

March 29, 2019  
Kobe Steel, Ltd.

**Notice on the Receipt of the Final Opinion of the  
Independent Quality Supervision Committee on the Progress of the Preventive Measures**

In the “Report on Misconduct in Kobe Steel Group” dated March 6, 2018 (hereinafter referred to as the “Kobe Steel Report”), Kobe Steel announced the facts concerning the misconduct including falsification of test results, which were revealed as a result of the investigation by the Independent Investigation Committee (hereinafter referred to as the “Misconduct”), as well as the cause analyses of the Misconduct, and the preventive measures.

Furthermore, in order to steadily implement the preventive measures described in the Kobe Steel Report, in April 2018, a Project for Restoring Trust, led by the President, was established. Various subcommittees and task forces were formed to serve as implementation units for the preventive measures, and concrete actions are being currently carried out.

In the same month, Kobe Steel established an Independent Quality Supervision Committee (chaired by Seinei Gondo, an attorney-at-law) composed of outside experts to monitor the progress of the preventive measures.

Kobe Steel has been continuously monitored by the Independent Quality Supervision Committee on the correction of the Misconduct and the progress of the preventive measures, and Kobe Steel has reflected the recommendations made by the Independent Quality Supervision Committee from an external objective perspective in the preventive measures.

Kobe Steel has just received the final opinion from the Independent Quality Supervision Committee on the progress of the preventive measures as shown in the exhibit sheet. In the conclusion of the final opinion, the Committee expressed its opinion that, Kobe Steel’s preventive measures have progressed on schedule, in the appropriate manner and with the appropriate content, and they are expected to continue to be implemented on an ongoing basis, together with the improvement of the quality management of Kobe Steel Group, under the monitoring of the Quality Management Committee, which will be established and composed of both outside experts and internal executive officers with the outside experts holding the majority. Therefore, monitoring of the progress of the preventive measures by the Independent Quality Supervision Committee will be completed as of the end of March 2019.

Kobe Steel, under the Quality Management Committee, will continue to strive to prevent the recurrence of such incidents by placing quality first.

The Quality Management Committee, referred to in the final opinion, is a committee Kobe Steel

voluntarily decided to establish in order to monitor the progress of the preventive measures and improve the quality management of the Kobe Steel Group on an ongoing basis, details of which are as follows:

#### Outline of the Quality Management Committee

- Establishment: April 2019 (Established as an advisory body to the Board of Directors)
- Purpose: (i) Monitoring of and advice to activities to strengthen the quality management in the Kobe Steel Group  
(ii) Continuous monitoring of the preventive measures against the Misconduct
- Members: Consisting of three (3) outside experts and two (2) internal executive officers (the chairman is selected among the outside experts)

EXHIBIT

March 28, 2019

To Kobe Steel, Ltd.

**Final Opinion of the Independent Quality Supervision Committee on the Progress of the Preventive Measures**

Kobe Steel, Ltd., Independent Quality Supervision Committee

Chairman: Seinei Gondo, Attorney-at-law

Member: Hiroshi Kawamura, Professor,

Doshisha University, Faculty of Law

Hiroyuki Nagano, Professor,

University of Hyogo

The final opinion of the Independent Quality Supervision Committee on the progress of the preventive measures (as of March 28, 2019) of the Misconduct, the act of shipping or providing customers with products, etc. that do not meet public standards or customer specifications (nonconforming products) by falsifying or fabricating inspection results, etc., discovered in Kobe Steel and its group companies, is as follows.

**1 Introduction**

The Independent Quality Supervision Committee is a temporary advisory body to the Board of Directors, which was established as part of the preventive measures of the Misconduct by Kobe Steel and its group companies, with the purpose of continuously monitoring the correction of the Misconduct by Kobe Steel and the progress of the preventive measures, from an external objective perspective, as well as discussing solutions to various problems that the Kobe Steel Group faces with regard to quality compliance. The schedule and activities of the Independent Quality Supervision Committee are as follows.

**[Schedule and Activities]**

The 1st April 17, 2018	Approval of annual plan draft, election of chairman, etc.
The 2nd May 17, 2018	Briefing on outline of the Misconduct
The 3rd June 7, 2018	Site inspection (Daian Works) Discussion with plant executives on the progress of the

	preventive measures, etc.
The 4th June 28, 2018	Update on the progress of the preventive measures
The 5th July 26, 2018	Interim summary of the Committee's opinions (reported to the Board of Directors on August 1)
The 6th September 6, 2018	Update on the progress of the preventive measures Confirmation of Committee Steering Policy
The 7th October 10, 2018	Site inspection (Moka Plant) Discussion with plant executives on the progress of the preventive measures, etc.
The 8th November 14, 2018	Update on the progress of the preventive measures
The 9th December 5, 2018	Update on the progress of the preventive measures
The 10th January 31, 2019	Site inspection (Kobelco & Materials Copper Tube Co., Ltd.) Discussion with the President and plant executives on the progress of the preventive measures, etc.
The 11th February 13, 2019	Discussion on the progress of the preventive measures
The 12th March 6, 2019	Discussion on the progress of the preventive measures
The 13th March 25, 2019	Final discussion on the progress of the preventive measures

In addition, today, the Independent Quality Supervision Committee requested Kobe Steel to confirm the facts related to the latest progress of the preventive measures as of March 28, 2019 and obtained confirmation of the facts from Kobe Steel.

## **2 Attitude of Management of Kobe Steel on the Implementation of the Preventive Measures**

In the Kobe Steel Group Integrated Report 2018 (hereinafter referred to as the “Integrated Report”) issued in August 2018, Mitsugu Yamaguchi, the President and CEO of Kobe Steel and the leader of the Project for Restoring Trust, which was launched to steadily implement the preventive measures, states that, “This sort of misconduct is absolutely impermissible for our Group, which calls manufacturing its livelihood. We have been profoundly reminded once again that respecting compliance is the basic foundation upon which a company exists, in addition to emphasis on safety, the environment, and disaster prevention. All Group executives and employees are working together as one to regain your trust. To this end, we must be brutally honest with ourselves on how to prevent such misconduct from occurring again, while drastically reforming our corporate culture and governance. I believe it is my foremost mission as President to ensure these reforms are made with a sense of urgency.” Accordingly, he has explicitly declared that he will be committed to compliance as the President and CEO and exercise leadership both internally and externally with respect to fundamental reforms of corporate culture and governance

through implementation of the preventive measures based on the “Report on the Misconduct in Kobe Steel Group” as of March 6, 2018 (hereinafter referred to as “Kobe Steel Report”) and he has been also visiting the manufacturing facilities and actively engaging in dialogue to directly communicate with general manager-level employees at each facility in reforming the corporate culture.

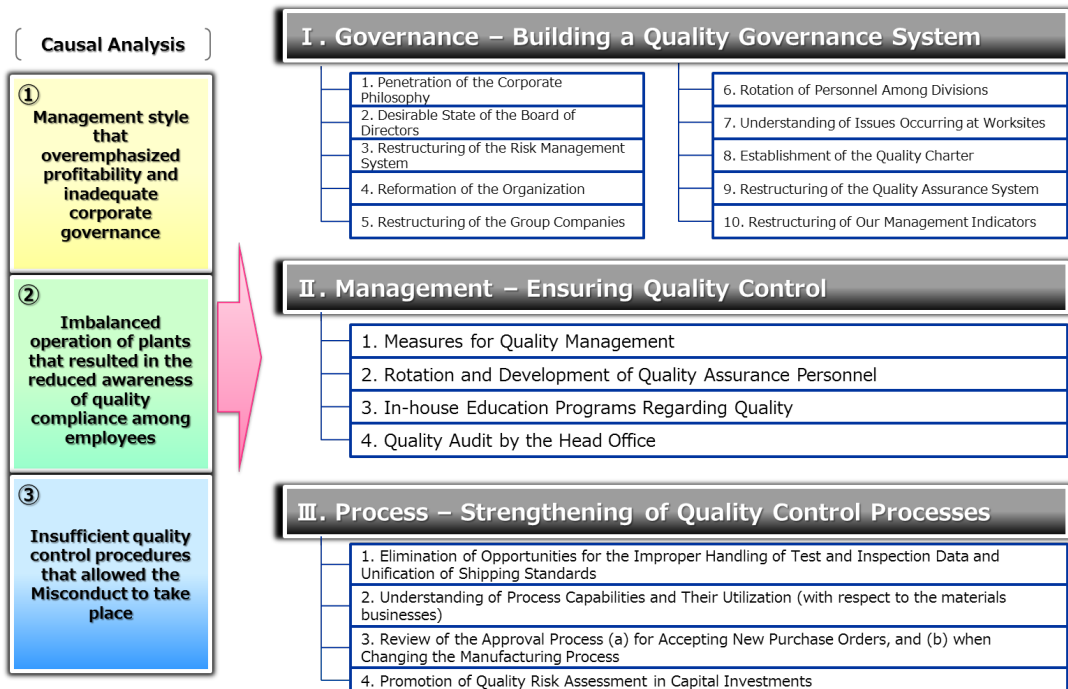
Messages from the Fusaki Koshiishi, the Executive Vice President and Representative Director overseeing companywide quality management, and, Shohei Manabe, the Director and Senior Managing Executive Officer overseeing companywide compliance, are also included in the Integrated Report, and it is clearly stated that Kobe Steel will strive to restore trust by improving and strengthening quality compliance and to strengthen employees’ awareness of compliance.

Accordingly, it can be regarded that the management team of Kobe Steel, including the President and CEO, is committed to implementing measures to prevent the recurrence of the Misconduct and has been demonstrating leadership with a reasonable degree of readiness.

In addition, the “Principles for Preventing Corporate Scandals (hereinafter referred to as the “Principles for Preventing Corporate Scandals”) announced by the Japan Exchange Self-Regulation Corporation on March 30, 2018, state that in the efforts to prevent the misconduct in listed companies (serious misconduct, improper conduct, etc.), the exercise of leadership by management, in particular, by the top management, is important, and the above-mentioned attitude of management is also valuable in the sense that it is in line with the Principles for Preventing Corporate Scandals.

### **3 Preventive Measures Stated in the Kobe Steel Report**

In the Kobe Steel Report, the root causes of the Misconduct were (1) the management style that overemphasized profitability and inadequate corporate governance, (2) the imbalanced operation of plants that resulted in the reduced awareness of quality compliance among employees and (3) the insufficient quality control procedures that allowed the Misconduct to take place (p. 40 of the Kobe Steel Report). In response to these root causes, Kobe Steel’s preventive measures against the Misconduct consist of three (3) pillars: I. Building a Quality Governance System, II. Ensuring Quality Control, and III. Strengthening of Quality Control Processes. Each of these three (3) pillars has been systematized to prevent a recurrence.



As described above, Kobe Steel’s preventive measures have been appropriately systematized in response to the root causes identified as a result of the investigation of the facts and these measures including the contents of the individual preventive measures, and thus can be regarded as having been basically formulated appropriately.<sup>1</sup>

#### 4 Status of the Preventive Measures Described in the Kobe Steel Report and the Appropriateness of the Individual Measures

The progress of Kobe Steel’s preventive measures has been publicly disclosed on a continuous basis on Kobe Steel’s website and as of March 28, 2019, we acknowledged that Kobe Steel had been taking the preventive measures as planned as follows.

<sup>1</sup> In addition to the Independent Quality Supervision Committee, the CGS Study Group (Corporate Governance Systems Study Group) (Chairman: Hideki Kanda, professor, Gakushuin University Law School) sponsored by the Ministry of Economy, Trade and Industry introduced Kobe Steel’s preventive measures as an example of the best practices regarding the “Compliance” aspect of group governance. This can also be regarded as proof of the appropriateness of Kobe Steel’s preventive measures (the second term of CGS Study Group’s 7th Meeting (held on June 22, 2018) see pages 21, 24 and 25 of “Protection in Group Governance” in Material 4: Explanatory Material to the Secretariat)

[Progress of the Preventive Measures (as of March 28, 2019)]

Measures to Prevent Reoccurrence of the Misconduct		Status	
<b>I Governance – Building a Quality Governance System</b>			
1	Penetration of the Corporate Philosophy	In Progress	
2	Desirable State of the Board of Directors	Completed	
3	Restructuring of the Risk Management System	In Progress	
4	Reformation of the Organization	Under Consideration	
5	Restructuring of the Group Companies	Under Consideration	
6	Rotation of Personnel Among Divisions	To be Implemented in April 2019	
7	Understanding of Issues Occurring at Worksites	In Progress	
8	Establishment of the Quality Charter	Completed	
9	Restructuring of the Quality Assurance System	Completed	
10	Restructuring of Our Management Indicators	To be Implemented in April 2019	
<b>II. Management – Ensuring Quality Control</b>			
1	Measures for Quality Management	Almost Completed	
2	Rotation and Development of Quality Assurance Personnel	Partially Completed	
3	In-house Education Programs Regarding Quality	In Progress	
4	Quality Audit by the Head Office	In Progress	
<b>III. Process – Strengthening of Quality Control Processes</b>			
1	Elimination of Opportunities for the Improper Handling of Test and Inspection Data and Unification of Shipping Standards	KOBELCO Quality Guidelines already enacted	Corrections and improvements are under review by quality audit.
2	Understanding of Process Capabilities and Their Utilization (with respect to the materials businesses)		
3	Review of the Approval Process (a) for Accepting New Purchase Orders, and (b) when Changing the Manufacturing Process		
4	Promotion of Quality Risk Assessment in Capital Investments		

In respect of monitoring and providing feedback on the specific preventive measures, the Independent Quality Supervision Committee received explanations from Kobe Steel on the specific preventive measures and reports on the progress of the individual measures and discussed them several times. We also conducted on-site inspections and interviews with plant executives of some of the sites where the Misconduct in question was discovered (see the “Schedule and Activities” described above).

In evaluating the preventive measures, we also considered whether they are consistent with the purpose of the Principles for Preventing Corporate Scandals as one factor.

The details and evaluations of the specific methods, characteristics and progress of each preventive measure are described below.

(1) Building a Quality Governance System

The quality governance system has been developed in an effort to correct the management style that overemphasized profitability and the inadequate corporate governance, which is one of the root causes of the Misconduct, and the purpose thereof is to improve the organization and system of the Kobe Steel Group and the mindset of the employees thereof regarding quality, which are the causes of the Misconduct.

A. Penetration of the Corporate Philosophy

From the viewpoint of penetrating the Kobe Steel Group's corporate philosophy, Kobe Steel has been implementing the "Core Values of KOBELCO, Next 100 Project" since 2017 and the intent of this activity is that all of the employees of the Kobe Steel Group form and continually develop a corporate group filled with "pride, confidence, passion and hope". By actively promoting this project from the viewpoint of preventing the Misconduct, Kobe Steel has been promoting activities to penetrate, among all of the employees of the Kobe Steel Group, the corporate philosophy of Kobe Steel ("Core Values of KOBELCO") and the "Six Pledges of KOBELCO Men and Women" as guidelines for realizing this philosophy.

Specific activities include the following:

- (a) The President and CEO directly communicated his ideas to the general managers of each business location who are core members of this project, and foremen who play important roles at the manufacturing sites, and had discussions with them, asking the general managers at each location to act as the "core implementers" for this project.
- (b) In July 2018, the Employee Awareness Survey, which targeted all of the employees of Kobe Steel, was completed and specific measures have been considered to address the issues identified in the survey.
- (c) The document titled "Customer's Voice", which summarizes the opinions and suggestions received from customers regarding the Misconduct, was prepared and has been used in in-house training.
- (d) In order to enhance two-way communication between supervisors and subordinates, October of each year is designated as "Core Values of KOBELCO Month" and each department has promoted "Dialogue Platform" activities to provide opportunities for both supervisors and subordinates to interact and honestly communicate with each other.

The initiatives described in (a) through (d) above are highly acknowledged as contributing to promoting for all of the employees the understanding that it is not in line with Kobe Steel's management policy to have the mindset that revenue and deadlines are prioritized over quality, and also acknowledged as establishing a corporate culture in which employees can consult with their supervisors without hesitation when they hear or discover anything that is questionable from the viewpoint of compliance.



Furthermore, it is pointed out in Principle 3 of the Principles for Preventing Corporate Scandals that “Companies should encourage two-way communication between the workforce and management, enabling both parties to share a sense of compliance. In this context, the awareness and behavior of middle management is highly crucial in collecting opinions from the workforce and conveying them to top management. Such enhanced communication will help detect cases of non-compliance at an early stage.” The above-mentioned activities to promote two-way communication between executives and employees in various positions were recognized as being in line with the purpose of the Principles for Preventing Corporate Scandals.

Therefore, it can be regarded that challenges regarding the penetration of the corporate philosophy have been carried out in the appropriate manner and with the appropriate content.

#### B. Desirable State of the Board of Directors

At the Ordinary General Meeting of Shareholders held in June 2018, a resolution was passed to appoint independent outside directors constituting at least one-third (1/3) of the total number of members of the Board of Directors, and to appoint directors overseeing risk management and quality management from the viewpoint of clarifying roles and responsibilities. In this way, Kobe Steel has reviewed the state of the Board of Directors to realize quality governance and strengthen compliance and has been promoting various systems attributable thereto.

[Establishment of a System Relating to the Desirable State of the Board of Directors]

- ① Independent Outside Directors account for one-third (1/3) or more of the board
- ② Established a Nomination & Compensation Committee
- ③ Abolished the chairman position and decided to appoint a Chairman of the Board from the independent outside directors
- ④ Appointed one (1) director for each of the materials, machinery and electric power businesses.
- ⑤ Appointed a director who oversees risk management
- ⑥ Appointed a director who oversees quality assurance
- ⑦ Established an Independent Quality Supervision Committee, comprised of external experts, as an advisory body to the Board of Directors

Accordingly, it can be regarded that improvements to the organizational system regarding the desirable state of the Board of Directors have been implemented in the appropriate manner and with the appropriate content.

#### C. Restructuring of the Risk Management System

In April 2018, Kobe Steel established the Compliance Management Department at its Head Office to reinforce the Group's risk management and compliance system, and through the activities of the Compliance Management Department, established a system to promote cross-business risk management, awareness reform, and education. In addition, ground rules that should be complied as a minimum standard within the Kobe Steel Group have been consolidated as "Standard Practices for the Group", and the introduction and maintenance of this standard are in progress.

Furthermore, Kobe Steel made a determination to regularly conduct a Compliance Awareness Survey, and in July 2018, it conducted the Compliance Awareness Survey for the first time after the disclosure of the Kobe Steel Report. Through such efforts, Kobe Steel has been striving to grasp the actual situation of compliance and has been studying to address the issues discovered through the Compliance Awareness Survey.

Based on the results of the Survey, the Independent Quality Supervision Committee pointed out that improvements should be implemented to make the internal reporting system easier and more reliable for employees. Responding to such remarks made by the Committee, Kobe Steel has begun efforts to improve the internal reporting system, including strengthening the protection of whistle-blowers.

Therefore, it can be regarded that restructuring of the risk management system has been reviewed and improved in the appropriate manner and with the appropriate content.

#### D. Reformation of the Organization and Restructuring of the Group Companies

In order to deal with concerns, including the insular organization, such as in the Aluminum and Copper Business where many of the long-running instances of the Misconduct were identified, personnel rotations among business locations and the Head Office have been carried out at Kobe Steel. In addition, Kobe Steel has commenced a study for restructuring the organization to strengthen its materials businesses.

Further, the Independent Quality Supervision Committee pointed out that it is necessary to fully consider how Kobe Steel becomes involved in each group company in accordance with its relationship and actual situation of compliance, while keeping in mind the basic principle that civil, administrative, and criminal liability at subsidiaries and affiliated companies should be borne by the subsidiaries and affiliated companies, and that the presidents of subsidiaries and affiliated companies should act with the awareness that they are responsible.

Responding to this, in order to strengthen group governance and establish a system providing more detailed support and management from the Head Office to each group company, Kobe Steel has reevaluated each group company from the viewpoint of risk management, and has started to strengthen the risk management system at some group companies.

In the Principles for Preventing Corporate Scandals, Principle 5 stipulates: “Companies should execute effective business management throughout the entire corporate group. When building its management structure, companies must pay sufficient attention to the importance of each group company and the potential risks involved in line with its overall structure and characteristics.” The above measures conducted by Kobe Steel are measures that take into account the characteristic of Kobe Steel whereby there was little interaction between the business locations and the Head Office, and reforms made to strengthen the governance of group companies that have been inadequately addressed in the past. These measures were recognized as being in line with the purport of the Principles for Preventing Corporate Scandals.

Therefore, it can be regarded that the initiatives for strengthening the governance of business divisions and group companies have been carried out in the appropriate manner and with the appropriate content, through the appropriate discussions on the reformation of the organization and restructuring of the group companies.

#### E    Rotation of Personnel Among Divisions and Understanding of Issues Occurring at Worksites

In addition to eliminating the risks associated with the immobilization of personnel in each business division in Kobe Steel, in order to develop human resources to have a broad perspective, revitalize the organization by mobilizing human resources, and strengthen

cross-business collaboration, the personnel rotation system among business divisions has been considered, and in some cases, personnel rotation among business divisions has already commenced. In addition to the above-mentioned dialogue activities led by the President and CEO, dialogue activities by the senior executives, including the heads of each business division, are also conducted in parallel.

Further, the “Quality Caravan Team”, consisting of employees of the departments of the Head Office such as the MONODZUKURI (Production System Innovation) Planning and Promotion Department, the IT Planning Department, the Technical Development Group and others, were established. They have been dispatched to each production site, including group companies and have consulted on practical problems occurred on a daily basis in order to collect risk information in the early stage. With respect to the dispatch of this Quality Caravan Team, as of March 28, 2019, of the 132 subject sites, 113 site<sup>2</sup> visits have been completed.

In the Principles for Preventing Corporate Scandals, Principle 1, Commentary 1-3 stipulates that “To safeguard against the problems that can come with clogged reporting lines, however, companies also need to establish structures for analyzing and processing internal whistleblowing, external complaints, and input from shareholders and investors as appropriate so that management can maintain access to accurate information should the conventional communication channels break down.” Activities of the Quality Caravan Team above can be regarded as a system that contributes to management’s access to risk information through routes that differ from the conventional communication channels and are in line with the Principle 1 of the Principles for Preventing Corporate Scandals because personnel in the Head Office with knowledge of quality issues visit production sites on a regular basis. The Independent Quality Supervision Committee pointed out that activities of the “Quality Caravan Team” are vital activities for the reasons above and that it is necessary to be implemented continuously, and according to Kobe Steel, it will be implemented continuously in the future as well.

Thus, it can be regarded that preventive measures regarding rotation of personnel among divisions and understanding of issues occurring at worksites have been implemented in the appropriate manner and with the appropriate content.

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<sup>2</sup> Out of the 132 subject sites, Kobe Steel has provided assistance such as information provision in order to resolve issues for 19 sites where the team has not visited yet.

F. Establishment of the Quality Charter, Restructuring of the Quality Assurance System, and Restructuring of Management Indicators of Kobe Steel

Based on the lessons learned from the Misconduct, Kobe Steel has already established the Quality Charter, which declares the concept of quality that underlies the corporate philosophy.

In January 2018, Kobe Steel newly established the Quality Management Department at the Head Office. Kobe Steel has developed a three-tier quality assurance system consisting of (1) an independent quality assurance organization at each manufacturing site, (2) a quality assurance organization under the direct control of each business division, and (3) the Quality Management Department in the Head Office. In addition, the quality assurance organization under the direct control of the business division in (2) has a multiple management system by appointing a person who concurrently serves at the Quality Management Department at the Head Office.

Furthermore, from the viewpoint of realizing sustainable improvement of corporate value without focusing solely on profit evaluation, the establishment of business management indicators is being considered from each of the viewpoints of legal compliance, safety, quality stability, economic efficiency, customer satisfaction, employee awareness, and environmental impact based on the basic requirements of (1) being able to quantitatively and comprehensively grasp business continuity risks, (2) being able to perform internal control functions all over and (3) being able to endure long-term operations.

Therefore, it can be regarded that preventive measures regarding the establishment of the Quality Charter, the restructuring of the quality assurance system, and the restructuring of management indicators, etc. have been implemented in the appropriate manner and with the appropriate content.

(2) Ensuring Quality Control

This is an effort to prevent the recurrence of misconducts related to quality, including the Misconduct, by instilling awareness of quality compliance in the Kobe Steel Group as a whole and strengthening quality compliance.

Kobe Steel implemented major efforts as follows.

A. Measures for Quality Management

From the viewpoint of strengthening quality management, Kobe Steel established the Quality Management Department in January 2018 (with a staff of 30 as of March 28, 2019) with the purpose of supervising the quality assurance organization of each business division as a Head Office organization, conducting quality audits, collecting risk information and identifying issues concerning quality in each business division, and regularly disseminating the information to the entire group as needed, as well as regularly reporting and sharing it with management and conducting the above in line with the objectives.

The Independent Quality Supervision Committee believes that it is important to share information on quality issues at other factories and locations throughout the entire company, including management. In the Principles for Preventing Corporate Scandals, Principles 4 and commentary 4-1 stipulates that “That initial corrective action then lays the groundwork for business improvements, which companies can shape by extending their investigations whether similar non-compliance or analogous situation exists in other departments, divisions, and group companies, and identifying common root causes. Making that cycle a self-propelling, continuing element of corporate culture can stop non-compliance from developing into a major scandal. This effort helps deter non-compliance from occurring in the first place.” The Quality Management Department has been endeavoring as a department to collect quality risks that exist throughout the Group and to report and disseminate these risks to management. This system is considered to be exactly in line with the Committee’s awareness of issues and the purpose of the Principles for Preventing Corporate Scandals.

In order to ensure the independence of the quality assurance organization from the sales departments and the manufacturing departments by establishing a quality assurance organization under the direct control of the business division, which is the second tier of the three-tier structure described in the quality assurance system ((1)-F), and to prevent the recurrence of the Misconduct and to realize the “reliable quality” indicated in the Quality Charter, Kobe Steel established the Quality Guidelines in May 2018 (the Quality Guidelines constitute a part of Kobe Steel’s operational rules as a subordinate rule of the quality assurance regulations). The Quality Guidelines clearly stipulate that the quality assurance organization should establish a quality assurance system independent of the design/manufacturing departments and the technical departments. The establishment of the

system based on these Quality Guidelines has already been completed in Kobe Steel and group companies.

In addition, a Group Quality Leader Meeting was held for quality assurance staff from Kobe Steel and group companies to follow up on related measures and share information (held in Japan, as well as in the United States, Southeast Asia, and China). This meeting is planned to be held continuously in the future.

Therefore, it can be regarded that preventive measures for quality management have been implemented in the appropriate manner and with the appropriate content.

#### B. Rotation and Development of Quality Assurance Personnel and In-house Education Programs Regarding Quality

From the viewpoint of rotation and development of quality assurance personnel, Kobe Steel has prepared a Quality Assurance Human Resource Map for Kobe Steel and group companies, and it is planned that personnel rotation between the Head Office, each business division, and group companies will be undertaken from FY 2019 for promoting personal communication. Therefore, Kobe Steel has already started to hire experienced quality assurance personnel and activities to strengthening the education and training of persons in charge of the quality assurance.

For these activities, Kobe Steel has developed requirements and evaluation systems for quality assurance personnel shared by the Kobe Steel Group, and Kobe Steel is systematizing education and reflecting these requirements and evaluation in education and training programs. In addition, Kobe Steel is devising quality-related risk countermeasures that include training in FMEA (Failure Mode and Effect Analysis<sup>3</sup>), FTA (Fault Tree Analysis<sup>4</sup>) and DR (Design Review<sup>5</sup>).

Further, quality and compliance training has been implemented for heads of departments and sections (approximately 600 persons) of Kobe Steel and domestic group companies. In

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<sup>3</sup> Failure Mode and Effect Analysis refers to the implementation of preventive measures to reduce risks by identifying and quantitatively weighing the risk of failures that may occur in the post-design process, including the types of product failures, at the design stage.

<sup>4</sup> Fault Tree Analysis refers to the method in which the causes of unfavorable events, such as product failures or failures, are visualized in a tree form and analyzed, the root causes of problems are identified and preventive measures are taken.

<sup>5</sup> Design Review refers to design and development review at every stage from development to the completion of mass production. By conducting design review in the order-receiving process, it is possible to avoid the risk of receiving orders with specifications that are difficult to mass-produce from the viewpoint of manufacturing capacity, etc.

addition to providing quality education through e-learning to employees other than those eligible for the said training, Kobe Steel has been creating opportunities to share the status of the project to regain public trust through the Quality Site established on the Kobe Steel Group's intranet.

As the Independent Quality Supervision Committee has commented, since quality assurance is extremely important but is also considered to be a difficult department to evaluate, it is necessary to consider how personnel evaluations should be conducted, for example, by establishing internal qualifications and providing incentives; and it is necessary for a department independent of the factories and locations to conduct personnel evaluations of the members of the Quality Assurance Department. Based on these comments, Kobe Steel has placed personnel with authority in the Head Office's supervisory departments for professional human resources functions, including quality assurance, and has been building a system in which the supervisory departments can voluntarily implement planned rotations and training.

Comprehensively considering the above, it can be regarded that preventive measures regarding rotation and development of quality assurance personnel and in-house education programs regarding quality have been implemented in the appropriate manner and with the appropriate content.

#### C. Quality Audits by the Head Office

The Quality Audit Section of the Quality Management Department has been conducting quality audits of Kobe Steel and group companies (a total of 117 sites<sup>6</sup>) as part of the measures to support quality compliance at each business division conducted by the Head Office.

As of March 28, 2019, the quality audits for all 117 subject sites have been completed. Upon conducting such quality audits, the following items were conducted as a part of the quality audits: (1) reviewing the status of compliance with laws and regulations and customer specifications; (2) reviewing the effectiveness of quality management systems from an anti-fraud perspective; (3) reviewing the awareness of managers, their attitudes and the implementation of education and training at sites; and (4) reviewing the status of the

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<sup>6</sup> The plan was for 118 sites to be subject to the quality audits in FY2018; however, as a result of the sites being partially reorganized (separation and integration), 117 sites are subject to the quality audits.



implementation of preventive measures.

With respect to support by the Head Office, the Independent Quality Supervision Committee pointed out that, for example, the constraints on human resources and other resources in small group companies could hinder capital investment for automation of test and inspection equipment, etc. In accordance with these comments, Kobe Steel has confirmed the sufficiency of human resources and the necessity of capital investment through the support activities by the dispatched Quality Caravan Team, presented specific examples of other offices that have already implemented automation of test and inspection equipment and introduced manufacturers of test machines. In this way, Kobe Steel has been working to alleviate the burden on group companies by providing such support.

In consideration of the facts above, it can be regarded that the quality audits have been implemented by the Head Office in the appropriate manner and with the appropriate content.

(3) Strengthening of Quality Control Processes

The measure in the title above is an effort to construct quality control processes to remove the environment that enabled the Misconduct to occur and to eliminate the opportunities for violations with respect to quality.

With regard to this effort, the Independent Quality Supervision Committee commented that it is important to endeavor to ascertain and confirm the quality control and quality assurance systems of related parties that are not necessarily part of the Kobe Steel Group, such as the suppliers of materials and parts to Kobe Steel (so-called upstream suppliers in supply chains) and third-party vendors thereto. In accordance with such comments above, Kobe Steel has considered ways to strengthen its understanding of the actual situation and has been planning to do so by expanding the scope of the quality audit to be conducted by the Quality Management Department of the Head Office at each manufacturing site to include determining whether or not the site under review has a sufficient understanding of, and conducts a sufficient review of the quality control and quality assurance systems of its suppliers and subcontractors.

The Aluminum & Copper Business, where it was confirmed that a large amount of the Misconduct took place, has implemented measures (i) to (iv) below as emergency measures immediately after the Misconduct was discovered and these emergency measures have been

continuing as of March 28, 2019. (In addition, measures (i) and (ii) below will continue until permanent measures have been completed.)

① Comparison of Test/Inspection Data and Mill Sheets

Prior to shipment, the head of the plants or the manager of the quality assurance department shall compare the description in all of the mill sheet test certificates against results in the test / inspection source data.

② Review of Manually-Entered Test/Inspection Results

Someone higher ranking shall double-check the test/inspection data manually entered by factory workers.

③ Restrictions on Access to Databases

Access rights to database on which test/ inspection results are stored are restricted by the Quality Assurance Department and the System Administration Department and access is restricted by passwords and edit history is left in order to verify whether or not the data was altered after the fact.

④ Adjustment of Shipping Standards

One of the causes for the data falsification was the fact that internal standards that are more stringent than customer specifications were used as shipping standards (in some cases, numerical falsifications may have occurred due to a failure to meet internal standards even though customer specifications were met). Based on this fact, upon approving shipment, customer specifications shall be used as a determination standard.

In addition to the emergency measures above, it was recognized that, as preventive measures, Kobe Steel has been considering and implementing the following concrete measures to establish long-term and permanent quality control processes that could not be implemented as emergency measures because of time constraints.

A. Elimination of Opportunities for the Improper Handling of Test and Inspection Data, and Unification of Shipping Standards, and Understanding of Process Capabilities and Their Utilization

First, in order to eliminate opportunities for the improper handling of the test and inspection data, Kobe Steel and Group Companies established capital investment plans for the automation of the testing and inspection procedures. According to these capital investment plans, approximately 1,800 testing/inspection machines will be automated by the end of FY2020 and approximately 80% will be completed by the end of FY2019.

For the tests and inspections for which the automation of the testing and inspection procedures is not advancing or is technically difficult, the Head Office is also actively involved in studying solutions by understanding the actual situation and problems through the activities of the Quality Caravan Team above. In addition, with regard to such tests and inspections for which the automation thereof is technically difficult, from the viewpoint of reducing the risks of one-person operation, it was recognized that improvements have been made by establishing a system such as confirmation of work logs and four-eye check process.

Next, from the perspective of optimizing shipping standards, the existence of dual shipping standards (customer specifications and internal standards) led to the Misconduct because the products did not meet the internal standards even though they satisfied the customer specifications. As such, it is confirmed that Kobe Steel has applied customer specifications and not internal standards as the sole standard for approving shipments. In addition, the Independent Quality Supervision Committee pointed out that it was important to promote stability of essential quality.

In response to this remark, Kobe Steel has been aiming to understand and improve the process capability by utilizing the internal standards for further stable quality control and the Process Capability Indicators.

With respect to understanding the process capability, from the viewpoint of appropriately grasping the manufacturing capacity of each business division and manufacturing location, Kobe Steel is promoting a system in which the Process Capability Indicators<sup>7</sup> is understood from an intended perspective (i.e., production lines, product types, test/inspection items, customers) and used to make decisions in the order authorization process.

In addition to clarifying this point in the “Quality Guidelines” that Kobe Steel has established, as part of concrete countermeasures, the order authorization process has been clarified; for example, it is required to take measures, such as enhancement of the manufacturing equipment, to improve the process capability or relax the specifications if the production capacity is insufficient for the specifications proposed by customers.

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<sup>7</sup> Process Capability Indicators is an indicator of the ability to produce a product within a specified tolerance when manufacturing a product.

Further, the Independent Quality Supervision Committee pointed out that it is necessary to continuously improve process capabilities by, for example, improving technical strength from a medium-to-long term perspective, on the belief that another kind of quality problem may occur unless Kobe Steel regards the occurrence of defective products as an opportunity to improve its technical strength, differentiates itself from competitors by constantly investigating the causes of such defective products and taking technological measures, and accordingly leads to improvements in manufacturing capabilities.

Based on these remarks, Kobe Steel has been working to grasp the degree of variation in the quality properties of the manufacturing process against the required standards by applying the Process Capability Indicators, etc., based on the assumption that it is essential to accurately grasp the process capabilities itself for the effective and continuous improvement of its process capabilities. In addition, Kobe Steel has been considering continuously utilizing the degree of variation in the quality properties thus ascertained in order to examine measures to improve process capability through capital investments and to review the process capability in the order authorization process.

Comprehensively considering the situation above, it can be regarded that Kobe Steel's initiatives, including elimination of opportunities for the improper handling of test and inspection data, unification of shipping standards, understanding of process capabilities, and their utilization, have been implemented in the appropriate manner and with the appropriate content.

- B. Review of the Approval Process (a) for Accepting New Purchase Orders and (b) when Changing the Manufacturing Process, and Promotion of Quality Risk Assessment in Capital Investments

The Independent Quality Supervision Committee pointed out that one of the causes of the Misconduct was to receive new orders that (1) exceeded the production capacity or (2) could have been prepared at the prototype stage but could not be prepared at the time of mass production. Therefore, the Independent Quality Supervision Committee pointed out that it was important for Kobe Steel to properly understand its own production capabilities and to carry out activities to improve the mass production process.

Based on these remarks, each business division of Kobe Steel has decided to thoroughly conduct DR (design review) in the order authorization process, and has been developing

procedures to reduce the risk of receiving orders with impractical or excessive specifications from the viewpoint of manufacturing capability, etc., and the Head Office has been promoting the development companywide.

In addition, when significant changes are made to the so-called 4Ms (i.e., manpower, machine, material, and method) at manufacturing locations, Kobe Steel has been developing procedures to appropriately assess beforehand the effect of such changes on quality and conformity with customer specifications, and to prevent the occurrence of quality defects or inconformity with customer specifications due to such changes of 4Ms.

It is also stipulated in the Quality Guidelines above that these procedures should be developed, and it is recognized that Kobe Steel has been making efforts to improve the order authorization process and the quality risk assessment for the entire Kobe Steel Group.

Next, with respect to promotion of the quality risk assessment, the previous capital investment standards focused on the rate of return and the cost payback period. This made it difficult for the Company to consider quality related investment matters (such as introducing new test and inspection devices). Therefore, Kobe Steel has introduced a new capital investment standard that includes the view to mitigate quality risks, and has been promoting the mechanism for appropriate capital investment from the viewpoint of mitigating quality risks.

In addition, it is recognized that Kobe Steel has been planning to promote quality risk assessment and utilize it in decisions for key capital investments after FY 2019.

In consideration of the facts above, it can be regarded that review of the approval process (a) for accepting new purchase orders and (b) when changing the manufacturing process, and promotion of quality risk assessment in capital investments in Kobe Steel have been implemented in the appropriate manner and with the appropriate content.

## **5 Establishment of the Quality Management Committee**

The Independent Quality Supervision Committee has heard from Kobe Steel that it would establish the Quality Management Committee as an advisory body to the Board of Directors from April 2019 for the purpose of (1) monitoring of and proposals for activities to strengthen the quality management in the Kobe Steel Group and (2) continuously monitoring of the preventive

measures against the Misconduct. The Committee consists of five members: three outside experts and two internal executive officers. The chairman of the Committee is selected among the outside experts.

Kobe Steel plans that the Committee will actively and constructively hold continuous discussions concerning quality management and the application thereof to the practice between outside experts with expertise in quality and internal executive officers who have extensive knowledge with the specific circumstances of Kobe Steel, as well as continuously monitor the progress of the preventive measures.

The Independent Quality Supervision Committee expects that the monitoring of the progress of the preventive measures against the Misconduct will be objectively continued by the activities of the Quality Management Committee and that in-depth analyses and deliberations of the methods of quality management and application thereof to the practice will be conducted, and that Kobe Steel will implement various measures based thereon.

## **6 Conclusion**

As described above, although some preventive measures have been under consideration or implementation as of March 28, 2019, it can be regarded that Kobe Steel's preventive measures have progressed on schedule.

Furthermore, the specific content of the preventive measures can be deemed to be effective from the viewpoint of eliminating the root causes of the Misconduct. In addition, because the preventive measures taken by Kobe Steel are in line with the Principles for Preventing Corporate Scandals, it can be regarded as appropriate.

Based on the above, Kobe Steel's preventive measures have progressed on schedule, in the appropriate manner and with the appropriate content, and they are expected to continue to be implemented on an ongoing basis, together with the improvement of the quality management of Kobe Steel Group, under the monitoring of Quality Management Committee, which is composed of both outside experts and internal executive officers with the outside experts holding the majority. Therefore, monitoring of the progress of the preventive measures by the Independent Quality Supervision Committee will be completed as of the end of March 2019.