the quality assurance managers from each plant, to consolidate information on quality throughout the company and ensure thorough management.

Efforts are now underway to restructure the system so that it is essentially impossible to engage in inappropriate conduct due to safeguards such as the separation of production management functions of product departments, where authority had previously been concentrated.

Regarding the role of our own corporate culture and climate, I recognize that there are employees who

feel that the act of taking on challenges is not valued and that more importance is placed on avoiding failure.

I believe that it is crucial for individuals to take on challenges and take ownership of the resultant failure as an asset, and that only by overcoming aversion to it can we grow.

I am committed to transformations that make for a company culture that is so open that supervisors who receive reports of failure can honestly thank their charges who made the effort to try.

In addition, we will of course continue to observe a Quality Compliance Month and strengthen education and training sessions related to quality compliance in order to foster a serious attitude toward compliance.

At the same time, I believe that it is essential that this be accompanied by a climate of openness that makes it possible for individuals to call out that which they feel does not make sense.

I will work to revamp the Company culture by making a point of being more involved in the workplace to use diverse opportunities to both communicate the messages from top management and listen to what employees have to say.

M&E possesses world-class technology and production facilities, including some of the world's largest production facilities, such as a 14,000-ton large forging press, and state-of-the-art facilities such as a 150-ton ESR (electroslag) melting furnace - in fact, M&E is the sole owner in Japan of such technology and facilities.

M&E supplies a wide range of products that support social infrastructure, including large cast and forged steel components used in power generation and steelmaking, clad steel plates used in natural gas extraction, desalination and petrochemical industries, and pressure vessels used in oil refineries.

We will carry through its commitment of achieving reform of its quality assurance system and corporate culture to regain the trust of customers and fulfill its responsibility to society by supporting the global infrastructure industry with advanced technology.

*** Note: This is an abstract from JSW Integrated Report 2022 issued in January 2023.**

“Response to Inappropriate Conduct in Quality Inspections” in following pages is an abstract from the Integrated Report, together with the updates on our recent responses.

Response to Inappropriate Conduct in Quality Inspections

Background behind the Series of Instances of Inappropriate Conduct

Having received a report from an internal whistleblower in late February 2022, about quality inspections by Japan Steel Works M&E, Inc. (hereinafter “M&E”), JSW Group conducted an unannounced internal inspection of M&E. In late March of the same year, we confirmed that M&E had committed inappropriate conduct in the inspection of some products they had manufactured.

In response, after making a public announcement about the matter on May 9, a special investigation committee consisting of outside attorneys was established to conduct an investigation.

On November 14, 2022, we received the results of that investigation and made an announcement about the initiatives we would be implementing.

Results of the Special Investigation Committee’s Investigation and the Inappropriate Conduct Determined

From among the facilities investigated (at M&E, Hiroshima Plant, Yokohama Plant, and Meiki Plant), inappropriate conduct was confirmed for products manufactured and shipped by M&E. No inappropriate conduct was confirmed at the Hiroshima Plant, Yokohama Plant, or Meiki Plant.

The inappropriate conduct confirmed at M&E was independently investigated and confirmed by the Special Investigation Committee.

As a result of this investigation, inappropriate conduct was confirmed in the following product groups: power products, nuclear energy products, cast steel products, forged steel products, steel Plate & Pipe products, and ordnance products.

A summary of the confirmed inappropriate conduct for each product group is shown in the table below. (Additional comments below the table are supplemented by the Company.)

Regarding the affected products, we are reporting to and discussing with our customers sequentially.

The occurrence of problems in the product quality or performance owing to the inappropriate conduct has not been confirmed.

We take the facts and recommendations of the Special Investigation Committee with the utmost seriousness, and we will make company-wide and group-wide efforts to reform our systems and culture to prevent any recurrence, which will enable us to regain the trust of all stakeholders.

Product groups	Products	Type of inappropriate conduct	Number of cases and times of occurrence
Power products	Rotors, ring materials	Falsification, fabrication, or misstatement of inspection results and analysis values	341 cases (1998-2021)
Nuclear energy products ※1	Disc materials, head materials	Falsification of dimensional records, falsification or fabrication of test results, false statements in inspections	20 cases (2013-2021)
Cast steel products	Valve casing materials, steam turbine casing materials	Falsification of inspection results, test results, and analysis values	12 cases (2007-2022)
Forged steel products	Rolls, forged steel pipes	Falsification or fabrication of inspection results, test results, and analysis values	68 cases (2003-2020)
Steel Plate & Pipe products	Stainless clad steel plate	Falsification of inspection results and analysis values	2 cases (2017, 2020)
Ordnance products ※2	Forged steel materials	Falsification of test results and analysis values	6 cases (2020)

※1. Most of the cases were emergency measures that were triggered by sudden events that occurred in the manufacturing process, a finding that was confirmed in the investigation report by the Special Investigation Committee. There were circumstances that would not have otherwise been a problem if they had been reported to or discussed with customers, but they were covered up without reporting to or discussing about with customers, which constitutes a deviation from the procedural specifications sought by customers.

※2. There was no deviation from the specifications agreed on with final customers, but instead from the internal control values of M&E, whose customer is our Company (Hiroshima Plant).

Analysis of the Causes

1) Inadequate organizational management system that made it difficult for a system of checks and balances to function

Authority was concentrated in the product division, which was in charge of planning and directing each process from specification coordination with customers to manufacturing and quality confirmation of products.

In addition, due to the very nature of materials manufacturing, which involves only a limited number of divisions in the manufacturing process and is subject to direct or indirect involvement and guidance by the product division, it is difficult for a system of checks and balances to function between processes.

This contrasts to the situation at other manufacturing plants engaged in machine manufacturing, where the series of manufacturing processes, such as design, machining, and assembly, are based on a division of labor, with process control by a production control division and at least a semblance of check-and-balance functions in place among the processes.

2) Lack of awareness of the importance of quality compliance

There had been a tendency toward downplaying the process of quality assurance due to there being more importance placed on the final quality of products and inadequate awareness of the fact that quality is created through the cumulative practice of adhering to each and every specification and inspection requirement in the manufacturing process that has been agreed on with the customer. In addition, it was observed that some individuals mistakenly believed that certain specification violations were acceptable as long as no quality problems were encountered while practicing individual standards. There was also a tendency to try to solve problems by independently changing the definitions and interpretations of regulations and specifications.

3) Overconfidence in experience and track record, and pressure to respond to customer requests and dialogue

M&E is seen as maintaining a strong commitment to perfection in terms of quality and on-time delivery. Against this background, M&E ended up engaging in inappropriate conduct due to the justification at the individual and organizational levels of taking measures without sufficient communication with customers in the event of the occurrence of quality problems.

4) Paper-based and manual inspection work processes and a chronic shortage of personnel

Paper-based management and manual record keeping create an environment in which there are occurrences such as the rewriting of inspection results.

In addition, the considerable volume of cumbersome manual work increased the workload and put a strain on human resources, especially in responding to unexpected events, thereby triggering the omission of necessary operations in the name of efficiency.

Measures to Prevent Recurrence

1. Measures to Prevent Recurrence in the Company

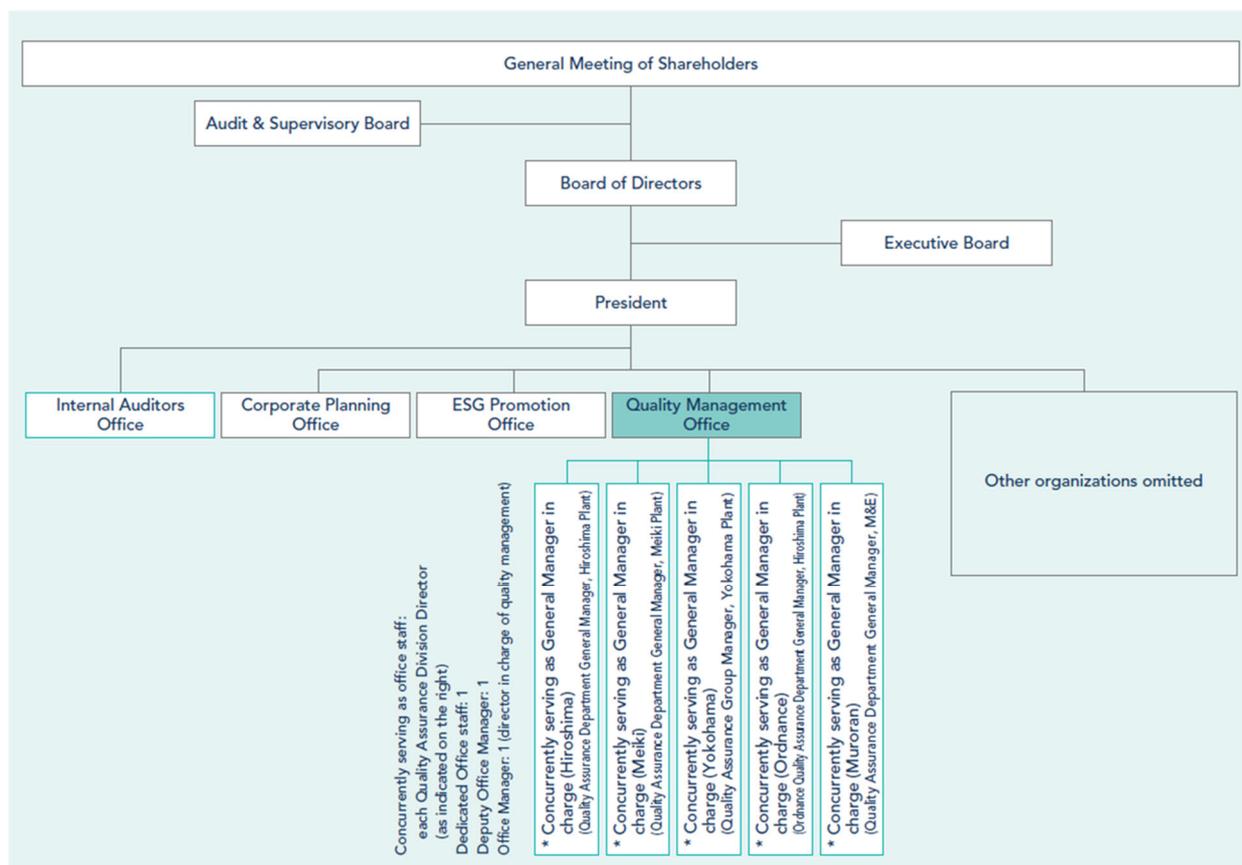
Based on the analysis of the causes, and taking into consideration the recommendations from the Special Investigation Committee, the Company has formulated and implementing the following measures to prevent recurrence of this inappropriate conduct. Also, having granted approval of the overall approach for the recurrence prevention, the Board of Directors will regularly monitor the progress and effectiveness of these measures.

1) Establishment of a company-wide quality assurance system

In order to strengthen the corporate monitoring and supervision of the self-contained quality assurance management system in each division and plant, we established the Quality Management Office on September 16, 2022. This office is headed by the director in charge of quality management to oversee the quality assurance functions in each division and plant.

The Quality Management Office is responsible for the following operations

1. Establishment of company-wide quality policy and basic quality action guidelines
2. Guidance on consistency with the Company's management strategy pertaining to the quality activity policies at each business and plant (including M&E)
3. Supervision and assessment of quality assurance activities at each division and plant (including independent audits)
4. Guidance and recommendations for operation improvement based on the related assessments
5. Implementation of company-wide education and training related to quality assurance activities
6. Company-wide horizontal deployment of information that should be shared: information on useful quality improvement activities and problems at each division/plant
7. Supervision of response to serious product accidents and quality irregularities at the time of occurrence
8. Reports to management on important quality assurance activities of the entire company or each division/plant



2) Strengthen and raise awareness of the need for quality compliance

- Proper communication from top management
Top management indicating the serious commitment to quality compliance will be an activity for raising awareness among the employees who work under them. In addition, the president continues to hold Town hall meetings with employees on a regular basis to promote dialogue and transition to a more open workplace culture.
- Establishment of a Quality Compliance Month
In order to sustain an awareness of the importance of the lessons learned from the inappropriate conduct, May of each year is observed as Quality Compliance Month, which entails activities such as education and training sessions pertaining to quality compliance, as well as proper communication from top management.

3) Strengthen governance and internal controls

- Strengthen internal audit functions
Strengthening the internal audit functions of Internal Auditor Office in the headquarter, audit on the status of the establishment of internal control systems in quality management process and its operation, including quality inspections performed by Quality Management Office, is performed as appropriate. The status and the result of the audit is reported to the Board of Directors and the Executive Board as part of Materiality.
- Strengthen the internal whistleblowing system
Further awareness of the whistleblowing system will be promoted and the system will undergo further strengthening, including the establishment of a new leniency system (punishment reduction) for internal voluntary reports.
- Review the structure of the Board of Directors
The functions of the Board of Directors will be oriented toward monitoring. From April 1st, 2023, tasks delegated or appointed by the Board of Directors are overseen and executed by directors or executive officers over corporate departments and are by executive officers or important employees over business divisions, to make a clear distinction between the execution of business unit operations and supervision by the Board of Directors.
Regarding the composition of the Board of Directors, we will move forward in ensuring diversity through means such as considering an increase in the percentage of outside directors (independent Officer).

2.Measures to Prevent Recurrence at M&E

1)Strengthening the independence of quality assurance functions by deconcentrating the authority of the product division

In order to prevent interference with quality control operations by the product division, which is responsible for delivery dates and costs, quality assurance functions has been integrated into the Quality Control Department, which reports directly to the president of M&E.

This reorganization has been implemented as of June 1, 2022.

In addition,, by incorporating Quality Assurance Division Directors into the parent company's Quality Management Office for concurrent duty, there is a system in place for ensuring personnel control.

Moreover, the Quality Control Department now receives quality audits from the Quality Management Office. These changes strengthen the monitoring and supervision functions of the parent company. Also, on January 1st, 2023, the function of delivery and cost management has been separated from the product division and re-organized, in order to properly verify and manage the human resources and facility capacity of the plant.

Furthermore, regarding quality assurance function, monitoring and supervising function by third parties has been enhanced through the measures such as witness by external inspection bodies on nuclear products. We will consider expanding this practice in the future depending on the discussions with our customers.

2)Renewal of workplace culture

The report of the Special Investigation Committee suggests that the corporate culture within the Company is not conducive to bringing attention to internal problems.

We will work to create an open workplace culture where individuals can point out mistakes without fear, where such feedback is accepted, and where opinions can be freely expressed.

To this end, we are continually moving forward with activities that raise awareness for fostering a culture of quality and safety, including senior management sending the right kind of messages and gleaning feedback from employees through regular round-table talks, as well as through actions such as holding regular workshops and study sessions on quality and compliance, along with the displaying posters, inviting external lecturers.

Also, since divisions where human resources remain unchanged are susceptible to the onset of peer pressure, we will also promote personnel rotation across divisional boundaries in parallel with the review of business processes.

The effectiveness of these actions will be verified through means such as internal attitude surveys.

3)Digitization of inspection work

We will construct a digitalized inspection work system to prevent the kind of errors and omissions in inspection data that could be due to intentional or negligent errors in the process of preparing inspection reports.

The Office of Digital Transformation (established on July 1, 2022) is taking the lead in the digitization of inspection operations progressively at plants, including those of M&E, with M&E aiming to begin partial operation of new systems during the second half of fiscal 2023.

4)Appropriate investment of management resources in quality control

Given that the lack of personnel and equipment necessary for quality control, including inspections, was a factor in the occurrence of inappropriate conduct, we will, continuously, increase the number of personnel needed, invest in education to train inspectors, and invest in the necessary equipment and measuring instruments, including digitization.

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