UNIVERSAL STAINLESS – NORTH JACKSON FACILITY

Quality Systems Manual

Revision 8

Issued 12-5-17

Conforms to AS9100 Rev. D and ISO 9001:2015

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1.0 Welcome to Universal Stainless – North Jackson Facility

Patriot Special Metals (PSM) was developed as a green field site, beginning operations in the first half of 2011. In August of 2011, PSM was purchased by Universal Stainless & Alloy Products headquartered in Bridgeville, PA. Some functions such as Sales and Purchasing are headquartered at the Bridgeville facility, but staff located in North Jackson assist in the operation of these systems.

The quality management system requirements specified in this Quality Program are complementary to those imposed by purchase order, customer/industry specifications and formal supplier quality program requirements formally accepted by USAP-NJ.

This Quality Program Manual can be used by internal and external parties, including certification bodies, to assess USAP-NJ's ability to meet customer, regulatory and the company's own requirements.

2.0 About The USAP-NJ Quality Manual

This manual is prepared for the purpose of defining the company's interpretations of the AS9100 Revision D and ISO 9001:2015 international standards, as well as to demonstrate how the company complies with that standard, General Electric Procedure S-1000, S-400, and applicable sections of ISO 17025.

This manual presents "Notes" which are used to define how USAP-NJ has tailored its management system to suit its purposes. These are intended to clarify implementation approaches and interpretations for concepts which are not otherwise clearly defined in ISO 9001 or AS9100. *Notes appear in italics, with gray background.*

Where subordinate or supporting documentation is reference in this manual, these are indicated by ***bold italics***.

3.0 Terms and Definitions

USAP-NJ adopts the following terms and definitions within its Quality Management System. Where no definition is provided, the company typically adopts the definitions provided in ***ISO 9000: Quality Management – Fundamentals and Vocabulary*** and AS9100 Rev D. In some cases, specific procedures or documentation may provide a different definition to be used in the context of that document; in such cases, the definition will supercede those provided for in this Quality Manual or the referenced definition sources.

General Terminology

USAP-NJ – Universal Stainless – North Jackson Facility

Document – written information used to describe how an activity is done.

Record – captured evidence of an activity having been done.

Risk-Based Thinking Terminology

Risk – Negative effect of uncertainty

Opportunity – Positive effect of uncertainty

Uncertainty - A deficiency of information related to understanding or knowledge of an event, its consequence, or likelihood. (Not to be confused with measurement uncertainty.)

Nonconforming Product Terminology

Rework: Efforts to bring nonconforming product into conformance through additional operations that *do not* alter the original design of the product.

Scrap: The discard of nonconforming product in lieu of rework .

4.0 Context of the Organization

4.1 Understanding the Organization and Its Context

USAP-NJ has reviewed and analyzed key aspects of itself and its stakeholders to determine the strategic direction of the company. This requires understanding internal and external issues that are of concern to USAP-NJ and its interested parties (per 4.2 below); the interested parties are identified throughout this document and associated procedures.

Such issues are monitored and updated as appropriate, and discussed as part of management reviews.

4.2 Understanding the Needs and Expectations of Interested Parties

The issues determined per 4.1 above are identified through an analysis of risks facing USAP-NJ and its interested parties. "Interested parties" are those stakeholders who receive our products, or who may be impacted by them, or those parties who may otherwise have a significant interest in our company.

This information is then used by senior management to determine the company's strategic direction. This is defined in records of management review, and periodically updated as conditions and situations change.

The following are examples of interested parties with requirements relevant to the QMS:

- Customer Input – responsibility of Sales group
- Regulatory input such as OSHA, Ohio EPA, Federal EPA – Responsibility of EHS Director
- Export input – EAR and ITAR – Responsibility of Corporate Quality Director, Corporate Legal Counsel, and NJX General Manager for local issues
- Employee input – Responsibility of General Manager and subordinate managers.
- Registrar – AS9100, ISO17025, ISO9001 – Responsibility of NJX QA Management and Corporate Quality Management.

4.3 Determining the Scope of the Quality Management System

Based on an analysis of the above issues of concern, interests of stakeholders, and in consideration of its products and services, USAP-NJ has determined the scope of the management system as follows:

Melting, Forging, Heat Treatment, and Finishing of Metal Products.

The quality system applies to all processes, activities and employees within the company. The facility is located at:

2058 South Bailey Rd

North Jackson, OH 44408

The following clauses of AS9100 were determined to be not applicable to USAP-NJ.

- Paragraph 8.3 – Design and Development of Products and services. USAP-NJ produces goods

based on our customers' and general industry specifications

4.4 Quality Management System and Its Processes

4.4.1 Process Identification

USAP-NJ has adopted a process approach for its management system. By identifying the top-level processes within the company, and then managing each of these discretely, this reduces the potential for nonconforming products discovered during final processes or after delivery. Instead, nonconformities and risks are identified in real time, by actions taken within each of the top-level processes.

Note: not all activities are considered "processes" – the term "process" in this context indicates the activity has been elevated to a higher level of control and management oversight. The controls indicated herein are applicable only to the top-level processes identified.

The following top-level processes have been identified for USAP-NJ:

1. Vacuum Induction Melting (VIM)
2. Vacuum Arc Remelting (VAR)
3. Radial Forging
4. Heat Teatment
5. Finishing

Each process may be supported by other activities, such as tasks or sub-processes. Monitoring and control of top level processes ensures effective implementation and control of all subordinate tasks or sub-processes.

Each top-level process has a Process Diagram document which defines:

- applicable inputs and outputs
- process owner(s)
- applicable responsibilities and authorities
- applicable risks and opportunities
- critical and supporting resources
- criteria and methods employed to ensure the effectiveness of the process
- quality objectives related to that process

The sequence of interaction of these processes is illustrated in procedure QS-23 – QMS System Diagram.

Note: Appendix A represents the typical sequence of processes, and may be altered depending on customer or regulatory requirements at the job or contract level, as needed.

4.4.2 Process Controls & Objectives

Each process has at least one objective established for it; this is a statement of the intent of the process. Each objective is then supported by at least one "metric" or key performance indicator (KPI) which is then measured to determine the process' ability to meet the quality objective.

Note: some processes have multiple objectives and multiple metrics. This is determined by the nature of the process, it's impact on products, and associated risks.

Note: Whereas ISO 9001 discusses process measurements and "quality objectives" as separate concepts, USAP-NJ combines them; i.e., quality objectives are used to control the processes. Additional objectives for [Products or Services Plur.] may be

assigned, but these will also be used to measure process effectiveness.

Throughout the year, metrics data is measured and gathered by process owners or other assigned managers, in order to present the data to the Management Team. The data is then analyzed in order that the Management Team may set goals and make adjustments for the purposes of long-term continual improvement.

The specific quality objectives for each process are defined in QS-018 – Quality Orientation.

Metrics, along with current standings and goals for each objective, are recorded in records of management review.

When a process does not meet a goal, or an unexpected problem is encountered with a process, the corrective and preventive action process is implemented to research and resolve the issue. In addition, opportunities for improvement are sought and implemented, for the identified processes.

4.4.3 Outsourced Processes

Any process performed by a third party is considered an "outsourced process" and must be controlled, as well. The company's outsourced processes, and the control methods implemented for each, are defined in ***QS-15 – Outsourced Procedures and Approved Supplier List***

The type and extent of control to be applied to the outsourced process take into consideration:

a) the potential impact of the outsourced process on the company's capability to provide product that conforms to requirements,

b) the degree to which the control for the process is shared,

c) the capability of achieving the necessary control through the purchasing contract requirements.

5.0 Leadership

5.1 Leadership & Commitment

5.1.1 General

The Management Team of USAP-NJ provides evidence of its leadership and commitment to the development and implementation of the management system and continually improving its effectiveness by:

a) taking accountability of the effectiveness of the management system;

b) ensuring that the ***Quality Policy*** and quality objectives are established for the management system and are compatible with the strategic direction and the context of the organization;

c) ensuring the integration of the management system requirements into the organization's other business processes, as deemed appropriate (see note);

d) promoting awareness of the process approach;

e) ensuring that the resources needed for the management system are available;

f) communicating the importance of effective quality management and of conforming to the management system requirements;

g) ensuring that the management system achieves its intended results;

h) engaging, directing and supporting persons to contribute to the effectiveness of the management system;

i) promoting continual improvement;

j) supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

Note: "business processes" such as accounting, employee benefits management and legal activities are out of scope of the QMS.

5.1.2 Customer focus

The Management Team of USAP-NJ adopts a customer-first approach which ensures that customer needs and expectations are determined, converted into requirements and are met with the aim of enhancing customer satisfaction.

This is accomplished by assuring:

a) customer and applicable statutory and regulatory requirements are determined, understood and consistently met;

b) the risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed;

c) the focus on enhancing customer satisfaction is maintained;

d) product and service conformity and on-time delivery performance are measured and appropriate action is taken if planned results are not, or will not be, achieved.

5.2 Policy

The Senior Management Team has developed the Quality Policy, defined in section 3.0 above, that governs day-to-day operations to ensure quality.

The Quality Policy is released as a standalone document as well, and is communicated and implemented throughout the organization.

The Quality Policy of USAP-NJ is defined in procedure QS-018 – Quality Orientation

5.3 Organizational Roles Responsibilities and Authorities

The Senior Management Team has assigned responsibilities and authorities for all relevant roles in the company. These are communicated through procedure QS-37 – Organizational Chart.

The Quality Manager has been assigned the role of ISO Management Representative when having a single point of contact to represent the USAP-NJ quality system is useful or required by customer or regulations. The Quality Manager shall also be responsible for:

a) ensuring that the quality management system conforms to the requirements of this International Standard;

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

quality management system are planned and implemented.

Other duties of the Quality Manager may be defined herein or within other documented procedures.

6.0 Planning

6.1 Actions to Address Risks and Opportunities

Note: USAP-NJ deviates slightly from the approach towards risk and opportunity presented in ISO 9001. Instead, USAP-NJ views "uncertainty" as neutral, but defines "risk" as a negative effect of uncertainty, and "opportunity" as a positive effect of uncertainty. USAP-NJ has elected to manage risks and opportunities separately, except where they may overlap. Formal risk management may not be utilized in all instances; instead, the level of risk assessment, analysis, treatment and recordkeeping will be performed to the level deemed appropriate for each circumstance or application.

USAP-NJ considers risks and opportunities when taking actions within the management system, as well as when implementing or improving the management system; likewise, these are considered relative to products and services. Risks and opportunities are identified as part of the Risk Register, as well as throughout all other activities of the QMS.

Risks and opportunities are managed in accordance with the Risk Register and QS-05. This procedure defines how risks are managed in order to minimize their likelihood and impact, and how opportunities are managed to improve their likelihood and benefit.

6.2 Quality Objectives and Planning to Achieve Them

As part of the adoption of the process approach, USAP-NJ utilizes its process objectives, as discussed in 4.4 above, as the main quality objectives for the QMS. These include overall product-related quality objectives; additional product-related quality objectives may be defined in work instructions or customer requirements.

The process objectives have been developed in consideration that they:

a) be consistent with the quality policy;

b) be measurable;

c) take into account applicable requirements;

d) be relevant to conformity of products and services and to enhancement of customer satisfaction;

e) be monitored;

f) be communicated;

g) be updated as appropriate.

Process quality objectives are defined in the minutes of management review per section 9.3 below.

The planning of process quality objectives is defined in section 4.4. above.

6.3 Planning of Changes

Changes to the quality management system and its processes are carried out in a planned manner per procedure QS-37 – Management of Change

7.0 Support

7.1 Resources

7.1.1 General

USAP-NJ determines and provides the resources needed:

a) to implement and maintain the management system and continually improve its effectiveness

b) to enhance customer satisfaction by meeting customer requirements

Resource allocation is done with consideration of the capability and constraints on existing internal resources, as well as needs related to supplier expectations.

Resources and resource allocation are assessed during management reviews.

7.1.2 People

Senior management ensures that sufficient staffing is provided for the effective operation of the management system, as well its identified processes.

7.1.3 Infrastructure

USAP-NJ determines, provides and maintains the infrastructure needed to achieve conformity to product requirements. Infrastructure includes, as applicable:

a) buildings, workspace and associated facilities;

b) process equipment, hardware and software;

c) supporting services such as transport;

d) information and communication technology.

Equipment is validated per the procedure QS-14 - Infrastructure.

7.1.4 Environment for the Operation of Processes

USAP-NJ provides a clean, safe and well-lit working environment. The Management Team of USAP-NJ manages the work environment needed to achieve conformity to product requirements. Specific environmental requirements for products are determined during quality planning and are documented in subordinate procedures, work instructions, or job documentation. Where special work environments have been implemented, these shall also be maintained per 6.3 above.

Human factors are considered to the extent that they directly impact on the quality of products.

Note: Social, psychological and safety aspects of the work environment are managed through activities outside of the scope of the management system. Only work environment aspects which can directly affect process efficiency or product and service quality are managed through the management system.

7.1.5 Monitoring and Measuring Resources

Where equipment is used for critical measurement activities, such as inspection and testing, these shall be subject to control and either calibration or verification; see procedure QS-01 – Calibration Program

Note: Calibration and measurement traceability is not employed for all measurement devices. Instead, USAP-NJ determines which devices will be subject to calibration based on its processes, products and services, or in order to comply with specifications or requirements. These decisions are also based on the importance of a measurement, and considerations of

risk.

7.1.6 Organizational Knowledge

USAP-NJ also determines the knowledge necessary for the operation of its processes and to achieve conformity of products and services. This may include knowledge and information obtained from:

a) internal sources, such as lessons learned, feedback from subject matter experts, and/or intellectual property;

b) external sources such as standards, academia, conferences, and/or information gathered from customers or suppliers.

This knowledge shall be maintained, and made available to the extent necessary.

When addressing changing needs and trends, USAP-NJ shall consider its current knowledge and determine how to acquire or access the necessary additional knowledge.

7.2 Competence

Staff members performing work affecting product quality are competent on the basis of appropriate education, training, skills and experience. Procedure QS-022 – Competency, Awareness, and Training defines these activities in detail.

Note: the management system does not include other aspects of Human Resources management, such as payroll, benefits, insurance, labor relations or disciplinary actions.

7.3 Awareness

Training and subsequent communication ensure that staff are aware of:

a) the quality policy;

b) relevant quality objectives;

c) their contribution to the effectiveness of the management system, including the benefits of improved performance;

d) the implications of not conforming with the management system requirements,

e) relevant quality management system documented information and changes thereto;

f) their contribution to product or service conformity;

g) their contribution to product safety;

h) the importance of ethical behavior.

7.4 Communication

The Management Team of USAP-NJ ensures internal communication takes place regarding the effectiveness of the management system. Internal communication methods include:

a) use of corrective and preventive action processes to report nonconformities or suggestions for improvement

b) use of the results of analysis of data including daily performance metrics

c) meetings (periodic, scheduled and/or unscheduled) to discuss aspects of the QMS and other pertinent topics

d) use of the results of the internal audit process

e) internal emails

f) memos to employees including board postings

g) USAP-NJ's "open door" policy which allows any employee access to The Management Team for discussions on improving the quality system

7.5 Documented Information

The management system documentation includes both documents and records.

Note: the ISO 9001:2015 standard uses the term "documented information"; USAP-NJ does not use this term, but instead relies on the terms "document" and "record" to avoid confusion. In this context the terms are defined by USAP-NJ as provided for in section 3.0 above. Documents and records undergo different controls as defined herein.

Documents required for the management system are controlled in accordance with procedures QS-02 – Document Control and QS-03 - Records**.** The purpose of document control is to ensure that staff have access to the latest, approved information, and to restrict the use of obsolete information. All documented procedures are established, documented, implemented and maintained.

A documented procedure QS-02 – Document Control has been established to define the controls needed for the identification, storage, retrieval, protection, retention time, and disposition of quality records. This procedure also defines the methods for controlling records that are created by and/or retained by suppliers.

Configuration documents are subject to additional controls per section 8.1.2 below.

These controls are applicable to those records which provide evidence of conformance to requirements; this may be evidence of product requirements, contractual requirements, procedural requirements, or statutory/regulatory compliance. In addition, quality records include any records which provide evidence of the effective operation of the management system.

8.0 Operation

8.1 Operational Planning and Control

USAP-NJ plans and develops the processes needed for realization of its products. Planning of product realization is consistent with the requirements of the other processes of the management system. Such planning considers the information related to the context of the organization (see section 2.0 above), current resources and capabilities, as well as product requirements.

Such planning is accomplished through:

a) determining the requirements for products;

b) establishing criteria for the processes and the acceptance of products;

c) determining the resources needed to achieve conformity to the product requirements;

d) implementing control of the processes in accordance with the criteria;

e) determining, maintaining and retaining documents and records to the extent necessary to have confidence that the processes have been carried out as planned and to demonstrate the conformity of products to their requirements;

f) determining the processes and controls needed to manage critical items, including production process controls when key characteristics have been identified;

g) engaging representatives of affected organization functions for operational planning and control;

h) determining the products and services to be obtained from external providers;

i) establishing the controls needed to prevent the delivery of nonconforming products to the customer.

Changes to operational processes are done in accordance with procedure QS-39 – Management of Change

Outsourced processes and the means by which USAP-NJ controls them are defined in the documented procedure QS-15 – Outsourced Procedures and Approved Supplier List

For developmental work, USAP-NJ plans and manages its provision of products in a structured and controlled manner; this is part of the corporate Technology A3 project system. Such work includes scheduling tasks in a planned sequence to meet requirements at acceptable risk, within resource and schedule constraints.

Process controls include methods to control the temporary or permanent transfer of work, to ensure the continuing conformity of products. This will consider how work transfer impacts and risks are managed. This process is described in QS-12 – Control of Work Transfers.

In this context, “work transfer” can mean the temporary or permanent handover of work between USAP-NJ internal processes, between USAP-NJ and an external service provider, or between external providers.

For transfers between internal processes, or within USAP-NJ divisions, these are controlled through normal work planning methods.

For transfers between USAP-NJ and an external service provider, or between external providers, these are controlled under the Purchasing requirements defined in section 8.4 below.

8.1.1 Operational Risk Management

Operational risk management is conducted to manage the risks related to USAP-NJ’s realization requirements. Risk assessment is based on local, corporate, regulatory, and customer factors. Risks are also determined on an operational basis specific to this facility and company-wide as they effect this facility. A risk register is maintained listing defined risks and mitigation practices for those risks.

8.1.2 Configuration Management

USAP-NJ plans, implements, and controls configuration management activities as appropriate to its products in order to ensure the identification and control of physical and functional attributes throughout the product lifecycle. This is defined in the documented procedure QS-07 Configuration Management. This includes document control for configuration documents, and change control for configured items.

8.1.3 Product Safety

Operational controls shall be implemented to assure product safety during the entire product life cycle, where this is appropriate relative to USAP-NJ’s products. These activities may include:

a) assessment of hazards and management of associated risks;

b) management of safety critical items;

c) analysis and reporting of occurred events affecting safety;

d) communication of these events and training of persons.

8.1.4 Prevention of Counterfeit Parts

Operational controls shall be implemented to assure the prevention of counterfeit or suspect counterfeit part use and their inclusion in product(s) delivered to the customer. These activities are defined in greater detail in the documented procedure QS-48 - Counterfeit Product Control

8.2 Requirements for Products and Services

8.2.1 Customer Communication

USAP-NJ has implemented effective communication with customers in relation to:

a) providing information relating to products;

b) handling enquiries, contracts or orders, including changes;

c) obtaining customer feedback relating to products and services, including customer complaints;

d) handling or controlling customer property;

e) establishing specific requirements for contingency actions, when relevant.

8.2.2 Determining the Requirements Related to Products and Services

Contract Review is performed by the Corporate Technology group in Bridgeville, PA. During the intake of new business USAP captures:

a) the requirements for the products and services, including any applicable statutory and regulatory requirements and other requirements deemed necessary by USAP-NJ

b) requirements not stated by the customer but necessary for specified or intended use, where known

c) special requirements (see 8.5.1 below)

d) operational risks (new technologies, capability and capacity, delivery time frames, etc.)

These activities are defined in greater detail in procedure QS-28 – Tender & Contract Review

8.2.3 Review of Requirements Related to Products and Services

Once requirements are captured, USAP-NJ reviews the requirements prior to its commitment to supply Products. This review ensures that:

a) product requirements are defined

b) contract or order requirements differing from those previously expressed are resolved

c) the organization has the ability to meet the defined requirements, and/or the claims for the products and services it offers

d) special requirements (see 8.5.1 below) can be met

e) risks have been identified and considered

These activities are defined in greater detail in procedure QS-28 – Tender & Contract Review.

8.2.4 Changes to Requirements for Products and Services

Where product requirements are changed, USAP ensures that relevant documents are amended and that relevant personnel are made aware of the changed requirements through guidelines provided in SPP3.1 (USAP-BVL QMS).

8.3 Design and Development of Products and Services

This section is exempted

8.4 Control of Externally Provided Processes, Products and Services

USAP-NJ ensures that purchased products conform to specified purchase requirements.

All quality critical purchasing for USAP-NJ is managed and controlled at the USAP-Corporate location through procedure SPP6.2. Through WI-066 Identification and Inspection of Incoming Forge Stock, and WI-042 Melt Shop Receiving and approval, USAP-NJ ensures that purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product are dependent upon the effect of the purchased product on subsequent product realization or the final product. These processes are managed and controlled by the purchasing department at USAP-Corporate.

USAP-Corporate evaluates and selects suppliers based on their ability to supply product in accordance with the company's requirements. Criteria for selection, evaluation and re-evaluation are established in USAP-Corporate procedure SPP6.2. Records of the results of evaluations and any necessary actions arising from the evaluation are maintained per USAP-Corporate procedure SPP6. USAP-Corporate is responsible for the quality of all products purchased from suppliers, including customer-designated sources (as stated above, USAP-NJX is responsible for verification of received goods, however SCARS originate at USAP-Corporate.

8.5 Production and Service Provision

8.5.1 Control of Production and Service Provision

To control its provision of products, USAP-NJ considers, as applicable, the following:

a) the availability of documents or records that define the characteristics of the products as well as the results to be achieved;

b) the availability and use of suitable monitoring and measuring resources;

c) the implementation of monitoring and measurement activities;

d) the use of suitable infrastructure and environment;

e) the appointment of competent persons, including any required qualifications;

f) the validation and revalidation of special processes if applicable (see below);

g) the implementation of actions to prevent human error;

h) the implementation of release, delivery and post-delivery activities.

Where special requirements, key characteristics and/or critical items are identified or deemed appropriate, the processes will be planned and controlled to manage these aspects.

Where appropriate, special statistical techniques may be used to control or monitor operational processes. In such cases, the techniques selected shall be based on known standards or otherwise justified as statistically valid. This includes sampling plans when sampling is used for inspection, testing or other purposes.

At this time, USAP-NJ does not utilize any in-house "special processes" where the result of the process cannot be verified by subsequent monitoring or measurement.

8.5.1.1 Control of Equipment, Tools and Software Programs

Production equipment, tools and programs are validated prior to use and maintained and inspected periodically according to documented procedures. Validation prior to production use includes verification of each article produced to the design data/specification. Storage requirements, including periodic preservation/condition checks, have been be established for production equipment or tooling in storage. See QS-06 Control of Production and Service Provision.

8.5.1.2 Validation and Control of Special Processes

Per QS-29 Forge Department Material Processing, QS-27 Pyrometry, QS-10 Purchasing and Supplier Evaluation, QS-02 Document Control, and QS-03 Quality System Records, USAP-NJ (along with purchasing support from USAP-Corporate) validates any processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement. This includes any processes where deficiencies become apparent only after the product is in use or the service has been delivered.

Validation of these "special processes" demonstrates the ability of these processes to achieve planned results. USAP-NJ has established arrangements for these processes including, as applicable

a) defined criteria for review and approval of the processes,

b) approval of equipment and qualification of personnel,

c) use of specific methods and procedures,

d) requirements for records, and

e) revalidation.

8.5.1.3 Production Process Verification

Production processes are verified through appropriate documentation and travelers. Where appropriate and/or required by customers, additional verification testing will be performed on each billet (eg. Macrostructure, Hardness, Ultrasonic testing, etc.). This testing may be performed by USAP-NJ personnel, or subcontracted to approved vendors. USAP-NJ produces materials to customer specification, and tests each piece as required by PO or specification. First article inspection requirements are satisfied because each heat is tested as required by customer PO.

8.5.2 Identification and Traceability

Where appropriate, USAP-NJ identifies its products or other critical process outputs by suitable means. Such identification includes the status of the product with respect to monitoring and measurement

requirements. Unless otherwise indicated as nonconforming, pending inspection or disposition, or some other similar identifier, all products shall be considered conforming and suitable for use.

USAP-NJ maintains the identification of the configuration of the products and services in order to identify any differences between the actual configuration and the required configuration; see documented procedure QS-07 – Configuration Management

Documented procedure QS-32 Identification, Traceability, and Inspection Status defines these methods in detail.

If unique traceability is required by contract, regulatory, or other established requirement, USAP-NJ controls and records the unique identification of our products. This shall include, as appropriate:

a) product identification to be maintained throughout the product life

b) the ability to trace all products manufactured from the same batch of raw material, or from the same manufacturing batch, to the destination (e.g., delivery, scrap)

c) for a product, a sequential record of its production

8.5.3 Property Belonging to Customers or External Providers

USAP-NJ exercises care with customer or supplier property while it is under the organization's control or being used by the organization. Upon receipt, such property is identified, verified, protected and safeguarded. If any such property is lost, damaged or otherwise found to be unsuitable for use, this is reported to the customer or supplier and records maintained.

For customer intellectual property, including customer furnished data used for design, production and / or inspection, this is identified by customer and maintained and preserved to prevent accidental loss, damage or inappropriate use.

This activity is defined in greater detail in the document QS-19 - Customer Supplied Materials

8.5.4 Preservation

USAP-NJ preserves conformity of product during internal processing and delivery to the intended destination. This preservation includes cleaning, FOD control, special handling for sensitive products, marking and labeling including safety warnings, shelf life control and stock rotation, and special handling for hazardous materials. Preservation also applies to the constituent parts of a product.

The documented procedure QS-31 Handling & Storage of Material defines the methods for preservation of product and the documented procedure. QS-049 FOD defines the methods for preventing, identifying and controlling foreign objects.

8.5.5 Post-Delivery Activities

Post-delivery activities are conducted in compliance with the management system defined herein. In determining the extent of post-delivery activities that are required, USAP-NJ considers:

1. statutory and regulatory requirements;
2. the potential undesired consequences associated with our products;
3. the nature, use and intended lifetime of its our products;
4. customer requirements;
5. customer feedback;

6. product/customer support (e.g., queries, training, warranties, maintenance, replacement parts, resources, obsolescence).

When problems are detected after delivery, USAP-NJ takes appropriate action including investigation and reporting; see section 10.2.

If a customer detects a problem with a product after delivery, a Customer Complaint is opened (QS-08 Corrective and Preventive Action, SCAR's, and Customer Complaints). The complaint will document actions to be taken, including investigation and verification activities.

8.5.6 Control of Changes

USAP-NJ reviews and controls both planned and unplanned changes to processes to the extent necessary to ensure continuing conformity with all requirements.

Process change management is defined in the document QS-39 Management of Change.

Documents are changed in accordance with procedure QS-02 Document Control.

8.6 Release of Products and Services

Products undergo inspection and/or testing to ensure they meet all requirements at critical stages throughout the various processes, and then prior to final delivery.

Measurement requirements are documented; this documentation is part of the order documentation, and includes:

a) criteria for acceptance and / or rejection,

b) where in the sequence measurement and testing operations are performed,

c) a record of the measurement results, and

d) type of measurement instruments required and any specific instructions associated with their use

Test records will show actual test results data when required by specification or acceptance test plan.

Where required to demonstrate product qualification, USAP-NJ will ensure that records provide evidence that the product meets the defined requirements.

When key characteristics have been identified, they are monitored and controlled as required.

Product is not used until it has been inspected or otherwise verified as conforming to specified requirements, except when released under positive-recall procedures pending completion of all required measurement and monitoring activities. Positive recall procedures (Proceed at risk) are documented in QS-47- Proceed at Risk.

Evidence of conformity with the acceptance criteria is maintained. Records indicate the person(s) authorizing release of said products.

8.6.2 Receiving Inspection and Testing

Incoming raw materials, processed products or other critical received goods undergo inspection and/or testing at receiving, prior to entry into the production processes. These activities are defined in procedure QS-10 - Purchasing & Supplier Evaluation

8.6.3 In-Process Inspection and Testing

At defined stages throughout production, inspections and/or tests are conducted to ensure our products satisfy the requirements for that particular process or activity, prior to being released to the next process or activity. This order of production is defined in each specific traveler and/or job documentation specific to each order.

8.6.4 First Article Inspection

First Article Inspections shall be performed at the discretion of Management and/or when required by customer or contract requirements.

Such First Article Inspections are a complete inspection of a completed part, of all physical and chemical data, to validate the production processes and equipment. The product used shall be a representative item from the first production run a new part or assembly to verify that the production processes, production documentation and tooling are capable of producing parts and assemblies that meet requirements. This process shall be repeated when changes occur that invalidate the original results (e.g., engineering changes, manufacturing process changes, tooling changes).

Where the customer dictates a format for First Article reporting, these formats will be used instead.

Note: USAP-NJ typically will analyze all required testing on each bar/order produced. All testing is performed as the customer requires for each order.

8.6.5 Final Inspection and Testing

Final acceptance criteria for products are defined in appropriate subordinate documentation. Reviews, inspections and tests are conducted at appropriate stages to verify that the product and service requirements have been met. This is done before products are released for shipping.

Each process utilizes different methods for measuring and releasing products. These methods are defined in test plans specific for each grade and customer.

8.7 Control of Nonconforming Outputs

USAP-NJ ensures that products or other process outputs that do not conform to their requirements are identified and controlled to prevent their unintended use or delivery.

The controls for such nonconformances are defined in QS-11 - Nonconforming Material

9.0 Performance Evaluation

9.1 Monitoring, Measurement, Analysis and Evaluation

9.1.1 General

USAP-NJ has determined which aspects of its quality management system must be monitored and measured, as well as the methods to utilize and records to maintain, within this Quality Manual and subordinate documentation.

Monitoring and measurement of the processes, as defined in 4.4 above, ensure that the Management Team the performance and effectiveness of the quality management system itself.

9.1.2 Customer Satisfaction

As one of the measurements of the performance of the management system, USAP-NJ monitors information relating to customer perception as to whether the organization has met customer requirements. The methods for obtaining and using this information include (but are not limited to):

- recording customer complaints
- product rejections or returns
- changing volume of orders for product
- trends in on-time delivery
- obtain customer scorecards from certain customers
- submittal of customer satisfaction surveys

The corrective and preventive action system shall be used to develop and implement plans for customer satisfaction improvement that address deficiencies identified by these evaluations, and assess the effectiveness of the results.

9.1.3 Analysis and Evaluation

USAP-NJ analyzes and evaluates the data and information arising from monitoring and measurement in order to evaluate:

a) conformity of products;
b) the degree of customer satisfaction;
c) the performance and effectiveness of the quality management system;
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 quality management system.

Statistical techniques used may be defined in appropriate documented procedures; in all cases, the methods are based on established standards or are otherwise determined to be statistically valid.

9.2 Internal Audit

USAP-NJ conducts internal audits at planned intervals to determine whether the management system conforms to contractual and regulatory requirements, to the requirements to the current revisions of ISO 9001, AS9100, Nadcap MTL and Heat Treat, and ISO17025, and to USAP management system requirements. Audits also seek to ensure that the management system has been effectively implemented and is maintained.

These activities are defined in procedure QS-04 - Internal Audits.

9.3 Management Review

The Management Team reviews the management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. The review includes assessing opportunities for improvement, and the need for changes to the management system, including the ***Quality Policy*** and quality

objectives.

Management review frequency, agenda (inputs), outputs, required members, actions taken and other review requirements are defined in the documented procedure QS-16 - Management Review.

Records from management reviews are maintained.

10.0 Improvement

10.1 General

USAP-NJ uses the management system to improve its processes, products and services. Such improvements aim to address the needs and expectations of customers as well as other interested parties, to the extent possible.

Improvement shall be driven by an analysis of data related to:

The results of analysis shall be used to evaluate:

h) conformity of products and services;

i) the degree of customer satisfaction;

j) the performance and effectiveness of the management system;

k) the effectiveness of planning;

l) the effectiveness of actions taken to address risks and opportunities;

m) the performance of external providers;

n) other improvements to the management system.

10.2 Nonconformity and Corrective Action

USAP-NJ takes corrective action to eliminate the cause of nonconformity in order to prevent recurrence. Likewise, the company takes preventive action to eliminate the causes of potential nonconformities in order to prevent their occurrence.

These activities are done through the use of the formal Corrective Action system, and are defined in procedure QS-08 - Corrective Action, SCARs, and Customer Complaints

10.3 Continual Improvement

Through the process effectiveness reviews, done as part of Management Review, USAP-NJ works to continually improve the suitability, adequacy and effectiveness of the quality management system. This includes seeking opportunities for improvement. The Continual Improvement system is documented in procedure QS-20 - Continual Improvement.

Director of Quality:

Brian Stanton Date: 12-5-17

Brian Stanton

Quality Manager:

Timothy Reeser Date: 12-5-17

Timothy Reeser

Rev#	Date	Revisions
0	10-25-10	New
1	6-3-11	Added Signatures, General update to AS9100 Rev C Requirements
2	9-7-11	Changed Patriot to Universal, Removed "Quality" from Quality Records statements, Added info about the sale to Universal, Changed Title from Pres to VP. Changed Org Chart.
3	1-14-12	Para 1.1 – Clarified scope Moved the QMS diagram to QS-23
4	6-18-12	Update Org Chart Para 1.1 – Added Melting to scope Para 7.4.1 – Added reference for melt shop
5	12-3-13	Page 5 – Added new document types Org Chart moved to QS-37 Para 5.5.1 - Org Chart moved to QS-37 Para 5.5.2 – Title change to General Manager who appoints QA Manager Para 7.2.1 – Contract review now a corporate function Para 7.2.2 – Removed reference to NJX procedures. Added reference to SOP-8 and USAP-Corporate documents Para 7.2.3 – Removed reference to NJX procedures. Added reference to SOP-8 and USAP-Corporate documents Para 7.4.1 – Added reference to USAP-corporate purchasing documents and system. Removed reference to QS-10 Para 7.4.2 – Added reference to USAP-corporate purchasing documents and system. Removed reference to QS-10 Para 7.4.3 – Added reference to USAP-corporate purchasing documents and system. Removed reference to QS-10 Para 7.5.2 – Added reference to USAP-Corporate Para 7.5.4 – Added reference to USAP-corporate purchasing documents and system. Removed reference to USAP-NJ documents Para 7.5.5 – Added reference to traveller Para 7.6 – Added reference to USAP-Corporate for technical requirements Para 8.2.4 – Changed reference from USAP-NJ review to USAP-Corporate review Para 8.2.4 – Added reference to traveller Para 8.3 – Changed OP to OFS
6	3-4-14	Added Table of Contents Added reference to GE specs S-1000 and S-400 Added reference to ISO 17025
7	10-31-17	Complete rewrite to comply with AS9100 Rev D NOTE: administrative change made to section 9.2 to add reference to additional international standards
8	12-5-17	Para 8.1.1 – Added additional clarification for risk assessment Para 8.5.5 – Removed para F, G, H – as not applicable