



High Performance Alloys, Inc.

Quality System Manual

Revision History

Revision	Date	Review/Revision Description	Approvals
A	8/26/2008	Initial Release	President: <i>Russ Kerchner Jr.</i>
			QA Manager: <i>David L Monow</i>
B	3/20/2009	Revised to meet ISO 9001:2008	President: <i>Russ Kerchner Jr.</i>
			QA Manager: <i>David L Monow</i>
C	10/12/2009	Revised Section 9.1 (Organization Chart) to move Production Planner position from Purchasing/Sales/Marketing department to Plant Operations department.	President: <i>Russ Kerchner Jr.</i>
			QA Manager: <i>David L Monow</i>
D	2/23/2010	Revised to reflect organizational changes.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
E	6/25/2010	Revised Section 9.1 Organization Chart to include new job description for Water Jet Cutter Operator.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
F	1/12/2011	Revised Section 9.1 (Organization Chart) to include new IT Systems Technician job title.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
G	1/10/2012	Eliminated quality objectives identified during internal audit that cannot be easily measured, including "effective communication" and "exceeding requirements of ISO 9001:2008."	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
H	8/19/2013	Revised to address organizational changes (Section 9.1 Organization Chart) and other minor editorial upgrades.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
I	3/5/2014	Revised Section 9.1 (Organization Chart) to include new IT Systems Network Administrator and Plant Shipping Supervisor job titles.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
J	11/6/2015	Revised to remove references to now-defunct PR-84-01 Statistical Sampling for Inspection, including revision to QMS Process Flowchart in Section 9.2.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
K	3/27/2017	Revised to include updated organization chart, which reflects newly-revised job description/titles for Top Management as well as IT department.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>



Revision History

Revision	Date	Review/Revision Description	Approvals
L	5/31/2017	Revised organization chart (Section 9.1) due to various additions, eliminations, and revisions to job descriptions, particularly those tied to the Administration department.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
M	3/9/2018	Revised for upgrade to ISO 9001:2015.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
N	9/22/2020	Revised organization chart in Section 11.1 to reflect current organizational structure.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
O	3/18/2022	Updated Organization Chart (Appendix 11.1) to reflect current structure.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
P	6/16/2022	Updated Organization Chart (Appendix 11.1) to add new job title "Quality Assurance Specialist."	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
Q	6/29/2022	Updated Organization Chart (Appendix 11.1) to add new job title "Senior Logistics Coordinator" and to change "Shipping Clerk" (now obsolete) to "Logistics Coordinator."	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
R	5/25/2023	Revised to update organization chart. Also revised to address various Spring 2023 internal audit action items, including changes to the quality objectives and other minor changes.	Top Management: <i>Frank W. Hill</i>
			QA Manager: <i>David L Monow</i>
			Top Management:
			QA Manager:
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			QA Manager:
			Top Management:
			QA Manager:



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0 Introduction

0.1 General

This Quality System Manual outlines the policies and procedures High Performance Alloys, Inc. employs to satisfy the requirements of the ISO9001:2015 Quality Management System. High Performance Alloys, Inc.'s strategic decision to adopt and conform to these quality management systems help to improve its overall performance and provide a sound basis for sustainable development initiatives. High Performance Alloys, Inc. recognizes that its full commitment to establishing, implementing, and maintaining these systems provides many potential benefits, including:

- a) the ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements;
- b) facilitating opportunities to enhance customer satisfaction;
- c) addressing risks and opportunities associated with its context and objectives;
- d) the ability to demonstrate conformity to specified quality management system requirements.

0.2 Quality Management Principles

High Performance Alloys, Inc. recognizes that the ISO 9001:2015 is based on the following set of quality management principles:

- customer focus;
- leadership;
- engagement of people;
- process approach;
- improvement;
- evidence-based decision making;
- relationship management.

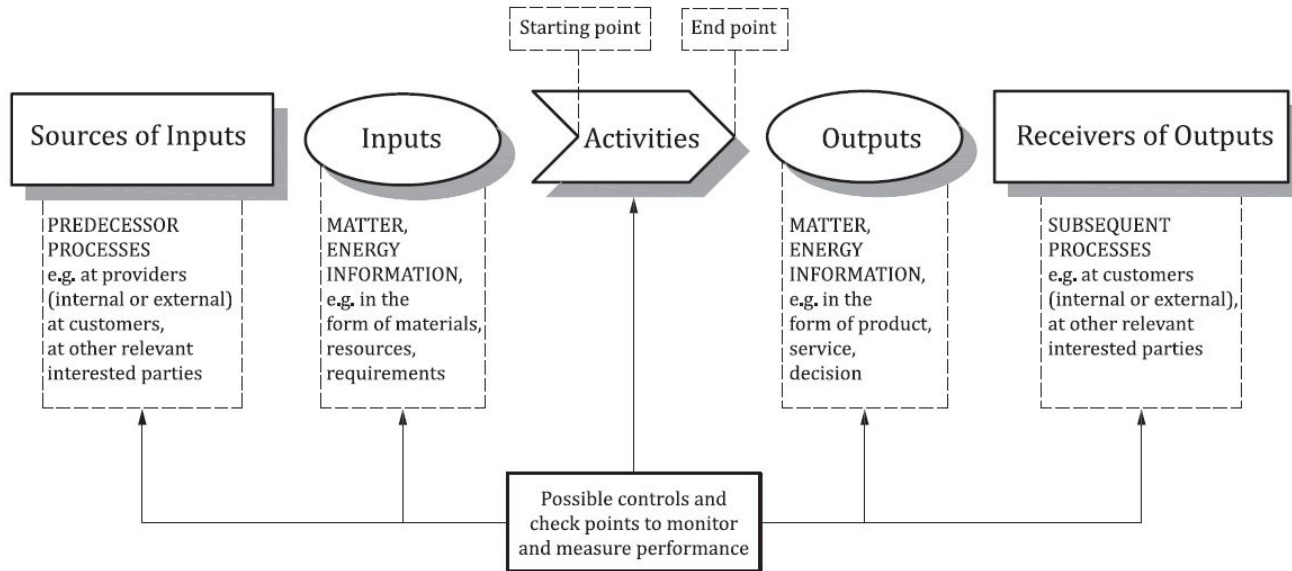
High Performance Alloys, Inc. has developed and implemented its quality management system to fully embrace these principles while understanding the benefits they provide to the organization in terms of improving the organization's performance.

0.3 Process Approach

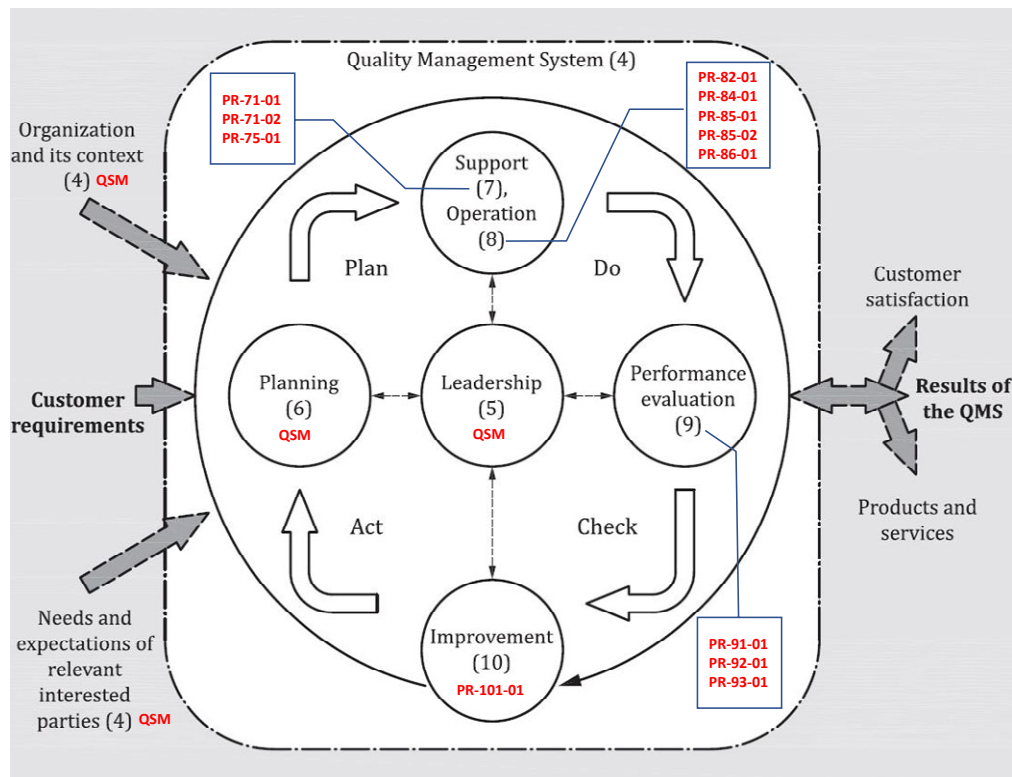
Understanding the importance of enhancing customer satisfaction and meeting customer requirements which the ISO 9001:2015 promotes, HPA has adopted a process approach in developing, implementing, and improving the effectiveness of its QMS. This approach enables HPA to control the interrelationships and interdependencies among its processes so that the HPA's overall performance can be enhanced.



The following is a schematic representation of any process and shows the interaction of its elements. The monitoring and measuring check points, which are necessary for control, are specific to each process and will vary depending on the related risks.



In addition to the schematic above, the following diagram illustrates how HPA applies the PDCA cycle to its processes identified in this quality system manual as well as the QMS as a whole.



The PDCA cycle can be briefly described as follows:

- Plan: establish the objectives of the system and its processes, and the resources needed to deliver results in accordance with customers' requirements and the organization's policies, and identify and address risks and opportunities;
- Do: implement what was planned;
- Check: monitor and (where applicable) measure processes and the resulting products and services against policies, objectives, requirements and planned activities, and report the results;
- Act: take actions to improve performance, as necessary.

Finally, HPA utilizes risk-based thinking, which is essential for achieving an effective QMS. In its application, HPA plans and implements actions to address risks and opportunities, realizing that addressing both risks and opportunities establishes a basis for increasing the effectiveness of the QMS and while at the same time achieving improved results and preventing negative effects.

1 Scope

Since 2006, High Performance Alloys, Inc. has implemented ISO 9001 in order to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements and aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.

2 Normative Reference

This quality manual serves as a normative document for the entire quality system. For undated references, the latest edition of the normative document referred to applies.

3 Terms and Definitions

- HPA = High Performance Alloys, Inc. (i.e., organization)
- Top Management = COO, CIO, and CFO (see Appendix 11.1)
- QMS = Quality Management System (i.e., ISO 9001:2015)

4 Context of Organization

Family Owned and Operated Since 1984

As a family-owned and operated small business, High Performance Alloys, Inc. (HPA or HPAAlloys) prides itself in delivering to its customers an unmatched level of service and depth of knowledge. Russ Kirchner, Jr., a Metallurgist and Corrosion Specialist, retired from Haynes International and started the company in 1984 with the intent to sell product quickly and economically.

Industry Leader

To this day, HPA continues its role as a leader in the super-alloys industry, supplying demanding and extreme-environment industries such as aerospace, defense, chemical processing, oil/gas, medical, and food processing with wear, corrosion, and high temperature-resistant materials.

Manufacturer, Distributor, and Service Center

Serving as a manufacturer, distributor, and service center, HPA is able to offer a wide array of products and services. HPA's manufacturing capabilities include custom cutting on shears, plasma cutters, bandsaws and waterjets as well as many "in house" conversion processes such as radial forging and rolling. With a large and diverse inventory, HPA is able to meet the needs of both small and large quantities quickly, many times the same day ordered.

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4.1 Understanding the Organization and Its Context

HPA has determined external and internal issues that are relevant to its purpose and its strategic direction and that affect its ability to achieve the intended result(s) of its QMS. HPA monitors and reviews information about these external (e.g., legal, technological, competitive, market, economic environments, whether international, national, regional or local, etc.) and internal issues (e.g., values, knowledge, performance of the organization, etc.).

4.2 Understanding the Needs and Expectations of Interested Parties

Due to their effect or potential effect on the HPA's ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, HPA has devised a chart located in Appendix 11.2 of this quality manual which lists interested parties and their requirements that are relevant to the HPA's QMS. HPA regularly monitors and reviews information about these interested parties and their relevant requirements.

4.3 Determining the Scope of the QMS

HPA has determined the boundaries and applicability of the QMS (i.e., scope) as represented in the following statement:

*Manufacturer and distributor of cobalt, stainless steel,
and nickel-based alloys and Water Jet cut parts.*

HPA does at times provide products primarily cut on waterjet equipment that by design are not included in the scope of the QMS. Such products include but are not limited to glass, plastics, stone/granite, and wood.

Although every ISO 9001:2015 requirement is mandatory, HPA does not engage in design and development activities. Therefore, HPA does not include Section 8.3 Design and Development of Products and Services in the scope of the QMS since it is a requirement that cannot be applied.

4.4 Quality Management System and Its Processes

HPA has established, implemented, and continually maintains and improves a QMS, including the processes needed and their interactions, that complies with ISO9001:2015 requirements. This quality manual identifies all the processes and their application within HPA's QMS.

5 Leadership

5.1 Leadership and Commitment

Top Management demonstrates leadership and commitment to:

- a) taking accountability for the effectiveness of the QMS;

- b) ensuring that the quality policy and quality objectives are established for the QMS and are compatible with the context and strategic direction of the organization;
- c) ensuring the integration of the QMS requirements into the organization's business processes;
- d) promoting the use of the process approach and risk-based thinking;
- e) ensuring that the resources needed for the QMS are available;
- f) communicating the importance of effective quality management and of conforming to the QMS requirements;
- g) ensuring that the QMS achieves its intended results;
- h) engaging, directing, and supporting persons to contribute to the effectiveness of the QMS;
- i) promoting improvement;
- j) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility
- k) customer focus by ensuring that:
 - 1) customer and applicable statutory and regulatory requirements are determined, understood, and consistently met;
 - 2) the risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed;
 - 3) the focus on enhancing customer satisfaction is maintained.

5.2 Policy

Top Management has established, has implemented, and continually maintains a quality policy that:

- a) is appropriate to the purpose and context of the organization and supports its strategic direction;
- b) provides a framework for setting quality objectives;
- c) includes a commitment to satisfy applicable requirements;
- d) includes a commitment to continual improvement of the QMS

- e) is available and maintained as documented information both within the context of this quality system manual;
- f) is communicated, understood, and applied within HPA via new employee orientation, bulletin board postings, and internal audits;
- g) is available to relevant interested parties upon request and as a courtesy link via HPA's website.

HPA's Quality Policy

High Performance Alloys, Inc. is committed to:

- Providing high performance super-alloy materials, products, and services that meet or exceed customer requirements*
- Communicating to employees the responsibility they share in maintaining an effective QMS*
- Monitoring and evaluating quality objectives to continually improve the effectiveness of the QMS*

5.3 Organizational Roles, Responsibilities, and Authorities

Top Management ensures that the responsibilities and authorities for relevant roles are assigned, communicated, and understood within HPA. Top Management has assigned the Quality Assurance Manager the responsibility for:

- a) ensuring that the quality management system conforms to the requirements of ISO 9001:2015;
- b) ensuring that the processes are delivering their intended outputs;
- c) reporting on the performance of the quality management system and on opportunities for improvement, in particular to Top Management;
- d) ensuring the promotion of customer focus throughout the organization;
- e) ensuring that the integrity of the quality management system is maintained when changes to the QMS are planned and implemented.

The structure of HPA in terms of job functions is documented in the Organization Chart, which appears in Appendix Section 11.1 of this quality system manual. Job descriptions are available to all employees as documented information which provide duties and responsibilities associated with their individual job functions.



The QA Manager communicates the responsibility new employees share in maintaining an effective QMS during orientation training. Training sessions - often the result of corrective actions - also provide opportunities to reinforce these principles.

6 Planning

6.1 Actions to Address Risks and Opportunities

HPA has identified risks and opportunities for each of its QMS processes which it addresses in order to:

- a) give assurance that the QMS can achieve its intended result(s);
- b) enhance desirable effects;
- c) prevent, or reduce, undesired effects;
- d) achieve improvement.

Along with identifying risks and opportunities, HPA has planned:

- a) actions to address these risks and opportunities, which are proportionate to the potential impact on the conformity of products and services;
- b) how to integrate and implement the actions into its QMS and evaluate the effectiveness of these actions.

The Monitoring, Measurement, Analysis, and Evaluation (PR-91-01) procedure delineates how HPA addresses, monitors, and implements these actions which are intended to avoid, reduce, or eliminate risk as well as those actions intended to seize upon opportunities such as the adoption of new practices (e.g., new technologies).

6.2 Quality Objectives and Planning to Achieve Them

HPA has established measurable quality objectives for HPA. These objectives, derived from the quality policy are listed as follows:

- 100% HPA employee satisfaction*
- 100% customer satisfaction*
- 100% on time shipment (OTS) of products and services*
- Prompt and effective detection, control, response, and prevention of non-conformities throughout HPA*

Top Management reviews quality objectives data during Management Review meetings in order to assess opportunities for improvement and plans for achieving them.

HPA communicates the quality objectives through internal audits, new employee orientation, and postings located throughout HPA's facilities.

The Monitoring, Measurement, Analysis, and Evaluation (PR-91-01) procedure delineates how HPA monitors, measures, analyzes, and evaluates its quality objectives and how the quality objectives relate to HPA's processes, risks, and opportunities.

6.3 Planning of Changes

When HPA determines the need for changes to its QMS, HPA carries out these changes in a planned manner. To achieve this, HPA considers:

- a) the purpose of the changes and their potential consequences;
- b) the integrity of the quality management system;
- c) the availability of resources;
- d) the allocation or reallocation of responsibilities and authorities.

Planning of changes is a review output of Management Review meetings as delineated in the Management Review (PR-93-01) procedure.

7 Support

7.1 Resources

HPA has determined and provides the resources needed for the establishment, implementation, maintenance, and continual improvement of the QMS while considering both the capabilities of, and constraints on, existing internal resources as well as what needs to be obtained from external providers.

The Support Resources – People (PR-71-01) procedure details how HPA:

- a) determines and provides the persons necessary for the effective implementation of its QMS and for the operation and control of its processes;
- b) determines the knowledge necessary for the operation of its processes and to achieve conformity of products and services.

The Support Resources – Infrastructure (PR-71-02) procedure details how HPA:

- a) determines the infrastructure necessary for the operation of its processes and to achieve conformity of its products and services. HPA provides and maintains this infrastructure, which includes buildings, utilities, individual workspaces, equipment (hardware and software), and any supporting services, including transportation, communication, and information technology (IT) systems;

- b) determines and manages the environment needed to achieve conformity to product requirements. The work environment consists of social, psychological, physical, and other factors, including health and safety conditions, work methods, handling methods, noise, temperature, humidity, lighting, and weather;
- c) determines and provides the resources needed to ensure valid and reliable results when monitoring or measuring is used to verify the conformity of products and services to requirements.

7.2 Competence

The Support Resources – People (PR-71-01) procedure details how HPA determines the necessary competence of person(s) doing work under its control that affects the performance and effectiveness of the quality management system.

7.3 Awareness

The Support Resources – People (PR-71-01) procedure details how HPA ensures that persons doing work under HPA's control are aware of:

- a) the quality policy (delineated in this quality manual);
- b) relevant quality objectives (delineated in this quality manual);
- c) their contribution to the effectiveness of the QMS, including the benefits of improved performance and the implications of not conforming to QMS requirements.

7.4 Communication

The Support Resources – People (PR-71-01) procedure details how HPA determines internal and external communications relevant to the QMS and how it is facilitated throughout the organization.

7.5 Documented Information

HPA has created documentation information that is required by the ISO 9001:2015 standard as well as that which HPA deems necessary for the effectiveness of the QMS. The Documented Information (PR-75-01) procedure details the creating, updating, and control of all QMS documented information.

8 Operation

8.1 Operational Planning and Control

The Products and Services Requirements (PR-82-01) procedure details how HPA plans,

implements, and controls the processes needed to meet the requirements for the provision of products and services.

8.2 Requirements for Products and Services

The Products and Services Requirements (PR-82-01) procedure details how HPA manages requirements for products and services by:

- a) communicating with customers;
- b) determining the requirements for the products and services;
- c) reviewing the requirements for product and services;
- d) appropriately handling changes to requirements for products and services.

8.3 Design and Development of Products and Services

This section is excluded per section 4.3 of this Quality System Manual.

8.4 Control of Externally Provided Processes, Products, and Services

The External Processes, Products, and Services Control (PR-84-01) procedure details how HPA ensures that externally provided processes, products and services conform to requirements, including the determination and application of criteria for the evaluation, selection, monitoring of performance, and re-evaluation of external providers based on their ability to provide processes or products and services in accordance with requirements.

8.5 Production and Service Provision

The Production and Service Control (PR-85-01) and the Product Inspection (PR-85-02) procedures detail how HPA implements production and service provision under controlled conditions, including how HPA:

- a) uses suitable means to identify outputs when it is necessary to ensure the conformity of products and services;
- b) exercises care with property belonging to customers or external providers while it is under the organization's control or being used by the organization;
- c) preserves the outputs during production and service provision, to the extent necessary to ensure conformity to requirements;
- d) meet requirements for post-delivery activities associated with the products and services;
- e) reviews and controls changes for production or service provision, to the extent necessary to ensure continuing conformity with requirements.

8.6 Release of Products and Services

The Products and Services Release (PR-86-01) procedure details how HPA implements planned arrangements, at appropriate stages, to verify that the product and service requirements have been met.

8.7 Control of Nonconforming Outputs

The Improvement procedure (PR-101-01) details how HPA ensures that outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery by taking appropriate action based on the nature of the nonconformity and its effect on the conformity of products and services.

9 Performance Evaluation

9.1 Monitoring, Measurement, Analysis, and Evaluation

The Monitoring, Measurement, Analysis, and Evaluation procedure (PR-91-01) details how HPA determines:

- a) what needs to be monitored and measured;
- b) the methods for monitoring, measurement, analysis and evaluation needed to ensure valid results;
- c) when the monitoring and measuring shall be performed;
- d) when the results from monitoring and measurement shall be analyzed and evaluated.

HPA then uses the results of analysis to evaluate:

- a) conformity of products and services;
- b) the degree of customer satisfaction;
- c) the performance and effectiveness of the QMS;
- d) if planning has been implemented effectively;
- e) the effectiveness of actions taken to address risks and opportunities;
- f) the performance of external providers;
- g) the need for improvements to the QMS.

9.2 Internal Audit

HPA conducts periodic Internal Audits at planned intervals in accordance with the Internal Audit procedure (PR-92-01). Internal Audits allow HPA to provide information on whether the quality management system conforms to the organization's own requirements for its quality management system and the requirements of ISO 9001:2015.

9.3 Management Review

The Management Review (PR-93-01) procedure details how HPA conducts management reviews that allow Top Management the opportunity to review HPA's QMS at planned intervals, to ensure its continuing suitability, adequacy, effectiveness, and alignment with the strategic direction of the organization.

10 Improvement

10.1 General

The Improvement procedure (PR-101-01) details how HPA determines and selects opportunities for improvement and implements any necessary actions to meet customer requirements and enhance customer satisfaction.

10.2 Nonconformity and Corrective Action

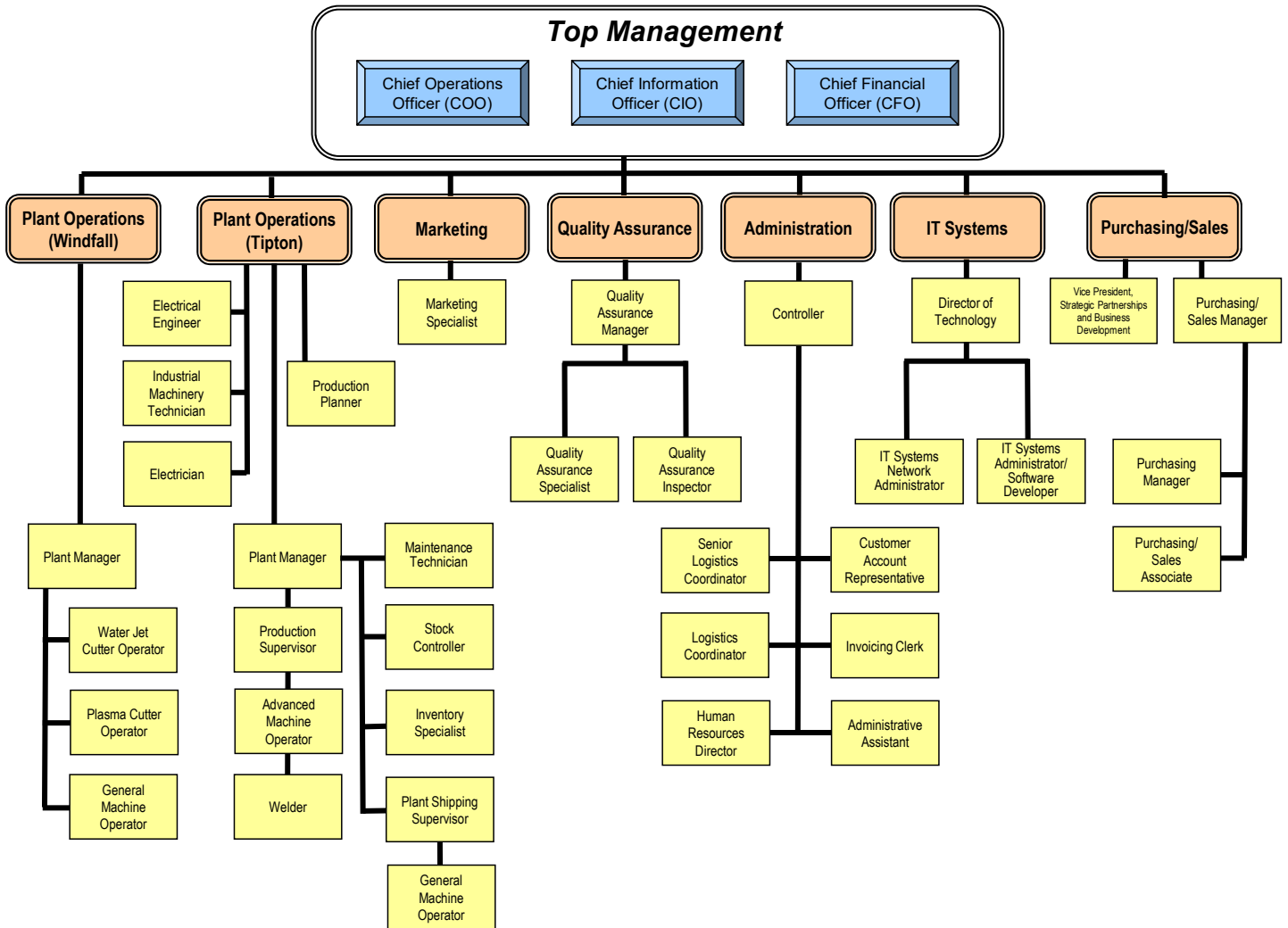
The Improvement procedure (PR-101-01) details how HPA reacts to, takes control of, and deals with the consequences of nonconformities, including any arising from complaints.

10.3 Continual Improvement

The Improvement procedure (PR-101-01) details the methods by which HPA continually improves the suitability, adequacy, and effectiveness of the QMS.

11 Appendices

11.1 Organization Chart



11.2 Interested Parties

Interested Party	Classification	Needs/Expectations
Board of Directors	Responsibility	Sustained profitability
		Long-term goals
Customers	Responsibility	Quality, price, & on-time delivery of products and services that conform to specifications
		Ethical behavior
		Adherence to payment terms
Vendors	Dependency	Mutual benefit and continuity
		Ethical behavior
		Adherence to payment terms
Bankers	Authority	Meeting repayment terms
		Compliance with loan conditions
Government	Authority	Compliance with applicable local and federal laws relevant to the business and the products and services it provides
Insurer	Authority	Meeting policy requirements
		Business coverage
		Payment of premiums
		Reporting changes in circumstances
Local community	Proximity	Environmental protection
		Sources of labor/support of industry
		Compliance with statutory and regulatory requirements
Competitors	Influence	Prices
		Delivery time
		Special properties
		Stocking quantity
Top Management	Responsibility	Adherence to agreements
		Discipline
		Morale
		Transparency
		Demonstrating leadership and commitment with respect to the QMS
Employees	Dependency	Good work environment
		Safe working conditions
		Market-competitive wages and benefits
		Opportunities for advancement
		Job security
		Recognition and reward
		Training and support