Supplier Quality Manual

Burns Engineering, Inc.

"The success of any organization can be measured by the strength of its supply relationships."

- anonymous

Revision and Approval Record

Printed copies of this document are for reference only. Suppliers should obtain and use the current revision of this document available on the Burns Website

http://www.burnsengineering.com/manuals

The master copy of this document is controlled and maintained by the Quality Manager at Burns Engineering. (FORM-190111-A)
Revisions to this manual will be available on the Burns Web Site, from the Burns Purchasing department, and will be communicated by email to all suppliers.

Revision	Date	Description of Change
A	4/1/2019	Original Release; FORM-190111-A

Approvals:

Name:	Title:	Signature:	Date:
Chuck Bragg	Quality Manager		4/1/19
Janice Bjonfald	Purchasing		4-2-19
Craig Hubbard	Quality Representative		4-1-19

Contact Information

For information or questions regarding this Manual, Suppliers may send correspondence to:

Quality Manager
Email: BE-BMS@burnsengineering.com

Burns Engineering Business Operating Policy

We are committed to achieving the highest level of customer satisfaction. This is achieved through alignment with the Burns Vision and Mission, living the Burns Core Values, and striving to create results that exceed our business objectives.

Our Vision: "Make a Difference Through Temperature Measurement Expertise"
Our Mission: "Ensure Temperature Measurement Confidence"

Our Core Values:

- Strong business ethics and integrity
- Temperature experts in all that we do
- Strive for best quality practices
- We value each other
- Strong financial performance

Business Objectives:

- 100% customer satisfaction
- 100% on time delivery
- Zero defects
- Industry leading product/service quality and reliability
- Grow our service to the process industry
- Provide expertise that ensures measurement confidence
- Be engaged participants in our industry's organizations
- Exemplary members of the community
- Continuous improvement
- Compliant with all statutory and regulatory requirements, and recognized standards.
- Maintain a safe work environment

Supplier Expectations:

In order to achieve Burns Business Objectives, the same must be expected of our Suppliers. We build relationships with Suppliers who align the following commitments:

- Zero Defects –all products shipped to us meet our specifications
  - Internal scrap and rework is measured and improved
- On time delivery – always meet acknowledged delivery dates
  - Lead time / through-put is measured and improved
- Communication - timely, accurate, full disclosure
- Continuous Improvement - in the areas of quality, service, cost and capability
- Sustainable & Scaleable – operating to a Management System that supports:
  - Consistency, growth, financially sound and technically strong

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1. Introduction

1.1. Purpose

This document defines the processes required by Burns Engineering to ensure all Suppliers base meet our expectations. It outlines the requirements for becoming an approved Supplier, continuous improvement, and ongoing communication.

1.2. Scope

The guidelines described in this Manual are applicable to existing and new Suppliers of parts, materials, and services that directly impact the quality of Burns products. See definition of "Supplier" below.

Our relationship with Suppliers is defined by the Burns Terms and Conditions of Purchase, the Purchase Order, the Burns drawing, and/or Burns Specification. Compliance with the guidelines of this Manual or acceptance or approval of the Supplier's parts or materials does not relieve the Supplier of any of the obligations or liabilities stated in the applicable Purchase Order, drawing or Specifications. In the event of conflict, the following order of precedence will apply:

- Purchase order
- Purchase Part drawing
- Burns Specifications
- Supplier Quality Manual

1.3. Definitions

Supplier – Supplier of material, parts, assemblies and services to Burns that are part of or processing for Burns products. This does not include Suppliers of Commercially Available Electrical and Electronic Components; Suppliers of MRO items (Maintenance, Repair and Operating supplies); Capital Equipment Suppliers; Calibration & Testing Suppliers; and Transportation Suppliers.

Should, May – action or compliance is strongly recommended

Must, Will, Shall – action or compliance is required

1.4. Responsibilities

Burns:

- Implementing appropriate aspects of this Manual
- Educating Suppliers regarding the applications of this Manual
- Managing revisions and providing the latest revision of this Manual to Suppliers

Suppliers:

- Controlling printed copies of the Manual
- Understanding the contents of this Manual and assuring all related departments and sub-suppliers are trained in regards to its guidelines and requirements
- Ensuring the use of the forms provided by Burns OR that their own forms contain all of the Burns required information

2. Supplier Expectations, Evaluation and Approval

2.1. Quality System

Suppliers shall demonstrate a top management commitment to quality and continuous improvement. This commitment should be evident in the Supplier's quality planning, quality control and quality improvement processes. Burns prefers its Suppliers to have Quality Systems that are registered to the ISO-9001. If a Supplier does not have ISO-9001 registration, the quality system will include the following as a minimum set of requirements:

- Quality manual
- Procedures for incoming, in-process, and final inspection
- Procedure for the control of non-conforming materials
- Procedure for Corrective Action Response
- Test equipment and gage control system
- Documented Work instructions
- Documentation control

If the supplier's Quality System does not include all these components, Burns may work with the supplier to assist in developing and implementing these key processes.

When changes that affect the status or scope of the Supplier's Quality System occur, Suppliers shall notify Burns in written form and communicated through the Purchasing representative at Burns.

In addition to a quality system, Suppliers should have a quality policy and specific quality indicators. A system should be present to track quality metrics and monitor for negative trends. The system should clearly communicate the Supplier's quality responsibilities, goals, and actions for improvement. It should also be visible throughout the Supplier's organization.

2.2. Technology

Suppliers should maintain and use the highest and most current levels of technology available and required for design and production of quality products. This may include equipment and resources to support getting new products to market faster, including rapid prototyping capability.

Suppliers should have the ability to communicate through email. Email will be used to distribute PO's, drawings, specifications, and other pertinent information necessary to facilitate the business processes between our organizations.

2.3. Proprietary Information

All information, drawings, materials, goods and equipment provided to Suppliers by Burns or arising from work or services done for Burns shall be treated as confidential and proprietary and shall not be disclosed or shown to others without written permission of Burns.

2.4. Document Control

Burns uses prints and other controlled documentation to communicate material requirements. Burns shall provide the latest revisions of controlled documentation to the Suppler with each Purchase Order issued. Suppliers shall have a

documented procedure for controlling these documents and a system to route Burns drawing and specification changes to all necessary departments. Suppliers will use the latest revision for purchasing, supplying, and inspecting based on the purchase order requirements. All superseded documents shall be marked "OBSOLETE" or shredded.

2.5. Print and Process Review

It is the responsibility of Suppliers to carefully review Burns drawings and related specifications (e.g. Burns Engineering Specifications) to ensure they understand and can meet all requirements. Burns Specifications identify requirements for procured material beyond the scope of drawings, purchase orders, and industry standards. Applicable Burns Specifications are referenced on the prints for the part numbers for which they apply.

If clarification of requirements is needed, contact Burns before submitting a quote or producing samples or production parts. In no case shall drawings or specifications be superseded by informal agreements. All issues that are not covered on the existing drawings or specifications shall be communicated through a purchase order, or a revised drawing.

2.6. Test and Measurement Equipment

Suppliers may use any test and measurement equipment (T & ME) deemed necessary to meet Burns requirements. When Burns requires the use of certain T & ME, it will be specified on Burns documentation.

Suppliers should comply with the calibration system described by ISO-17025 or equivalent. At a minimum, T & ME calibration shall be traceable to NIST. Inspection gages along with test equipment shall be controlled and the periodic calibration cycle shall be sufficient to ensure accurate measurements. Additionally, Suppliers shall treat all T & ME with reasonable care to prevent loss, damage or out-of-calibration conditions. Suppliers shall not ship product to Burns tested with T & ME that is not in calibration or not in good working order. If T & ME is found to be non-conforming / out-of-calibration after product has been shipped, the Supplier shall be notify Burns immediately with part number, shipping information, and as-found calibration results of the affected T & ME.

2.7. Process Control, Monitoring and Improvement

Suppliers are responsible for ensuring all items, regardless of their process sources (e.g. sub-Supplier), meet Burns' specifications. To prevent defective product from being delivered to Burns, Suppliers should establish and document process standards and controls for all aspects of their manufacturing operations.

Once all processes are defined and documented, Suppliers shall monitor the process to ensure an acceptable level of quality and/or further analyze it to achieve the needed improvements. Suppliers shall use the appropriate techniques for monitoring, controlling, and improving their processes. The objective is to prevent defects, rather than detect defects.

Statistical Methods
When SPC is used, Suppliers should have a procedure describing the actions required in response to out-of-control conditions, including when and by whom action will be taken. Additionally, records should exist to show evidence of in-process control, response to out-of-control conditions, and any actions taken. This documentation shall be made available to Burns upon request.

Inspection Sampling
If the supplier utilizes Inspection / Verification sampling, the following should be used to determine appropriate sample plan methods.

- ANSI/ASQC Z1.4 or Z1.9, or ISO 2859

The Acceptable Quality Level (AQL) shall be set by the Supplier to ensure acceptable product quality levels are maintained. It is based on a statistical probability and does not relieve the Supplier from maintaining conformance on all part characteristics.

2.8. Supplier Subcontractors and Sub Suppliers

Burns requires visibility to and approval of any subcontract operations or Suppliers. Burns will make a determination, based on the type of subcontract operation, if a subcontract Supplier may be used and if formal evaluation/approval is required.

The primary Supplier (Supplier who holds the Burns P.O.) shall be responsible for:

- Communication of Burns product specifications
- Providing final product to Burns' product specifications
- Addressing quality issues for subcontract and finished product (includes verification of effective process and product controls)
- Establishing policies and responsibilities related to subcontract product rejects
- Maintaining copies of all subcontracted secondary process certifications, including but not limited to plating, annealing, cleaning, polishing, testing, and inspection

Any modifications to the above noted requirements or responsibilities shall be documented in the applicable contract or purchase order.

2.9. Quality Records

Unless otherwise specified by Burns, the Supplier is responsible for maintaining records in accordance with the Supplier's quality system requirements.

2.10. Product Identification and Traceability

Suppliers shall establish and maintain documented procedures for identifying the product by suitable means from receipt and during all stages of production and delivery.

2.11. Labeling, Packaging and Delivery

Suppliers shall package and mark all products in accordance with the drawings, related specifications, purchase order, and applicable regulatory requirements. All products shall be shipped in packaging that provides adequate protection during shipment as well as storage.

All shipments to Burns shall include the following:

- Required documentation with complete and correct information (e.g. Packing List, Invoices, Bills of Lading, etc.)

- Each part number shall be boxed/bagged separately
- Each container shall be marked with the part number of the contents so that it is visible from the outside of the packaging
- Certifications or material test reports as required (reference applicable prints, procurement specifications, or purchase order)

For additional information regarding Packaging and Delivery specifications, contact the responsible Burns Purchasing representative.

2.12. Production Part Approval Process

Based on Supplier experience and / or results of the supplier assessment, Burns will determine if First Article (FA) samples are necessary prior to production release, or if Burns will perform the FA on parts from the first production lot.

First Article
When First Article Samples are requested, they shall be appropriately identified as “SAMPLES”. Samples that accompany a Sample Inspection Report shall be marked with sample numbers which correspond to the sample numbers on the inspection report.

2.13. Approval for Part or Process Changes

Burns requires Suppliers to contact Burns for approval of part or process changes, and to receive approval in written form from Burns engineering and Quality representatives prior to implementing the change. Enough time should be allotted for Burns to evaluate the request as Suppliers must obtain written approval for the deviation prior to shipment of samples or production parts. Suppliers will be notified of the status of the request and the need for additional information or samples.

Approved deviations from Burns’ product specifications shall be noted by the Supplier on the inspection records for each production or sample lot.

Requests for deviation will be considered only for unusual circumstances and will not be accepted on a routine basis. If a requirement is impossible to meet then Suppliers shall request a revision to the drawing or specification prior to accepting a Purchase Order / beginning production.

2.14. Verification Test Results

Any testing required will be fully communicated on the Burns drawing, Burns specification document or the Purchase order.

The Supplier shall verify that these requirements have been met for all parts and purchased materials when specified by Burns. Blanket statements of conformance are unacceptable. The information presented will include the property tested, the date and quantity tested, and the results of the analysis. When an outside service is utilized, the name of the organization shall be included in the submission.

2.15. Non-Conforming Material

In the event that a product nonconformance is identified, it will be rejected and Burns will set aside per the Burns Nonconforming Material process. Burns will notify the Supplier and provide as much identifying information about the product as possible. Suppliers are required to immediately inspect, segregate and correct similar parts within their facility to assure that Burns will not receive additional

shipments of nonconforming product. The cause of the nonconformance shall be identified and controlled. Depending on the severity of the issue, a Supplier Corrective Action may be issued to address the non-conformance.

Any product rejected due to the fault of the Supplier will be subjected to one of the following actions:

- Return to Supplier at Supplier's cost for full credit or refund.
- Return to Supplier for rework at Supplier's cost - all rework shall be completed to the drawing requirements. Repair processes, (processes not per the original production methods) are not acceptable without prior review and written approval by Burns Engineering.
- In special cases (e.g. nonconformance jeopardizes Burns on time delivery commitment), Burns will 100% inspect the received lot and will return all nonconforming items. Burns reserves the right, upon notice to the supplier, to have the nonconforming items reworked at Burns or a suitable alternate supplier. Before this activity begins, an estimate of the cost and a timeframe for completion will be communicates to the supplier. If the Supplier is not able to meet Burns requirements, Burns, at its discretion, will invoice the Supplier for the rework cost.

2.16. Supplier Corrective Action

Burns determines whether or not a Supplier Corrective/Preventive Action (SCPA) should be issued based on the seriousness or impact of the issue on the quality of Burns product. The Burns SCPA system facilitates the prompt investigation, correction, and prevention of non-conformances. Upon receipt of an SCPA, Suppliers shall promptly respond, addressing all open sections of the SCPA form.

Burns will indicate the response due date for the Supplier to return the SCPA on the SCPA form. The Supplier may request an extension to the response due date or corrective action implementation date.

The Supplier shall also maintain a corrective action program with its suppliers. Depending on the severity of the issue, Burns may issue a Supplier Corrective Action.

2.17. Use of Statistical Tools and Problem Solving Techniques

Suppliers may utilize any of various improvement methods that best fit the suppliers' type of work, organization and experience, and have shown to yield successful process and quality improvements. Additionally, Suppliers should use the appropriate statistical tools required to establish, control and verify product quality.

The use of such tools / methods should be required by the Supplier's quality system and documented in the control plan, capability studies and other quality records. In addition to verifying compliance with specifications, these tools should be used to develop solutions to problems and to identify opportunities for improvement.

2.18. Supplier Evaluation and Approval

All Suppliers must meet the quality system requirements outlined in Section 2.1. Additional requirements may apply to Suppliers who provide materials with specific approvals and/or regulatory requirements.

Supplier evaluation and approval activities are completed prior to approving specific part numbers or services from the supplier to ensure that suppliers have the necessary quality control elements in place to consistently meet our

requirements.

The Burns Supplier Qualification process will be used to facilitate the evaluation of the Supplier's Quality System for the types of products and services to be provided. This process is initiated by Burns and may consist of self assessment document sent to the Supplier. Upon receipt, Suppliers should complete the form and return with required documentation.

In addition to the Supplier Self assessment Form, an on-site assessment of the Supplier may be required. The on site assessment will be based on the requirements of ISO-9001.

Burns and Suppliers must act in good faith to:

- Establish a schedule date and timeframe for the assessment
- Provide appropriate and adequate resources
- Be committed to improvement of the quality system where needs are identified
- If corrective action is required, the Supplier shall develop and submit their plan for corrective action within 2 weeks of the conclusion of the assessment. If an extension of time is necessary, the request shall be submitted in writing.
- Burns Quality Representative will review the supplier corrective action plan for adequacy and Burns reserves the right to perform a follow-up assessment (upon reasonable notice) to verify corrective actions. All non-conformances identified during the audit must be closed prior to granting approval to supply product.

2.19. Supplier Re-Qualification

Burns may require Suppliers or parts that have been inactive for more than one year (i.e. no receipts of a specific part number within a 12 month period) to be re-qualified before a new order is placed. If requalification is required, Suppliers may be asked to provide updated company information and/or evaluation samples and documentation as per the Production Part Approval Process (Section 2.12).

Burns will typically not require re-qualification if the Supplier has provided parts or materials in the past 12 months that have similar requirements and are produced using a process that is the same as the one used to produce the specific part(s) that have been inactive for more than 12 months.

2.20. Supplier Performance Feedback

It is Burns' preference that all suppliers monitor their performance and take action to maintain a performance level that meets or exceeds:

- On time Delivery ≥ 98.7%
- Quality level ≥ 99.9%
- Responsiveness / Lead Time consistency
- Price / Cost controls, Changes communicated early

Burns will monitor supplier performance and periodically provide updated quality and delivery reports. If an adverse trend in performance is detected, actions will be taken to review the Supplier's status. If warranted, Burns may initiate corrective action activities, including Supplier Corrective/Preventive Action, on-site assessment, or requalification of samples and process documentation.

2.21. Material Conformance Requirements

Burns requires that suppliers have processes in place that ensure parts are

produced with the correct material. Suppliers shall meet the following requirements as applicable per Burns PO, drawing, or Specification:

- Maintain material traceability to a heat number and material properties
- Provide Certification of Hazardous Location approval per BES101.
- Provide Certification of No Animal Derived Material per BES102.
- Produce material certificate reports per applicable standards (EN 10204 “type 3.1”) and provide to Burns as requested
- Perform positive material identification (PMI) tests to verify material type
- Provide evidence of controls in place to prevent the shipment of incorrect material

2.22. Environmental Compliance Requirements

Burns requires Suppliers to comply with US and relevant International compliance regulations that are instituted by a recognized government body (e.g. REACH, RoHS, Conflict Minerals, PROP65, etc.). These regulations must be followed in order to conduct business within that government’s controlled domain. Any exceptions must be approved by Burns.

When requested, Suppliers shall submit written product specifications that pertain to any compliance regulation to Burns within 2 weeks of initial notification.

Burns requires Suppliers to implement a proactive process to monitor the compliance areas and pursue the required data through its supply base to support Burns communications to its customers.