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Established	March 1. 2020
Revised	November 13. 2020

REGULATIONS OF CORRECTIVE AND PREVENTIVE ACTION

The 2nd Edition

Musashi Seimitsu Industry Co.,Ltd.

Revision Date	GLOBAL REGULATIONS OF CORRECTIVE AND PREVENTIVE ACTION	Global Regulations No.
November 13. 2020		MGP0400-31

Contents

Article 1 (Purpose)

The purpose of these regulations is to maintain and improve product quality and processes by taking corrective and preventive action for quality defects and process nonconformities that occurred at customers and within groups (including between Musashi sites).

Article 2 (Scope of application)

The scope of these regulations applies to corrective actions for quality defects occurred at customers, between Musashi production sites and in-house (within the site), and preventive actions based on this, at each site, for new model event parts, mass production parts, and service parts. In addition, regarding non-conformity of quality system, internal quality audits, and corrective actions for external quality audits, these regulations are not applicable and it shall be performed with the rules for internal quality audit at each site.

＊ Article 3 (Acceptance and handling of quality defects)

1) When the customer service department of each site receives information such as product troubles, it develops based on the flow of Appendix-1. Each site refers to the importance index and the GQI index in attached table-1 and ranks non-conforming, at the same time, register in the Quality Trouble (hereinafter referred to as QT) system of Space Finder (hereinafter referred to as SF). When repairing a defective product, perform repairing and re-inspection with an approved method by quality department of each site. If the severity index is A, report it to the general manager of MSI Quality Assurance department and the responsible person of Quality Assurance. In addition, an emergency quality meeting may be held by Quality Assurance. The meeting shall be held as below.

Holding requirements: The quality assurance responsible will decide considering the impact on quality (in the case of significant decline in trust and a large impact on management).

Attendee	Role	Authority
Quality Assurance Responsible (Chairperson)	Summery of urgent quality meeting	Approval of corrective action
Head of related department	Promotion responsibility of own de	Approval of investigation result
Responsible for correction *1	Promote correction	Decision of corrective organization and implementation of correction
Quality Assurance GM	Total progress control	Instruction to the responsible dept.
Quality Assurance Mgr.	Promote based on minute	

*1 General manager of responsible department or president of site in case of oversea sites.

2) The treatment cost due to quality defects between sites shall be processed based on the flow of Appendix-3,4.

Article 4 (Cause investigation)

The head of the responsible department confirms and analyzes the actual defective part, and gives instructions for cause investigation of nonconformity and recurrence prevention. When it becomes clear that our company is not responsible by the analysis result of the defective part returned from the customer, report it to the customer and record it in the “Treatment contents” of the QT system. (Including reporter, date, customer contact, etc.)

Article 5 (Corrective action and report)

(1) Implementation of corrective action

The head of the responsible department of each site shall implement corrective action. (See appendix-1) The head of the responsible department shall manage and handle holding products (including reworked products and specially selected products).

The due date for corrective action is based on the following, but any instructions required by customer shall be followed.

①When the importance index is A rank, within one week of work day based on the calendar of each site

②When the importance index is except for A rank, within two weeks of work day based on the calendar of each site

The report format basically uses the analysis report attached in the QT system.
When using other formats, create contents reflecting the items described in the analysis report.

(2) Effectiveness check of corrective action

1) When the importance index is A rank or *a* rank
The general manager of the responsible department of each site confirms the state and the effectiveness of corrective actions based on analysis report.
The head of responsible department of each site reports corrective contents to MSI QA general manager and QA responsible person.

2) When the importance index is except A rank or *a* rank
The manager of responsible department of each site confirms the status and the effectiveness of corrective actions based on analysis report.

Article 6 (Horizontal development)

The responsible department of each site shall implement corrective actions and the controls taken horizontally to ensure that similar nonconformities do not occur with other similar products and processes of the manufacturing department and record them in “Analysis Report”.

MSI Quality Assurance department performs horizontal development to each production site when the importance index is A rank or *a* rank. The horizontal development is operated and managed by QT system.

In addition, if a defect that affects the customer's production line occurs except A rank and *a* rank, or if a defect occurs due to an inadequate quality system, it shall be informed to Quality Assurance department and horizontally deployed if the manager or the responsible of MSI Quality Assurance department instructs horizontal deployment.

Article 7 (Preventive action)

The responsible department of each site verifies that corrective contents are reflected to FMEA and reviews it as necessary. In addition, it considers the review of control plan and submits it to customer as necessary.

Article 8 (Effectiveness verification)

The responsible department of each site checks the effectiveness of corrective action and horizontal development described in “Analysis Report” and inputs the results to QT system.
If there is a defect in the validity check result, follow up and enter the correction check result into the QT system.

* Article 9 (Storage of records)

The responsible department of each site shall display confidential rank (Table-2) for correction documents and save it in the QT system. Documents stored except for QT system shall be kept for the specified period by each site. Any storage period required by customer shall be covered.

* Article 10 (Access and notification of these regulations)

This regulation shall be distributed to the related members of Musashi Group .
The recipient shall keep their members informed on these regulations and revise subordinate documents and rules as needed.

Supplementary Rule

1. Decision of Establishment/abolishment

Any inquiry on these regulations should be made to Quality Assurance Division, MSI.
The establishment/abolishment of this regulation shall be issued based on approval by General Manager of Quality Assurance.

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Revision History

Date	Edition	Description	Approval	Audited	Prepared
March 1. 2020	1	New global regulations of corrective and preventive action with the establishment of Musashi group quality manual.	Matsui	Muramatsu	Midori
November 13. 2020	2	Added processing of costs due to quality defects between sites to Article 3, added Appendix-3 and 4, added confidential rank viewpoint to Article 9, and reviewed Appendix-1	Horibe	Midori Hamai	Y.Suzuki
				Approved	

Planning department : Quality Assurance department

<Nonconforming Classification>

Table-1

Importance index

		Trouble degree (Defect progress)			
Impact	Location / Hazard level	Market / Complete vehicle	Customer acceptance/Assembly	Within Musashi (between subsidiaries)	Within Musashi (internal)
	Lead to critical quality problem (Car accident, breakage etc.)	A	A	a *1	a *2
	Lead to decline of function and capability (Noise, Worn, roductivity etc.)	B	B	C	
	Except for above	C	C	D	
Responsible section is not decided (Under investigation/analysis)		Register as "M" because a pass / fail investigation of parts for completed car problem is required	When responsible section is not decided, it registers as "M".		
		After investigation / analysis ・change to the suitable rank ・change to "N"(information) when the problem is not our responsibility			

*1 : Register as a defect rank "a" of a product that leads to a critical quality problem found between and within Musashi group sites.

*2 : If a defective product that is detected at the Musashi group site and leads to a critical quality problem is set as an inspection item in the occurrence process and is found during the inspection, it will not be registered as rank "a".

GQI Index

Importance classification		Number of defects			
	Quantity	100 ≦	10 － 99	2 － 9	1
	Point	70	50	10	2
A	100	**170**	**150**	**110**	**102**
B	20	**90**	**70**	**30**	**22**
a	4	**74**	**54**	**14**	**6**
C	4	**74**	**54**	**14**	**6**
D	2	**36**	**26**	**6**	**2**

＊ In case the nonconforming contents will be changed after judgement at receiving information, information input department will change the rank to suitable nonconforming rank.

＊ Importance index D is evaluated with the half of calculated GQI.

<GQI evaluation objective>

GQI evaluation objective shall be only quality defects occurred at customer, between production sites, and in-house (in site) of mass production products.

Defects of new model, prototype, and service parts are not counted GQI, but register to QT system

*Table-2

＜Confidential Rank Benchmark＞

Confidential Rank	Definition	Benchmark
S secret	It belongs to the highest important secret and is not known to anyone but a very limited number of people.	Materials on critical field claim (After the customer decides on action in field, it is equivalent to handling **A** secret delivered quality claim)
A secret	It belongs to the second most important secret after **S** secret, and it is not known to anyone other than a limited number of people.	Analysis record of field quality claim
		A secret analysis record of delivered quality claim
		A secret analysis report
		Compensation claim report of field claim

Corrective and preventive action flow chart

Information flow
system input

Timeline (Indication)	Dept./Defective rank (Customer, In-house, Musashi group sites, Suppliers)	Oversea sites	JAPAN (MSI, KMS, MCT)	MSI related department	MSI Quality Assurance	Executive Room	OUTPUT

(Quality information)

Start — Defect information

Acceptance of defective product information (Quality contact department)

Judge importance index / resp. department *2

Judge importance index / resp. department *2

Judge importance index / resp. department *2 (QA Mgr.)

・*2 has a authority for stop and release by occurring defects and occurrence prevention. General manager of each department has a authority for stop and release of shipment.

Within 4h — Importance Index (A) — Within 4h — Register to QT system

Within 12h

Importance index(A)

Confirm action states (QA GM /

Importance Index (A) — Within 12h

Within 24h — Report the states to president & head of related dept.

☆Promote correction and horizontal development (Internal department, Supplier) (Resp. department + Related department)

Urgent Quality Meeting

Instruction

Urgent quality meeting will be held as necessary

Records of defects treatment result

Importance Index (A) — Approval

Due date — Report to the department

Complete correction and horizontal development (Responsible dept. Mgr./ General Mgr)

Report

Confirm action states (QA GM / QA Resp. person)

Report the states to president & head of related dept.

Instruction

Instruction

・Record to analysis report

Register to

Importance index (A,a) or there is special instruction

After 1 week — Promotion of horizontal development

Issue horizontal development (QA dept.)

Register to

Confirm completion of horizontal development

Register to QT

1 month after correction

After 1 month — Effectiveness verification (Responsible department)

Register to QT

3 months after correction

After 3 months — Follow up of effectiveness verification (Responsible department) (Implemented as necessary)

Register to QT system

Ask analysis

Start — Ask analysis for problem occurred in market or completed car

Acceptance of analysis contents (In charge of customer contact department)

Judge importance index

Judge importance index (Production Quality

Judge importance index (QA Mgr.)

・*1 object is applicable to A of market and completed car

Within 4h — Within 4h — Register to QT system

Within 12h after receiving parts

After receiving products within 12h — 1st analysis (Responsible dept. + Related dept.)

Status check (QA GM / QA Resp.person)

Judged by contents

Within 24h after receiving parts — Report the states to president & head of

Instruction

・*1 controls by special control of QT system and inputs information timely

Importance index(M*1)

After receiving products within 24h — Move to ☆ process and handle with trouble based on decided defective rank

Urgent quality meeting after determined responsible dept.

Urgent quality meeting will be held as necessary

Register to

Analysis Record [Analysis Report]

Entry Procedure

Theme	Enter brief description of the model, part name, symptom etc. If "Defect countermeasure request" or "Market Quality information (Analysis/countermeasure request)" have already issued, use the same theme.
Part No.	
Part Name	

S secret A secret
Attach confidential mark

Date : YYYY/MM/DD

Created Section	Approved by	Confirmed by	Created by

Enter the date of issue

Occurrence Situation (Symptom, Complaint, Number of occurrences, Treatr

Date		Quantity	

・Enter model and type
・Enter where the problem detected (In the market, at Honda etc.)
・Symptom or claim at the time of trouble occurrence
・Enter the occurrence date (Year / Month / Day)
・Mileage, registration date, frame No.(if it detected in the market)
・Enter the number of occurrence
・Enter details of corrective action taken for the problem model or parts.
・Production plant where the nonconforming product has occurred.

＊Enter necessary information if there are any besides the above.

Determine the facts (Part analysis, factor analysis, production quality status)

1. Enter the outline (measurements) of the trouble area
 ①Enter trouble area clearly.
 ②Enter results against criteria/standards. (assembled condition, dama accuracy, material, strength etc.)
 ③Enter lot number clearly
 ④Enter summary of conclusion from the claim part analysis

2. Process line and process investigation
 ①Enter occurrence process and outflow process clearly.

3. Enter cause analysis for problem occurrence and outflow.
 ①Enter results of occurrence cause and outflow cause.
 ②Verify causes resulted in the occurrence, after having lined up procedures and rules defined in operation standards.
 ③Enter specifically what was the problem and what was missing.

4. Enter the understanding of situation of outflow products
 ①Enter results of investigation on the situation at the time of discovery of the problem lot (any changes to 4M or not).
 ②Enter investigation results of history of the same symptoms in the past.
 ③Understand the current status by daily operation note, quality check records, X-R control chart etc.

5. Understand the applicable scope of occurrence (period, occurrence ratio, number of units) and enter the reason
 ①Make an estimation based on changes made to lot, man, model, equipment, condition, operation methods, or environment.

Find the Cause （Occurrence mechanism・Reproduction test・Why why analysis）

When occurred defects, sort out the facts that occurred at the production site, and investigate the mechanism with 5 actual principles.

1. Enter the causes of occurrence cause and outflow cause
 ①If the cause is due to tangible factors, investigate equipment, jigs, tools, and inspection tools etc.
 ②If the cause is due to intangible factors, conduct interviews with the persons involved with the failure at the time of occurrence, and determine the facts.

2. Describe reproducibility of the symptom against the cause
 ①Verify by reproduction test, 5 actual principles (Production site, fact, actual product, theory, rule)

Why Why Analysis
The occurrence cause and outflow cause are linked to the true cause rather than the trouble cause, and the cause-result relation is clarified in conjunction with the process investigation, reproduction test, and

Example:
Occurrence cause
①・・・・
②・・・・
Occurrence measure
①・・・・
②・・・・
Outflow measure

Appropriate Countermeasure （Detail, Estimated effects, PPA）

1. Enter description of C/M and person in charge
 ① Device the C/M into occurrence and outflow factors.
 ② Make sure that the C/M is taken to intangible attributes, even if the cause was originated in human errors.

2. Enter the date of C/M, applicable parts, model.

3. Describe prediction of C/M effectiveness for temporary C/M or for permanent C/M.
 ①Estimated effectiveness by reproduction test or quality inspection data
 ②In case it is a temporary measure, describe transition period to permanent action.

4. Describe C/M for already-shipped units and enter the necessity of handling parts stock.

＜Action completion・Confirmation＞
Check the states 1 month after the countermeasure

Confirmation of C/M Effectiveness (Actual Outcome)

1. Enter the check result of action effectiveness of process or shipped products or checked timing.
①Enter the result by comparing the difference of quality data before and after taking measures.

2. Enter viewpoint for the frequency of defects (Possibility of defect occurrence one after another)
①Enter the corroborative occurrence estimation by occurrence mechanism / reproduction test /process investigation result.

＜Effectiveness verification＞
Confirm after 1 month of C/M implementation as a check of C/M effectiveness

edback to the source （Reflection on system & mechanism）

) - /P - FMEA Review Need ・ No need
-horizontal development Need ・ No need Circle suitable one

When it uses specified form of customer, it is necessary to enter whether if it needs to reflect to FMEA or not.

1. Enter the reflection to system of item for keeping hard action continuously.
①Enter reflected contents to design requirements / drawing / standards / references
2. Include a system that eliminated cause of the true causes
①Similar parts / Similar line / Horizontal development to suppliers
②Regulation, Standard, Past-trouble, FMEA etc.

Why Why Analysis

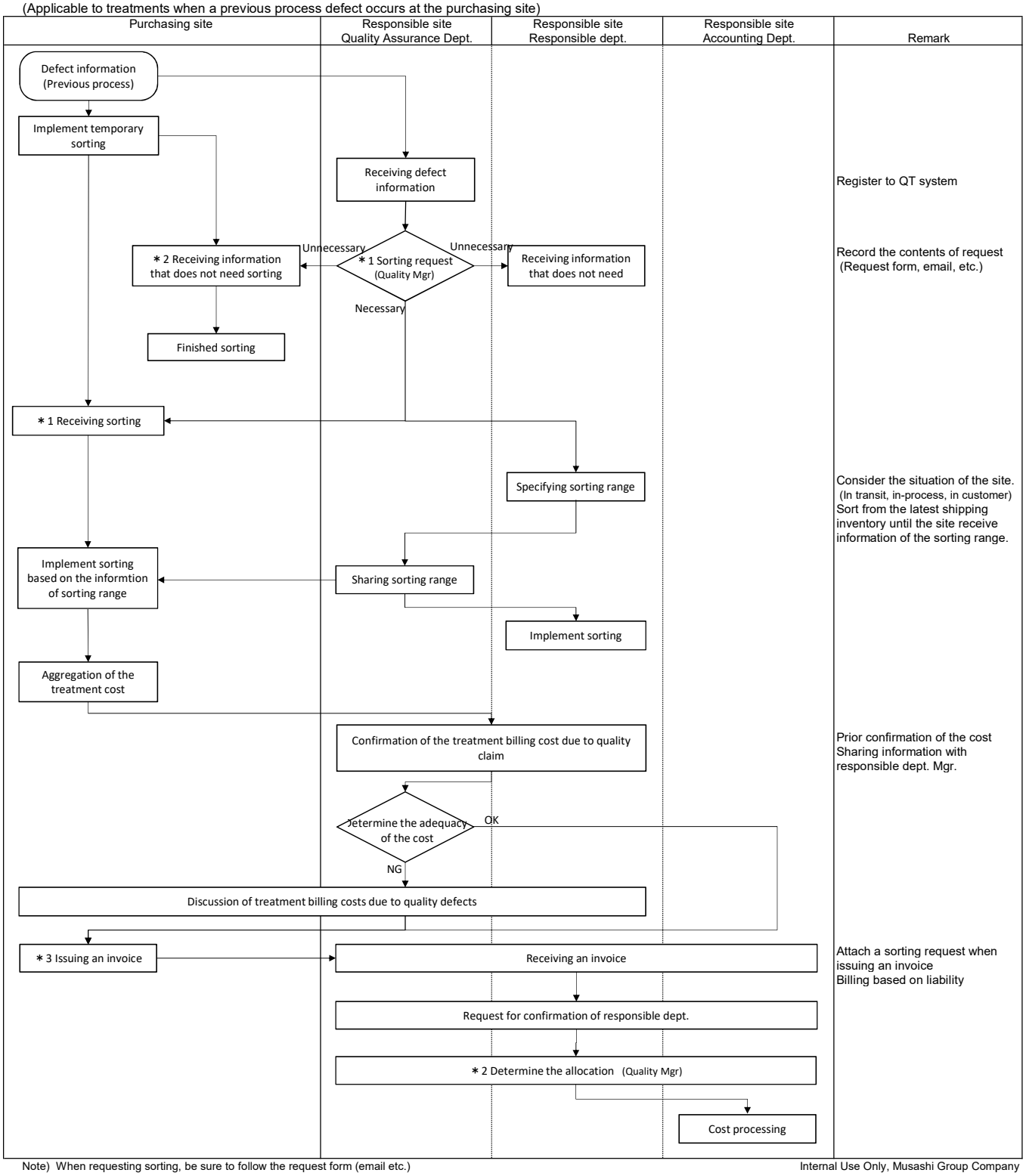
Step		1	2	3	4	5
Contents	Occurrence	Enter the process of finding out causes. (Occurrence cause, outflow cause)				Enter true cause
	Outflow	Characteristics of problems	Big branch	Middle branch (Middle bone)	Small branch (Small bone)	Enter true cause

Original to be retained until :

Process flow of treatment costs due to quality defects between production sites

*Appendix-3

(Applicable to treatments when a previous process defect occurs at the purchasing site)



Note) When requesting sorting, be sure to follow the request form (email etc.)

Note) *1 If there is no sorting request and sorting request acceptance (mutually agreed), but the sorting is carried out, the costs shall be handled at the purchasing site.

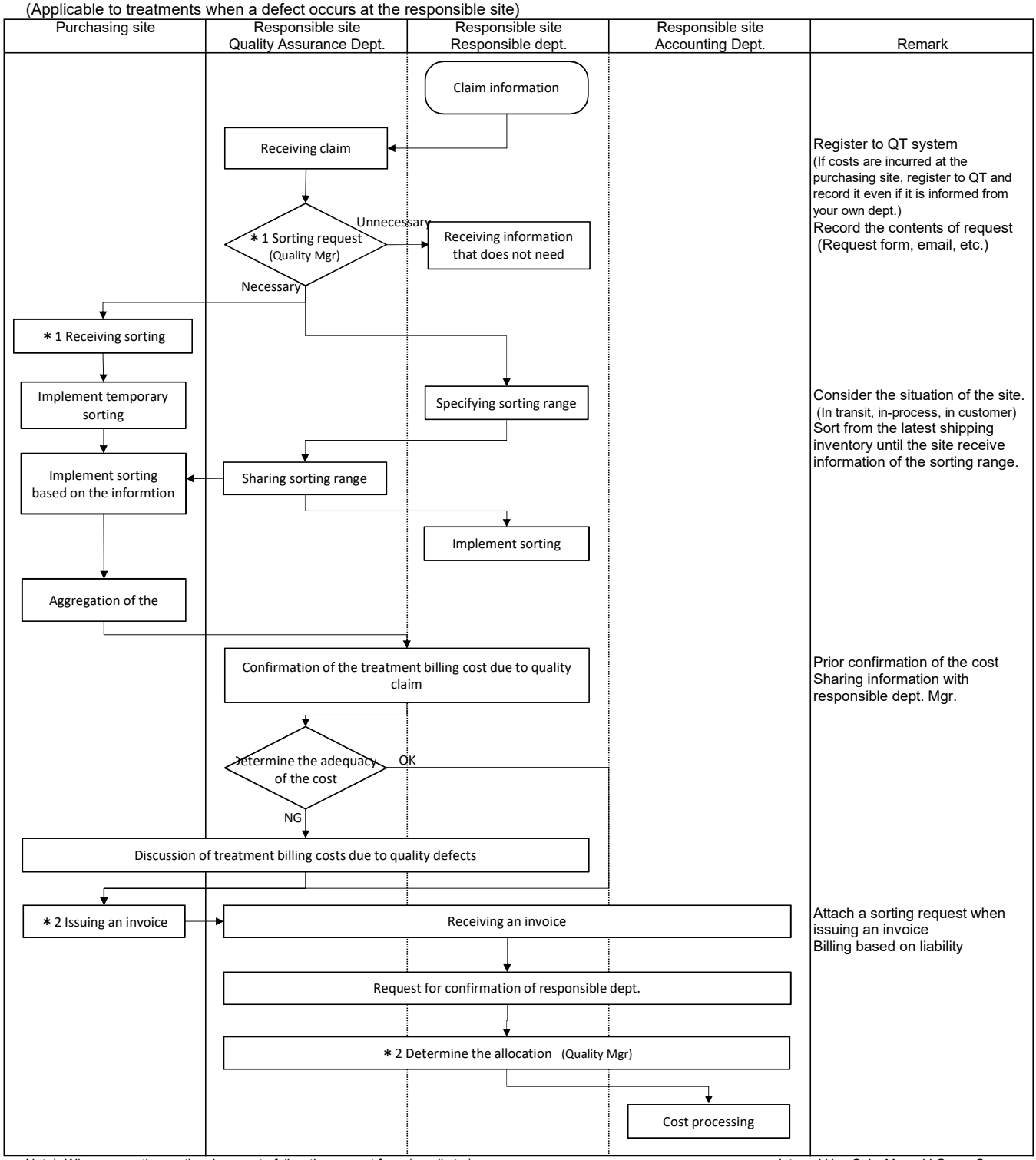
Note) *2 Since there is a time lag in the temporary sorting, the quality staff at the purchasing site can judge and carry out the sorting. If sorting is not necessary in the end, discuss with the responsible site about the cost claim for the temporary sorting.

Note) *3 Agreed costs should be processed without crossing quarters (if incurred at the end of the quarter, the deadline for cost processing should be decided after discussion between the sites).

Process flow of treatment costs due to quality defects between production sites

*Appendix-4

(Applicable to treatments when a defect occurs at the responsible site)



Note) When requesting sorting, be sure to follow the request form (email etc.)

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Note) *1 If there is no sorting request and sorting request acceptance (mutually agreed), but the sorting is carried out, the costs shall be handled at the purchasing site.

Note) *2 Since there is a time lag in the temporary sorting, the quality staff at the purchasing site can judge and carry out the sorting. If sorting is not necessary in the end, discuss with the responsible site about the cost claim for the temporary sorting.

Issue date 作成日： YYYY/MM/DD

Analysis Record【Analysis Report】

解析記録［解析レポート］

S secret A secret

Theme テーマ	
Part No. 部品番号	
Part Name 部品名	

Created Section		Approved by 承認	Confirmed by 確認	Created by 作成

Occurrence Situation (Symptom,complaint,number of occurrences,treatment)
発生状況（現象・訴え内容・発生件数・処置内容）

Date 発生日		Quantity 発生数	

Determine the facts (part analysis,factor analysis,production quality status)
事実の把握（部品の確認結果・要因分析・生産品の品質状況）

Find the Cause (Occurrence mechanism,reproduction test,why why analysis)
原因の究明（発生のメカニズム・再現テスト・ナゼ・ナゼ分析）

Why why analysis
ナゼ・ナゼ分析

Contents 内容	Steps ステップ	1	2	3	4	5
	Occurrence 発生					
	Outflow 流出					

Appropriate countermeasures (Detail,estimated effects,PPA)
適切な対応（対策内容・効果予想・PPA）

Confirmation of C/M Effectiveness (Effectiveness history)
対策効果の確認（効果実績）

Feedback to the Source (Reflection on system & mechanism)
源流へのフィードバック（体制・仕組みへの反映内容）

Review D-FMEA/P-FMEA	Necessary ・ No need
Horizontal development	Necessary ・ No need