



SUPPLIER QUALITY MANUAL

RAMKRISHNA FORGINGS LTD

Email: press_plant5@ramkrishnaforgings.com

WEB: www.ramkrishnaforgings.com

SUPPLIER QUALITY MANUAL



**RAMKRISHNA FORGINGS LTD.
JAMSHEDPUR**

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 1 of 15

Amendment History

Sl. No.	Revision Date	Revision No.		Description Of Revision	Reason For Revision
		To	From		
1	12.02.2018	00	--	New Release	-----
2	28.05.2018	01	00	Supplier quality rating (Quality, Delivery & Price) calculation method changed	Aligned with SAP method.
3	13.07.2018	02	01	Packaging and Dispatch clause added Supplier acceptance grade defined and added	CFT decision

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD. JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 2 of 15

Table of Contents

Company Introduction.....	3
Company Policies.....	4
Purpose.....	6
Scope.....	6
Quality management system requirements.....	6
Quality manual and procedures.....	6
Control of sub-tier supplier.....	6
Environmental requirements.....	7
IMDS.....	7
Business sustainability and code of conduct policy.....	7
Statutory and regulatory requirements.....	8
Supplier qualification process.....	8
New supplier assessment.....	8
On-site assessment.....	8
Periodic reevaluation.....	9
Part qualification.....	9
Sample submission.....	9
Production part approval process.....	9
PPAP requirements.....	9
RKFL PPAP status.....	9
Shipment of PPAP package.....	10
Material Safety Data Sheet.....	10
Statistical Process Control.....	10
Process performance requirements.....	11
Product Safety Requirements.....	11
Identification and traceability.....	11
Work Instruction.....	12
Control of Monitoring and Measuring instruments.....	12
Safety.....	12
Preventive Maintenance.....	12
Process Changes / engineering changes.....	12
Corrective action system.....	12
Corrective action process approach.....	12
Supplier corrective action.....	13
Supplier Monitoring.....	13
Supplier Audit.....	14

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD.
JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 3 of 15

Supplier Rating.....
Document Retention.....15

1.0 Company Introduction

Ramkrishna Forgings Ltd. is one of the most professionally managed company manufacturing forgings of superior quality. Ramkrishna Forgings Ltd. was incorporated in 11th November' 1981.It equipped with both closed-die forging and open-die Forging facilities using temperature controlled furnaces, in-house Die making shop, Heat-Treatment facilities like hardening, tempering and sealed quench furnaces.

To ensure consistent product quality, testing facilities including a Spectrometer, metallurgical Microscope with Image analyzer. Facilities for Customer specific testing like Proof and Brake Load testing, Magnaflux and Ultrasonic Flaw detector and Hardness tester are available, besides software for data analysis, accounting and ERP.

A sophisticated, state of the art machine shop with latest CNC machines & a Co-ordinate measuring machine

(CMM) caters to the customers' requirement of both productivity & quality.

With a strong well experienced and highly skilled Supervisors and workforce, led by a well-trained and committed Managerial team , the company is committed to provide quality products to its customers, meeting the customers' requirements, providing a healthy growth oriented work atmosphere to its employees with total compliance to statutory & regulatory requirements.

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD.
JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 4 of 15

1.1 Company Policies

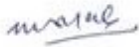


RAMKRISHNA FORGINGS LIMITED
QUALITY POLICY

IN THE MANUFACTURE OF AS FORGED & FULLY MACHINED COMPONENTS TO THE OEMs / CUSTOMERS, WE ARE COMMITTED TO WIN MAXIMUM CUSTOMER SATISFACTION THROUGH CONSISTENT PRODUCT QUALITY, ON-TIME DELIVERY, REDUCTION IN WASTEFUL PRACTICES, CONTINUAL IMPROVEMENT AND COMPLIANCE WITH THE REQUIREMENTS IN ALL OUR SYSTEMS AND PROCESSES.

WE SHALL ACHIEVE THIS BY DEVELOPING A CAPABLE TEAM OF COMPETENT EMPLOYEES AND PROVIDING NECESSARY RESOURCES, INFRASTRUCTURAL FACILITIES AND CONGENIAL WORK ENVIRONMENT.

Jamshedpur
01.08.2016


M. P. Jalan
(Chairman)

Prepared By	Approved By	Issued By
		

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD.
JAMSHEDPUR

ENVIRONMENTAL POLICY

Ramkrishna Forgings Limited (RKFL), Jamshedpur is committed to manage its environmental matters as an integral part of its business. At RKFL environmental protection will be one of the key goals. To achieve this goal, RKFL adhere the following principles:

- RKFL shall comply with all applicable legal and other requirements related to environmental aspects.
- RKFL shall strive to continually improve performance, especially through emphasizing on prevention of pollution.
- RKFL shall review and improve upon environmental objective & targets.
- RKFL shall follow documented procedure to reduce its impact on the environment.

Management of RKFL shall be responsible for continual improvement and for ensuring that this environmental policy is communicated and adhered by all persons working for or on behalf of the organization and shall be made available to all interested parties and public / stake holder on request.

February 01, 2011

M. P. Jalan
(Chairman)

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD. JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 5 of 15

OCCUPATIONAL HEALTH AND SAFETY POLICY

We, at Ramkrishna Forgings Ltd., reaffirm our belief that the health and safety of all the persons associated with us is of utmost importance and takes precedence in all our working decisions. In pursuit of this belief and commitment, we strive to:

- Maintain and proactively improve our management system to minimize health and safety hazards to prevent injury and ill health of our employees and all others engaged in our activities including interested parties.
- Ensure total compliance with all applicable legal and other requirements.
- To provide framework for setting & reviewing occupational health and safety objectives
- Integrate health and safety procedures and best practices into every operational activity with assigned responsibilities at all levels for improving and sustaining Health & Safety performance.
- Involve our employees in maintaining a safe and healthy workplace through periodic reviews of operational procedures, safe methods of work and a safe work environment.
- Develop a culture of safety through active leadership & provide appropriate training at all levels to enable employees to fulfill their Health & Safety obligations.
- For the management of change, the organization will proactively evaluate Safety Hazards & Risk associated with the change before introduction of such changes.
- Ensure availability of appropriate resources to fully implement the Health & Safety Management System of the company.
- Actively communicate this policy to all levels of the organization and interested parties, by suitable means and periodically review its relevance in its working environment.

February 01, 2011

M P Jalan
(Chairman)

RAMKRISHNA FORGINGS LTD, Safety Policy (Product)

WE AT RAMKRISHNA FORGINGS LIMITED ARE DEDICATED TO PROVIDING OUR CUSTOMERS WITH PRODUCTS AND SERVICES THAT RECOGNIZE A SINCERE AND PROPER REGARD FOR PUBLIC SAFETY & ITS USE IN SAFE, RELIABLE AND USER FRIENDLY ENVIRONMENT. WE ARE COMMITTED TO WIN MAXIMUM CUSTOMER SATISFACTION ON REAL AS WELL AS PERCEIVED PRODUCT SAFETY.

WE DEMONSTRATE OUR COMMITMENT TO PRODUCT SAFETY BY:

- CONSIDERATION OF PRODUCT SAFETY AS AN INTEGRAL PART OF PRODUCT DEVELOPMENT AND PARTNERING WITH OUR CUSTOMERS TO CONTINUOUSLY IMPROVE THE SAFETY OF OUR PRODUCT.
- ESTABLISHING PRODUCT SAFETY AND QUALITY AS CRITICAL PERFORMANCE MEASURES FOR ALL COMPANY LEADERSHIP AND STAFF.
- MAINTAINING STRICT PROCESS DESIGN, ENGINEERING, MANUFACTURING, INSTALLATION AND SERVICE QUALITY CONTROLS AND
- CONTINUAL IMPROVEMENT IN ALL OUR SYSTEMS AND PROCESSES BASED ON USERS EXPECTED BEHAVIOUR, CUSTOMERS' FEEDBACK, SYSTEMATIC HAZARD, and RISK & ACCIDENT ANALYSIS.
- WE SHALL ACHIEVE THIS BY DEVELOPING A CAPABLE TEAM OF COMPETENT EMPLOYEES AND PROVIDING NECESSARY RESOURCES, INFRASTRUCTURAL FACILITIES AND CONGENIAL WORK ENVIRONMENT.
- ABOVE POLICY IS COMMUNICATED TO ALL EMPLOYEES, SUPPLIERS AND STAKE HOLDERS FOR & BEHALF OF RAMKRISHNA FORGINGS LIMITED.

Jamshedpur
13. 03.15

MP JALAN
(CHAIRMAN)

Prepared By

Approved By

Issued By

SUPPLIER QUALITY MANUAL



**RAMKRISHNA FORGINGS LTD.
JAMSHEDPUR**

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 6 of 15

1.2 Purpose: The purpose of this Supplier Quality Manual is to provide an overview of RKFL requirements and expectations for quality. Suppliers are required to read and understand the contents of this manual in its entirety.

In order to meet or exceed customer expectations and be successful in today's global market place, RKFL must supply products of the best quality to our customers at the right price and right time. This cannot be achieved without a robust supply base that understands RKFL's expectations and is committed to the same high standards demanded by our customers. By selecting only those suppliers which can fulfill the quality requirements set forth in this manual.

1.3 Scope: This information applies to all suppliers who have interest in doing business with RKFL. It also applies to RKFL's outsourced partners or subsidiaries.

2.0 General Requirements

2.1 Quality Management System Requirements

RKFL's supplier is required to maintain an effective quality management system, conforms to ISO 9001:2015 / IATF 16949. If any supplier is not certified on ISO 9001:2015 / IATF 16949, then the supplier should have a proper plan on it. In addition to, the supplier must meet all the requirements of this manual and any specific requirement time to time.

2.2 Quality Manual and Procedures

The supplier, as requested, should have a copy of the supplier's Quality Manual and supporting procedures. This includes documents and work instructions those are specific to production of material for RKFL.

2.3 Control of Sub Tier Supplier.

Suppliers are responsible for the quality of materials and components provided by their sub-tier suppliers and sub-contractors. RKFL suppliers must impose controls on their sub-tier suppliers that provide quality results and documentation comparable to the controls applied to suppliers by RKFL. The extent of the controls may vary, depending on the nature and complexity of the product and processes, but should normally include:

- Evaluation and qualification of sub-tier supplier facilities
- Control to ensure that raw materials used meet RKFL's requirements
- Controls to ensure that the sub-tier suppliers of components used are those approved by RKFL, where applicable.
- Sample submission, PPAP and process capability studies of as applicable.
- Control of drawings/revisions
- Control of nonconforming material
- Corrective action and preventive action programs

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD. JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 7 of 15

- A continuous quality improvement program

Where appropriate, RKFL may specify the sub-tier suppliers that may be used, evaluate and qualify the sub-tier supplier's facilities, and assist the supplier in controlling the sub-tier supplier. Typically, this occurs when the sub-tier supplier is an essential component of the supply-chain process. RKFL reserves the prerogative to evaluate the quality system and records of such sub-tier suppliers as necessary. In the event of RKFL's involvement, it does not absolve suppliers of the ultimate responsibility for the quality performance of their sub-tier suppliers.

2.4 Environmental Requirements

RKFL is certified in ISO 14001 "Environmental Management System", OHSAS 18001 "Occupational Health and Safety". This requires that RKFL's suppliers should also meet the requirements from the respective standards. RKFL suppliers should also plan for adopting ISO 14001 and OHSAS 18001. Standard. RKFL's supplier should request the same from their suppliers.

2.4.1 IMDS

All suppliers shall sign up for IMDS (International Material Data System) and implement a process to report MDS (Material Data Sheet) as applicable. If requested, the supplier shall register the part or substance in the International Material Data System, IMDS, before any delivery to RKFL.

RKFL fulfill Black and Grey List regulating requirements regarding chemicals or materials used in products and/or services. Any presence of listed chemicals must be accounted for and the supplier must initiate phase-out plans. Similarly RKFL supplier must follow the same.

Supplier to ensure whether their products contain "conflict minerals" necessary to the functionality or production of the products and to disclose whether these materials originate from the Democratic Republic of Congo and surrounding countries.

"Conflict minerals" or "3TG" refers to **Tin, Tantalum, Tungsten and Gold** (the derivatives of cassiterite, columbite-tantalite and wolframite).

2.4.2 Business Sustainability and Code of Conduct Policy

The Supplier Code of Conduct is designed to support RKFL's process for identifying suppliers that demonstrate a firm commitment to provide a work environment free from discriminations and/or harassment. We strive to utilize only those suppliers who can adhere to the Supplier Code of Conduct and who can provide us materials and services with the lowest total cost, best on time delivery, shortest lead-time and a high level of customer responsiveness.

- All suppliers must provide a safe and healthy working environment for all employees.
- Employees must have freedom of association and the right to collective bargaining consistent with applicable local laws.
- No sexual harassment.

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD. JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 8 of 15

- Suppliers should refrain from all forms of forced labor.
- Suppliers should refrain from using child workers as part of their normal workforce.
- Suppliers should refrain from discrimination.
- Suppliers should support a precautionary approach to environmental challenges and work actively to reduce environmental impact.
- Compensation and benefits: Applicable legal wages and other legally mandated benefits and compensation must be paid in time and in a transparent way.
- Laws and regulations on maximum number of working hours and time off shall be respected
- RKFL does not accept bribery and corruption and expects its suppliers to refrain from corrupt practices.

2.4.3 Statutory and regulatory requirements

RKFL expects all suppliers to comply with all international and national applicable statutory and regulatory requirements..

2.4.4 Supplier Qualification Process

All suppliers of supplying materials to RKFL must be qualified suppliers. The extent of the qualification process is dependent upon the criticality of product purchased and other factors determined by RKFL. The qualification process in its most complete form consists of two parts:

- A quality management system self-assessment completed by the supplier, using the RKFL supplier assessment survey form. This is returned, along with the supplier's quality manual and documentation for review by RKFL.
- An on-site assessment by RKFL personnel.

RKFL periodically reevaluates suppliers through the use of quality performance data and/or on-site assessments.

2.4.5 New Supplier Self Assessment

When a new supplier is being considered, they are sent a quality management system self-assessment survey form. The supplier completes the self-assessment and returns it along with a copy of their quality manual and supporting documents. RKFL will review the quality manual, procedures, and survey to determine if the documented quality system meets RKFL's requirements

2.4.6 On-Site Assessment

For suppliers of critical components, an on-site assessment of the supplier's facility is performed. The on-site assessment includes three components:

- A quality assessment to determine whether the supplier's quality management system is in place and functioning effectively.
- A business assessment to determine whether the supplier has financial resources, production capacity, and other business resources needed to fulfill RKFL's production needs.

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD. JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 9 of 15

- A technology assessment to determine whether the supplier has the needed technical resources, including production and inspection equipment, facilities, engineering resources, etc.

If the assessment team determines that the supplier meets RKFL's requirements, RKFL qualifies the supplier to bid on new business and supply materials.

2.5 Periodic Re-evaluation

RKFL periodically reevaluates current production suppliers through the use of quality performance data and/or on-site assessments. If requested, the supplier shall make their facility available for on-site process verification by RKFL personnel, with reasonable notice.

3.0 Part Qualification

3.1 Sample submission

The supplier is responsible for submitting Sample as requested by RKFL with sample inspection report. RKFL and the supplier will agree on the number of the samples to be checked and submitted with inspection report.

4.0 Production Part Approval Process

The purpose of production part approval is to determine if all customer engineering and specification requirements are properly understood by the supplier and that the process has the potential to produce product meeting these requirements during an actual production run at the quoted production rate.

All suppliers of RKFL will submit PPAP Documents according to Level 3 as described in the AIAG manual. RKFL will evaluate the PPAP package submitted by the supplier.

4.1 PPAP submission is required at the time of-

- Initial production of a new or revised component and/or material.
- Correction of any discrepancy on a previous submission (resubmission of an Interim or rejected PPAP).
- Any change in process, tooling or engineering design that may affect form, fit or function of the product (resulting in change to process control plan).
- Any change in the supplier's manufacturing location or movement of any or all of the production processes used to manufacture the component.
- Any change in sub-supplier (new sub-supplier).
- Any change in the sub-supplier's process, tooling or engineering design that may affect form, fit or function of the supplier's product.
- Any change in the status of a component and/or material from inactive to active if the inactive period was longer than 12 months.

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD. JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 10 of 15

4.2 PPAP Requirements

The supplier organization has to satisfy the PPAP requirement (level 3) as given in AIAG manual and also customer specific PPAP requirement.

4.3 RKFL PPAP Statuses

Approved: This status indicates that the parts or material meets the entire customer requirement and that the supplier is authorized to ship production quantities of the product as specified by RKFL.

Interim Approval: This status indicates the supplier can ship materials for production on limited time or piece quantity basis and it will be granted only when the supplier has:

- Clearly defined non-compliances preventing approval.
- Prepare an action plan agreed upon by RKFL. PPAP resubmission is required to obtain the "Approved" status.

Material shipped after the expiration of the interim approval will be rejected and the supplier is not authorized any additional shipment unless an extension of interim approval is granted.

Rejected: It means that the PPAP submission does not meet customer requirement based on the production lot from which it was taken and/or accompanying documentation. In such cases appropriate correction has to meet the customer requirement.

4.3 Shipment of PPAP Package

The PPAP parts and documentation must be packaged with sufficient care and planning in order to prevent damage to the contents.

In all cases, the supplier must ship PPAP sample parts and documentation to the attention of the RKFL's Purchase head.

4.4 Material Safety Data Sheets (MSDS)

As applicable, Material Safety Data Sheets (MSDS) must be provided during supply of material like lubricant, paints, chemical etc. Any changes in MSDS must be communicated immediately.

5.0 Manufacturing Process Control

5.1 Process Control

RKFL suppliers are required to control all manufacturing processes in accordance with the control plan, which is approved during PPAP.

5.2 Statistical Process Control

Where specified in the control plan, the supplier is required to apply effective statistical process controls. Effective controls must include:

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD. JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 11 of 15

- The control chart displays control limits that are correctly calculated (specification limits may not be used as control limits).
- The control chart is at the process area, visible to the operator, or persons who are responsible for controlling the process.
- For each out-of-control condition, actions are taken to bring the process back into control. Actions taken to bring the process back into control are recorded.
- Product produced during any out-of-control condition is sorted, scrapped, reworked or dispositioned through the supplier's material review process.

5.3 Process Performance Requirements

- **Critical Characteristics / Safety Critical Characteristics:** A C_{pk} at least 1.67 is required. Any critical characteristic failing to meet the minimum requirement requires a containment plan and an improvement plan.
- **Other Characteristics:** A C_{pk} of at least 1.33 is required. When specified by RKFL, other characteristics failing to meet the minimum requirement also require a containment and improvement plan.
- **Process Improvement** Out-of-control or unstable processes (which have assignable causes) and processes that do not meet the minimum C_{pk} requirements must be identified and corrected. The Supplier must also improve processes.

5.4 Product Safety Requirement

With regard to dimensional, material, test and functional requirements for product features identified as safety critical or critical characteristics (CC), the C_{pk} requirement is 1.67. Safety critical characteristics must be clearly identified throughout the manufacturing process and in all associated documentation such as process FMEA, control plans and work instructions.

The methods used for marking lot/serial numbers on safety critical parts must support identification, traceability and failure investigation through all phases of the products life. In principle, the serial number / heat number or lot number should be applied to the actual part and preferably should be easily visible when mounted on the vehicle. When feasible, the symbol must be included on the part label. This would apply if the drawing is marked with any symbol or as given by supplier.

Supplier must apply following requirements on the shop floor;

- Identification of operations which have a directly or indirectly influence on safety features.
- Clear sign or placard defining the characteristic and potential effect of non-compliance.
- Training status and authorization for all operators working on safety features related work stations.
- Understanding the effect of product safety of supplied product.

Prepared By	Approved By	Issued By



5.5 Training

Supplier must ensure to provide training to their employee on safety, product safety and sustainability. Supplier must have yearly training plan comprising modules on safety, basic, technical, behavioral etc.

5.6 Identification and Traceability

The supplier shall define an appropriate traceability system that enable to identify and segregate nonconforming and/or suspect product, and to ensure appropriate system is applied to the sub-tier supplier. The supplier is requested to provide full traceability for products with safety characteristics assigned on the drawing / TDC specifications.

5.7 Work Instruction

The supplier must ensure that work instructions are communicated to and understood by the employees those are responsible for performing the work, legible and accessible for use at the designated work areas.

5.8 Control of monitoring and measuring instruments

RKFL supplier must ensure that the measuring and monitoring instruments used for monitoring and measuring activities are specific, calibrated and safe guarded. Supplier must retain the record as evidence of calibration.

5.9 Safety

At no time should any customer, or person at a RKFL facility, be exposed to hazardous material or situations that are not inherent in a component's structure. Packaging materials should comply with OSHA (Occupational Safety & Health Association) standards. For items with inherent hazards, safety notices must be clearly observable. As applicable, MSDS sheets must be provided during the supply.

5.10 Preventive Maintenance (PM)

The supplier must have preventive maintenance plan yearly for all manufacturing machines, tools, and other equipment and maintenance must have done as per plan that the supplier can support RKFL's production requirements, and the quality of parts manufactured for RKFL is not degraded in any way. Also maintain all facilities and measuring devices.

5.11 Packaging & Dispatch

Supplier should dispatch the materials with suitable packaging item to ensure that the dispatched material should reach at RKFL end safely. Damaged materials are not acceptable at RKFL end. Transporters carrying RKFL's packed finished product should safeguard our items and its packaging.

Prepared By	Approved By	Issued By



6 Drawings/Changes

6.1 Drawing and change control

The supplier must have a documented system for assuring that the latest RKFL drawings / TDC are in effect at their facility. The supplier's quality management system must contain a documented procedure that describes the method used for the receipt, review, distribution, and implementation of all changes to drawings and specifications. In addition, the procedure must address control of obsolete drawings, TDC specifications.

6.2 Process Changes, Engineering Changes

Suppliers must have systems in place to control changes to drawings, TDC specifications, processes, or produced parts. Systems should be capable of handling changes being requested by the customer, and also changes requested by the supplier.

7 Corrective Action System

RKFL requires suppliers to utilize a closed-loop corrective action system when problems are encountered in their manufacturing facility, or after nonconforming product has been shipped to RKFL.

7.1 Corrective Action Process Approach.

The corrective action system utilized should be similar to the process outlined below. The focus should be on identifying the root cause(s) of the problem and taking action to prevent its recurrence.

- Use a team approach
- Describe the problem
- Contain the problem
- Identify and verify root causes(s)
- Implement permanent corrective actions
- Verify corrective action effectiveness
- Close the corrective action

7.2 Supplier Corrective Action

RKFL demands corrective action from supplier when non-conforming parts are found at incoming inspection / testing, in process or by a RKFL customer. The following provides a brief outline of the 8D procedure that suppliers to RKFL should comply with:

- RKFL requires that the supplier take immediate containment action upon notification of the nonconformance. The supplier must give a written response to RKFL within 24 Hrs of notification and must report at RKFL for initial observation and interim containment plan within 48 hours of notification. The Supplier's Initial Observation is an acknowledgement that the Supplier has been informed of the problem, and has begun to gather information about the problem.

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



RAMKRISHNA FORGINGS LTD. JAMSHEDPUR

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 14 of 15

- The containment plan must clearly define the containment actions at the supplier's facility to assure that no nonconforming product is shipped to RKFL. If suspect product has already been shipped, the supplier must address all suspect stock in transit and any stock at RKFL. The supplier will assist RKFL in identifying customer risk by identifying all suspect lot numbers and associated quantities involved.
- Within one week after the original notification, the supplier must report the results of the Supplier's investigation into the cause of the problem.
- Within two weeks from the initial notification date, the supplier must submit the corrective action in the form of 8D to be taken to prevent recurrence of the problem, and the affectivity date (the date the corrective action will be implemented). Actions such as "train the operator", "discipline the operator" or "increase inspection" are typically not acceptable corrective actions.
- The supplier is required to keep RKFL informed of progress towards implementing the corrective action. When corrective action implementation is complete, the supplier and RKFL verify that the corrective action is effective in preventing the problem's recurrence.

7.3 Supplier Monitoring

RKFL continually monitors its suppliers to ensure they continue to meet its requirements, and to ensure that the supplier continues to ship acceptable parts. This may consist of:

- A quality management system surveillance audit at the supplier's facility
- An on-site audit of the supplier's control plan.
- A random incoming inspection of a batch of product

7.4 Supplier Audits

Periodically, RKFL and / or its customer may audit the supplier's quality management system. The supplier must make their facility available for on-site process verification by RKFL personnel and / or its customer at any time, with reasonable notice. This may be a full or abbreviated documentation and on-site audit. The purpose is to evaluate any changes that may have occurred in the supplier's quality management system, and to assess the supplier's continuing commitment to quality improvement.

Audit Score	Status
≥75%	Approved
between 60% to 70%,	conditionally approved
<60%	not approved
<60%	In some cases can be approved with signature of concern senior management

Prepared By	Approved By	Issued By

SUPPLIER QUALITY MANUAL



**RAMKRISHNA FORGINGS LTD.
JAMSHEDPUR**

Doc. No.: SQM-01
Rev. No. & Date: 02/13.07.2018
Issue No & Date: 01/12.02.2018
Page No: 15 of 15

7.5 Supplier Evaluation

Composite rating is arrived at by way of simple average of Delivery, Price and Quality. Thus, all the three parameters are given equal weightage. However, IT team was instructed and exploring the possibility of assigning the following weightage to these parameters:

- Delivery – 20%
- Price – 10%
- Quality – 70%

From the above rules, it may be seen that a vendor may score a maximum of 100 points as it's composite performance index (CPI).

Based on the composite rating, vendors to be classified into four different groups as under:

- Composite rating of 81 – 100: Group A
- Composite rating of 61 – 80: Group B
- Composite rating of 31 – 60: Group C
- Composite rating of 0 - 30: Group D

All the vendors should be apprised of their composite rating to encourage them to improve upon their rating.

A vendor who is classified as group 'D' for three consecutive quarters should be de-registered or removed from the 'Approved vendor list' for sending out enquiries.

Whenever the vendor is found to lacking in performance in terms of response, delivery compliance, capacity, quality standards, ethics or any other valid reason, the vendor may be removed / blacklisted form the approved list of vendors by HOD - Purchase by giving notice of removal to the firm.

8.0 Documentation Retention

Document	Examples	Shall be maintained for
APQP and PPAP documentation/ activities	Technical specifications, drawings, process flow charts, control plans, FMEA, manufacturing instructions, master samples, etc.	the length of time that the art (or family of parts) is active for production and service requirements plus one (1) calendar year unless otherwise specified by RKFL.
Quality performance records	Control charts, inspection and test results, product audits, layout inspection, functional testing, etc.	the length of time that the part (or family of parts) active for production and service requirements plus one (1) calendar year unless otherwise specified by RKFL.
Quality system records	Internal quality system audits and management reviews	Three (3) calendar years
Product Safety related records		a minimum of 15 years from the date of manufacture

Prepared By	Approved By	Issued By