QUALITY MANAGEMENT SYSTEM MANUAL

PETROPIPE NIGERIA LTD

Engineering, Fabrication, Manufacturing

Unit 26 Springvalve Industrial Estate,
Cwmbran, **South Wales, NP**44 5BD
United Kingdom
Tel 0800 141 2148
Web Site : www.petropipeltd**.com**
E-Mail : sales@petropipeltd**.com**

Controlled No. : 19012009-PPNQAQC
Document No. : QMSM-01
Issue No. : 02 Rev. 1
Date : April 24, 2010

01	A. BARKER	S. LEE	A. WEBB
Revision No.	Prepared by	Reviewed by	Approved by

TABLE OF CONTENTS

SCOPE OF QUALITY MANAGEMENT SYSTEM

Design, supply & fabrication of structural steels, piping, ducts, tanks, furnaces and silos.

QUALITY POLICY

Petropipe Nigeria Ltd shall provide fabricated steel products that meet and exceed all their intended customer requirements. Each employee shall strive to improve the quality, reduce the cost, and maximize production by systematically following the Quality Management System (QMS) which complies with ISO 9001:2015.

The management is committed to maintain and continually improve the efficiency and effectiveness of the QMS.

ISSUE No. 2 REV. 1
DATE : April 24, 2010

Adam Webb
General Manager

1 SCOPE

1.1 GENERAL

1.1.1 Petropipe Nigeria **Ltd. is formed to cater to the increasing demand for quality products and services in the Oil and gas, Power, Petrochemical, Cement and similar industries. Comprised of dedicated personnel with vast experience in the same field and equipped with all the necessary tools,** PPN **is in a position to fulfill contractual obligations satisfying the customer needs. Major products are steel structures, pressure vessels, storage tanks and other plate works, pipe spools, pipe supports etc. in accordance with International Standards and Customer Requirements. In addition** PPN **also undertakes Engineering and Site Construction services in the above fields.**

1.1.2 This Quality Management System Manual has been developed by adopting the basic framework and definitions in accordance with ISO 9001:2008.It is designed to demonstrate the QMS's ability to consistently provide products and services that meets the requirements of customers, statutory and regulatory requirements.

1.1.3 The QMS includes processes for continual improvement and the assurance of conformity to the requirements of customer and regulatory needs. Effective application of the QMS aims to enhance the customer satisfaction.

1.2 APPLICATION

1.2.1 The PPN's **QMS is designed to ensure that all Quality Requirements are recognized and a consistent, uniform and effective control of these requirements is adequately established and maintained.**

1.2.2 The Quality Management principles stated in ISO 9004:2008 and fundamentals and vocabularies of ISO 9000:2008 have been taken into consideration during the development of this Quality Management System including relevant procedures, instructions and forms in the pursuit of continual improvement in performance, efficiency and effectiveness of PPN **Quality Management System.**

1.2.3 For ease of reference, paragraph numbers in this Quality Management System follow the clause numbers of ISO 9001:2008.

2 NORMATIVE REFERENCES

2.1 The following International Standards contents provisions which, through reference in this Quality Management System, constitute provisions of this part of ISO 9000:2008 Family of Standards to enable to implement and operate effective Quality Management System.

2.1.1 ISO 9001:2008 "Quality Management System – Requirements" – sets outs the requirements for Quality Management System to use where an organization's capability to provide products and/or services that meet Customers and applicable regulatory requirements needs to be demonstrated.

2.1.2 ISO 9004:2008, "Quality Management System – Guidelines for Performance Improvements"- provide guidance on Quality Management System that contains information on the processes for continual improvement that contribute to the satisfaction of an organization's Customers and interested parties.

2.1.3 ISO 9000:2008, "Quality Management System – Fundamentals and Vocabulary" – sets out the fundamentals of Quality Management Systems and contains definitions of the terms used.

3 TERMS AND DEFINITIONS

For the purposes of ISO 9001:2015, the terms and definitions given in ISO 9000:2008 apply. The definitions described below are included in the understanding of the concept used in this Quality Management System without the need to consult other documents.

The following terms, used in this Quality Management System to describe the supply chain, reflect the vocabulary currently used:

supplier ⟶ organization ⟶ customer

Throughout the text of this Quality Management System, wherever the term "**product**" occurs, it can also mean "**service**".

A term in definition or note, which is defined elsewhere in this clause is indicated by boldface followed by it's entry number in parenthesis. Such a boldface term may be replaced in the definition by it's complete definition.

For example:

product (3.4.2) is defined as "result of a **process (3.4.1)**

process is defined as "set of inter-related or inter-acting activities, which transforms inputs into outputs".

If the term "**process**" is replaced by it's definition then:

product becomes "result of a set of inter-related or inter-acting activities which transforms inputs into outputs".

A concept limited to a special meaning in a particular context is indicated by designating the subject field in angle brackets<>, before the definition, for example, **technical expert <audit>(3.9.12).**

3.1 TERMS RELATING TO QUALITY

3.1.1 Quality – degree to which a set of inherent **characteristics (3.5.1)** fulfills requirements **(3.1.2).**

a. The term "**quality**" can be used with adjectives such as poor, good or excellent.

b. "**Inherent**" means existing in something, especially as a permanent characteristics.

3.1.2 Requirement – need or expectation that is stated, generally implied or obligatory.

a. "General implied" means that it is custom or common practice for the organization (3.3.1), it's customers (3.3.5) and other interested parties (3.3.7), that the need or expectation under consideration is implied.

b. A qualifier can be used to denote a specific type of requirement, e.g. product requirement, quality management requirement, customer requirement.

c. A specified requirement is one, which is stated, for example, in a document (3.7.2).

d. Different interested parties can generate requirements.

3.1.3 Grade – category or rank given to different quality requirements (3.1.2) for products (3.4.2), process (3.4.1) or systems (3.2.1) having the same functional use.

a. When establishing a quality requirement, the grade is generally specified.

3.1.4 Customer Satisfaction – customer's perception of the degree to which the customer's requirements (3.1.2) have been fulfilled.

a. Customer complaints are a common indicator of low customer satisfaction but their absence does not necessarily imply high customer satisfaction.

b. Even when customer requirements have been agreed with the customer and fulfilled, this does not necessarily ensure high customer satisfaction.

3.1.5 Capability – ability of an organization (3.31) system (3.2.1) or process (3.4.1) to realize a product (3.4.2) that will fulfill the requirements (3.1.2) for that product.

3.2 TERMS RELATING TO MANAGEMENT

3.2.1 System – set of inter-related or inter-acting elements.

3.2.2 Management System – system (3.2.2) to establish policy and objectives and to achieve those objectives.

a. A management system of an organization (3.3.1) can include different management systems, such as quality management system (3.2.3), financial management system or environment management system.

3.2.3 Quality Management System – management system (3.2.2) to direct and control an organization (3.3.1) with regard to quality (3.1.1).

3.2.4 Quality Policy – overall intentions and direction of an organization (3.3.1) related to quality (3.1.1) as formally expressed by senior management (3.2.7).

a. Generally the quality policy is consistent with the overall policy of the organization and provides a framework for the setting of quality objectives (3.2.5).

b. Quality management principles presented in this International Standard can form a basis for the establishment of a quality policy.

3.2.5 Quality Objective – something sought, or aimed for, related to quality (3.1.1).

a. Quality objectives are generally based on the organization's quality policy (3.2.4).

b. Quality objectives are generally specified for relevant functions and levels in the organization (3.3.1).

3.2.6 Management – coordinated activities to direct and control an organization (3.3.1).

a. In English, the term "management" sometimes refers to people, i.e. a person or group of people with authority and responsibility for the conduct and control of an organization. When "management" is used in this sense it should always be used with some form of qualifier to avoid confusion with the concept "management" defined above. For example, "management shall…" is deprecated whereas "senior management (3.2.7) shall…" is acceptable.

3.2.7 Senior Management–person or group of persons who direct and control an organization (3.3.1) at the highest level.

3.2.8 Quality Management – coordinated activities to direct and control an organization (3.3.1) with regard to quality (3.1.1).

a. Direction and control with regard to quality generally includes establishment of the quality policy (3.2.4) and quality objectives (3.2.5), quality planning (3.2.9), quality control (3.2.10), quality assurance (3.2.11) and quality improvement (3.2.12).

3.2.9 Quality Planning – part of quality management (3.2.8), focused on setting quality objectives (3.2.5) and specifying necessary operational processes (3.4.1) and related resources to fulfill the quality objectives.

a. Establishing quality plans (3.7.5) can be a part of quality planning.

3.2.10 Quality Control – part of quality management (3.2.8), focused on fulfilling quality requirements (3.1.2).

3.2.11 Quality Assurance – part of quality management (3.2.8), focused on providing confidence that quality requirements (3.1.2) will be fulfilled.

3.2.12 Quality Improvement - part of quality management (3.2.8), focused on increasing the ability to fulfill quality requirements (3.1.2).

a. The requirements can be related to any aspect such as effectiveness (3.2.14), efficiency (3.2.15) or traceability (3.5.4).

3.2.13 Continual Improvement – recurring activity to increase the ability to fulfill requirements (3.1.2).

a. The process (3.4.1) of establishing objectives and finding opportunities for improvement is a continual process through the use of audit findings (3.9.6) and audit conclusions (3.9.7), analysis of data, management reviews (3.8.7) or other means and generally leads to corrective action (3.6.4).

3.2.14 Effectiveness – extent to which planned activities are realized and planned results achieved.

3.2.15 Efficiency – relationship between the result achieved and the resources used.

3.3 TERMS RELATING TO ORGANIZATION

3.3.1 Organization – group of people and facilities with an arrangement of responsibilities, authorities, and relationships.

a. The arrangement is generally orderly.

b. An organization can be public or private.

3.3.2 Organization Structure – arrangement of responsibilities, authorities and relationships between people.

a. The arrangement is generally orderly.

b. A formal expression of the organizational structure is often provided in the quality manual (3.7.4) or a quality plan (3.7.5).

c. The scope of an organization structure can include relevant interfaces to external organizations (3.3.1).

3.3.3 Infrastructure - <organization> set facilities, equipment and services needed for the operation of an organization (3.3.1).

3.3.4 Work Environment – set of conditions under which work is performed.

a. Conditions include physical, social, psychological and environmental factors (such as temperature, recognition schemes, ergonomics, and atmospheric composition).

3.3.5 Customer – organization (3.3.1) or person that receives a product (3.4.2).

3.3.6 Supplier – organization (3.3.1) or person that provides a product (3.4.2).

a. A supplier can be internal or external to the organization.

b. In contractual situation a supplier is sometimes called “contractor”.

3.3.7 Interested Party – person or group having an interest in the performance or success of an organization (3.3.1).

a. A group can comprise an organization, a part thereof , or more than one organization.

3.4 TERMS RELATING TO PROCESS AND PRODUCT

3.4.1 **Process** – set of Inter-related or inter-acting activities, which transforms inputs into outputs.

3.4.2 **Product** – result of a process (3.4.1).

3.4.3 **Project** – unique process (3.4.1), consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements (3.1.2), including the constraints of time, cost and resources.

3.4.4 **Design and Development** – set of processes (3.4.1) that transform requirements (3.1.2) into specified characteristics (3.5.1) or into the specification (3.7.3) of a product (3.4.2) process (3.4.1) or system (3.2.1).

3.4.5 **Procedure** – specified way to carry out an activity or a process(3.4.1).

3.5 TERMS RELATING TO CHARACTERISTICS

3.5.1 **Characteristic** – distinguishing feature.

a. A characteristic can be inherent or assigned.

b. A characteristic can be qualitative or quantitative.

3.5.2 **Quality Characteristic** – inherent characteristic (3.5.1) of a product (3.4.2), process (3.4.1) or system (3.2.1) related to a requirement (3.1.2).

a. Inherent means existing in something, especially as a permanent characteristic.

b. A characteristic assigned to a product, process or system (e.g. the price of a product, the owner of a product) is not a quality characteristic of that product, process or system.

3.5.3 **Dependability** – totality of characteristics (3.5.1) related to the availability performance and it's influencing factors: reliability performance, maintainability performance, and maintenance support performance.

a. Dependability is used only for general description in non-quantitative terms.

b. Dependability is a time-related quality characteristic (3.5.2).

3.5.4 **Traceability** – ability to trace the history, application or location of that which is under consideration.

a. When considering product (3.4.2), traceability can relate to:

i. The origin of materials and parts.

ii. The processing history, and

iii. The distribution and location of the product after delivery.

3.6 TERMS RELATING TO CONFORMITY

3.6.1 Conformity – fulfillment of a requirement (3.1.2).

3.6.2 Defect – non-fulfillment of a requirement (3.1.2).

3.6.3 Non-Conformity – non-fulfillment of a requirement (3.1.2) related to an intended or specified use.

a. The distinction between the concepts defect and non-conformity (3.6.2) is important as it has legal connotations, particularly those associated with product liability issues. Consequently the term "defect" should be used with extreme caution.

b. The intended use as intended by the customer (3.3.5) can be affected by the nature of the information, such as operating or maintenance instructions, provided by the supplier (3.3.6).

3.6.4 Preventive Action – action taken to eliminate the cause of a potential non-conformity (3.6.2) or other potentially undesirable situation.

a. There can be more than one cause of a potential non-conformity.

b. Preventive action is taken to prevent occurrence whereas corrective action (3.6.5) is taken to prevent recurrence.

3.6.5 Corrective Action – action taken to eliminate the cause of detected non-conformity (3.6.2) or other undesirable situation.

a. There can be more than one cause for non-conformity.

b. Corrective action taken to prevent recurrence whereas preventive action (3.6.4) is taken to prevent occurrence.

c. There is distinction between correction (3.6.5) and corrective action.

3.6.6 Correction – action taken to eliminate detected non-conformity (3.6.2).

a. A correction can be made in conjunction with a corrective action (3.6.5).

b. A correction can be, for example, rework (3.6.11) or regrade (3.6.8).

3.6.7 Rework – action taken on a non-conforming product (3.4.2) to make it conform to the requirements (3.1.2).

a. Unlike rework, repair (3.6.9) can affect or change parts of the non-conforming product.

3.6.8 Regrade – alteration of the grade (3.1.3) of a non-conforming product (3.4.2) in order to make it conform to requirements (3.1.2) differing from the initial ones.

3.6.9 Repair – action taken on a non-conforming product (3.4.2) to make it acceptable for the intended use.

a. Repair includes remedial action taken on a previously conforming product to restore it for use, for example as part of maintenance.

b. Unlike rework (3.6.11), repair can affect or change parts of the non-conforming product.

3.6.10 Scrap – action taken on a non-conforming product (3.4.2) to preclude it's originally intended use.

3.6.11 Concession - permission to use or release (3.6.13) a product (3.4.2) that does not conform to specified requirements (3.1.2).

a. A concession is generally limited to the delivery of a product that has non-conforming characteristics (3.5.1) within specified limits for an agreed time or quantity of that product.

3.6.12 Deviation Permit – permission to depart from the original specified requirements (3.1.2) of a product (3.4.2) prior to realization.

a. A deviation permit is generally given for a limited quantity of product or period of time, and for a specific use.

3.6.13 Release – permission to proceed to the next stage of a process (3.4.1).

3.7 TERMS RELATING TO DOCUMENTATION

3.7.1 Information – meaningful data

3.7.2 Document – information (3.7.1) and its supporting medium.

a. The medium can be paper, magnetic, electronic or optical computer disc, photograph or master sample, or a combination thereof.

b. A set of documents for example specifications and records (3.7.6), is frequently called "documentation".

3.7.3 Specification – document (3.7.2) stating requirements (3.1.2).

a. A specification can be related to activities (e.g. procedure document, process specification and test specification), or products (3.4.2) (e.g. product specification, drawing and performance specification.

3.7.4 Quality Manual – document (3.7.2) specifying the quality management system (3.2.3) of an organization (3.3.1).

a. Quality Manual – can vary in detail and format to suit the size and complexity of an individual organization.

3.7.5 Quality Plan – document (3.7.2) specifying which procedures (3.4.5) and associated resources shall be applied by whom and when to a specific project (3.4.3), product (3.4.2), process (3.4.1) or contract.

a. These procedures generally include those referring to quality management processes and to product realization processes.

b. A quality plan often makes reference to part of the quality manual (3.7.4) or to procedure documents.

c. A quality plan is generally one of the results of quality planning (3.2.0).

3.7.6 Record – document (3.7.2) stating results achieved or providing evidence of activities performed.

a. Records can be used to document traceability (3.5.4) and to provide evidence of verification (3.8.4) preventive action (3.6.4) and corrective action (3.6.5).

b. Generally records need not be under revisions control.

3.8 TERMS RELATING TO INSPECTION

3.8.1 Objective Evidence – data supporting the existence or verification of something.

a. Objective evidence may be through observation, measurement, test (3.8.3), or other means.

3.8.2 **Inspection – conformity evaluation by observation and judgement accompanied as appropriate by measurement, testing or gauging.**

3.8.3 **Test – determination of one or more characteristics (3.5.1) according to a procedure (3.4.5).**

3.8.4 **Verification – confirmation, through the provision of objective evidence (3.8.1), that specified requirements (3.1.2) have been fulfilled.**

a. The term "verified" is used to designate the corresponding status.

b. Confirmation can comprise activities such as:

i. Performing alternative calculations,

ii. Comparing a new design specification ((3.7.3) with a similar proven design specification.

iii. Undertaking test (3.8.3) and demonstrations, and

iv. Reviewing documents prior to issue.

3.8.5 **Validation – confirmation, through the provision of objective evidence (3.8.1), that the requirements (3.1.2) for a specific intended use or application have been fulfilled.**

a. The term "validated" is used to designate the corresponding status.

b. The use conditions for validation can be real or simulated.

3.8.6 **Qualification Process – process (3.4.1) to demonstrate the ability to fulfill specified requirements (3.1.2).**

a. The term "qualified" is used to designate the corresponding status.

b. Qualification can concern persons, products (3.4.2), processes or system (3.2.1).

c. Example, auditor qualifications (3.9.13), material qualification.

3.8.7 **Review – activity undertaken to determine the suitability, adequacy and effectiveness (3.2.14) of the subject matter to achieve established objectives.**

a. Review can also include the determination of efficiency (3.2.15).

b. Example: Management review, design and development review, review of customer requirements (3.1.2) and non-conformity review.

3.9 TERM RELATING TO AUDIT

3.9.1 Audit – systematic, independent and documented process (3.4.1) for obtaining audit evidence (3.9.5) and evaluating it objectively to determine the extent to which agreed criteria (3.9.4) are fulfilled.

3.9.2 Audit Program – set of one or more audits (3.9.1) planned for a specific time frame and directed towards a specific purpose.

3.9.3 Audit Scope – extend and boundaries of an audit (3.9.1).

a. The scope generally includes a description of physical locations, organizational units, activities and processes (3.4.1) as well as the time period covered.

3.9.4 Criteria – set of policies, procedures (3.4.5) or requirements (3.1.2) determined as a reference.

3.9.5 Audit Evidence – records (3.7.6), statements of fact or other information (3.7.1) relevant to the agreed criteria (3.9.4) and which can be cross checked.

a. Audit evidence can be qualitative or quantitative.

3.9.6 Audit Findings – result of an audit (3.9.1).

3.9.7 Audit Conclusions – outcome of an audit (3.9.1) provided by the audit team (3.9.10) after consideration of all the audit findings (3.9.6).

3.9.8 Audit Client – organization (3.3.1) or person requesting an audit (3.9.1).

3.9.9 Auditee – organization (3.3.1) being audited.

3.9.10 Audit Team – person or group of persons conducting an audit (3.9.1).

a. One or more persons of the audit team generally are qualified auditors (3.9.14), and one of them is generally appointed as audit team leader. The audit team can include auditors-in-training and, where required, technical experts (3.9.12).
b. Observers can accompany the audit team but not as part of it.

3.9.11 Auditor – person appointed to conduct an audit (3.9.1).

a. An auditor generally has the qualifications necessary for the specific audit under consideration.

3.9.12 **Technical Expert - <audit> person who provides specific knowledge or expertise with respect to a particular organization (3.3.1), process (3.4.1), activity or subject to be audited.**

3.9.13 **Auditor Qualifications – combination of inter-acting personal attributes and education, training, work and audit (3.9.1) experience, and areas of competence that need to be demonstrated to enable a person to be appointed as an auditor (3.9.11).**

3.9.14 **Qualified Auditor – person who has successfully passed an auditor qualification process (3.8.6).**

3.10 TERMS RELATING QUALITY ASSURANCE FOR MEASUREMENT PROCESSES

3.10.1 **Measurement Control System – set of inter-related or inter-acting elements necessary to achieve meteorological confirmation (3.10.3) and continual control of measurement processes (3.10.2).**

3.10.2 **Measurement Process – set of operations to determine the value of quantity.**

3.10.3 **Meteorological Confirmation – set of operations required to ensure that measurement (3.10.4) is in state of compliance with the requirements (3.1.2) for it's intended use.**

a. **Meteorological confirmation generally includes calibration and/or verification (3.8.4), any necessary adjustment or repair (3.6.9), and subsequent recalibration, comparison with the meteorological requirements for the intended use of the equipment, as well as any required sealing and labeling.**

b. **Meteorological confirmation is not achieved until and unless the fitness of the measuring equipment for the intended use has been demonstrated and documented.**

c. **The requirements for intended use include such consideration as range, resolution, maximum permissible errors, etc.**

d. **Meteorological confirmation requirements are usually distinct from and are not specified in product requirements (3.1.2).**

3.10.4 **Measuring Equipment – measuring instrument, software, measurement standard, reference material and/or auxiliary apparatus or combination thereof necessary to realize a measurement process (3.10.2).**

3.10.5 **Meteorological Characteristic – distinguishing feature, which can influence the results of measurement.**

a. Measuring equipment (3.10.4) usually has several meteorological characteristics.

b. Meteorological characteristics can be the subject of calibration.

3.10.6 Meteorological Function – organizational responsibility for defining and implementing the measurement control system (3.10.1).

4.0 QUALITY SYSTEM REQUIREMENTS

4.1 General Requirements

4.1.1 The QMS is based on PPN's process approach. PPN handles all the customer orders with different requirements as separate Job Orders. The Quality Management System of PPN satisfies the customer requirements and even exceeds the customer satisfaction by adopting process approach.

4.1.2 In addition to the requirements to establish, document and maintain it's Quality Management System, the requirement to continually improve is also included, in which processes are identified and managed to ensure that specific requirements are met. The processes are managed in accordance with ISO 9001:2008 requirements, as referred in QMS process flow chart (QMS FC 01).

4.1.3 To implement the Quality Management System, PPN shall:

a. Identify the processes needed for the Quality Management System and the application of the System throughout the organization;

b. Determine the sequence and inter-action of these processes;

c. Determine the criteria and methods needed to ensure that both the operation and control of these processes are effective;

d. Ensure the availability of resources and information necessary to support the operation and monitoring of these processes;

e. Monitor, measure and analyze these processes;

f. Implement the actions necessary to achieve planned results and continual improvement.

4.1.4 The Quality Management System includes provision for prompt detection of discrepancies and for timely and effective corrective action.

4.1.5 Where PPN chooses to outsource any process that affects product conformity with the requirements, it should have control over such

process. The control of such outsource processes are identified within the Quality Management System.

4.2 Documentation Requirements

4.2.1 General

4.2.1.1 This Company Quality Management System Manual contains Quality Policy and Quality objectives that address the requirements of ISO 9001:2008 as well as individual procedures, work instructions, quality forms on a department by department basis.

4.2.1.2 The documentation of Quality Management System is structured to support the size of PPN and it's type of activities; complexity of the processes and their interactions; and competencies of PPN personnel depicted in Appendix II (Sequence and Inter-Action of PPN Quality Management System).

4.2.1.3 The main purpose of quality documentation is to express the Quality Policy and to describe the Quality Management System with suitable documentation available to achieve the effective operation of PPN Quality Management System.

4.2.1.4 The Quality Management System shall be reviewed periodically by Management Representative with the Functional Heads to re-affirm it's adequacy and conformity to Customer and Regulatory requirements. The minimum frequency for review of the Quality Management System is once every Twelve (12) months.

4.2.1.5 The Quality Management Representative will ensure the proper implementation of Quality Management System and to review, evaluate and audit it's effectiveness including continuous improvement of the system.

4.2.2 Quality Manual

4.2.2.1 The company Quality Manual provides an overall view of PPN Quality Management System as an adaptation of the Clauses of ISO 9001:2008 to PPN's line of business.

4.2.2.2 Company Quality Management System Manual and it's procedures, instructions and forms are the core of the PPN Quality Management System, supported by Departmental Procedures, applicable instructions and forms.

4.2.2.3 The Quality System Procedures provide the highest level instructions for the implementation of Quality Management

System. These procedures cover the function of PPN and those undertaken in support of projects and for internal control of such projects.

4.2.2.4 Departmental Procedures including supporting work instructions and forms provide the working level detail necessary for implementation for specific department, function or projects needs.

4.2.2.5 All sub-clauses in Section 7 of ISO 9001:2008 are relevant to PPN's Quality Management System. Therefore, there is no exclusion of any sub-clause of Section 7 in PPN Quality Management System.

4.2.3 Control of Documents

4.2.3.1 The Quality Management System Documentation is subject to control in accordance with Control of Documents (QSP 01) and Document Master List (Q 012) shall be utilized to show that the latest revision for each separate document is addressed and controlled properly.

4.2.3.2 The Quality Management Representative shall ensure that only the correct version of documents is available for use. All documentation shall be reviewed and approved prior to use, make sure that the documents are kept in good order and legible, and they can be easily retrieved.

4.2.3.3 Any comment or proposed modification to documents must be referred to the Originator via Quality Management Representative for action and approval.

4.2.3.4 Department procedures are also subject to issue control under the authority of Department heads using this Company Quality Management System Manual as a guideline.

4.2.3.5 Nominated copy holders of Quality Management System documents are responsible for ensuring that their copies, and any sub-distributions thereof, are the current issue in accordance with the published list.

4.2.4 Control of Quality Records

4.2.4.1 This section provides a procedure for performing and controlling the filling and holding of quality records and documents.

4.2.4.2 The Quality Management System documentation is subject to control in accordance with Records control (QSP 02), which is the responsibility of Quality Management Representative.

4.2.4.3 The Quality Management Representative is responsible for maintaining and controlling all quality-related records within this procedure.

4.2.4.4 The appointed Document Controller is responsible for the control of drawings and documents related to project.

5.0 MANAGEMENT RESPONSIBILITY

5.1 Management Commitment

5.1.1 PPN **Senior Management has defined quality objectives, which are stated within Section 5.4.1 of this Company Quality Management System Manual.**

5.1.2 **The Senior Management will conduct regular reviews (QSP 08)of the effectiveness of** PPN **Quality Management System, and ensure that there are adequate resources in order to ensure that the quality objectives are achieved.**

5.2 Customer Focus

5.2.1 PPN **Quality Management System has the full backing and support of Senior Management, in order to ensure that the Customer's expectations are determined.**

5.2.2 **In particular, the Operations Manager is responsible for liaising with Customers and determining their needs and expectations, and for relaying them to Senior Management.**

5.3 Quality Policy

5.3.1 **The Senior Management has defined and documented** PPN **Quality Policy as shown in the front cover sheet of this Quality Management System Manual. The Quality Policy is also installed, company-wide, in all prominent places of** PPN **offices.**

5.3.2 **It is the policy of** PPN **to provide Customer's with a high quality service and to meet contractual requirements, any applicable legal and statutory requirements, codes of practice, etc. including ISO 9001:2008 and ISO 9004:2008 guidelines.**

5.3.3 PPN **seek to continually improve the effectiveness of this Quality Management System, which will be reviewed during Management Review Meetings, to improve the existing quality objectives and to establish new objectives, wherever may benefit from doing so.**

5.3.4 **Ongoing suitability of this Quality Policy will be reviewed during the Quality Management Review Meetings.**

5.3.5 **Senior Management has ensured that the Quality Policy:**

a. **Is appropriate to the purpose of** PPN**;**
b. **Includes a commitment to comply with requirements and continually improve the effectiveness of Quality Management System;**

c. Provides a framework for establishing and reviewing quality objectives;
d. Communicated and understood within ; e.
Is reviewed for continuing suitability;

5.3.6 Senior Management has ensured that the Quality Policy is consistent with PPN's overall business policies.

5.3.7 Senior Management considered the following in establishing the Quality Policy:

a. The expected level of customer satisfaction;
b. The needs of other interested parties;
c. Opportunities and needs for continual improvement;
d. Resources required, and;
e. Contributions of Suppliers and Partners.

5.4 Planning

5.4.1 Quality Objectives (Refer Appendix 2)

5.4.2 Quality Management System Planning

5.4.2.1 The resources required to achieve the quality objectives have been identified and incorporated into the relevant procedures.

5.4.2.2 Where procedures and instructions changes are planned which may affect the operation of the Quality Management System, the changes will be reviewed during the Quality Management Review Meetings, so as to ensure that the integrity of Quality Management System is not compromised.

5.4.2.3 This section links those previous objectives for the identification, operation and control of processes, the availability of resources, the measurement and monitoring of processes and the achievement of results and continual improvement. Evidence of the commitment of Senior Management will be provided.

5.4.2.4 Senior Management will implement quality planning for the activities and resources needed to satisfy the Quality Policy, objectives and requirements.

5.5 Responsibility, Authority and Communication

5.5.1 Responsibility and Authority

5.5.1.1 This section of Company Quality Management System Manual sets forth the organizational arrangement employed by PPN in providing support services and in executing projects it undertakes.

5.5.1.2 Senior Management has ensured that the responsibilities, authorities and their inter-relation are defined and communicated within PPN.

5.5.1.3 Appendix I (Company Organization Chart) defines the organizational inter-relationship, responsibility, authority and lines of communications of the Quality Management function. Only key positions and functions are indicated on this organization chart.

5.5.1.4 In providing effective project and functional management, PPN assures optimum use of manpower, technological and financial resources utilizing expertise from a variety of disciplines and support personnel to meet the requirements of Customers. Such expertise is developed around highly competent, technical and managerial personnel experienced in the design and engineering techniques.

5.5.1.5 The responsibilities and authorities defined below relate to the key quality responsibilities of personnel having particular functions. Each procedure of Quality Management System specified additional task-related responsibilities.

5.5.1.6 To this end, PPN has an obligation to ensure that the final product (i.e. result of activities or processes) "meets it's fitness for purpose" and has been carried out in accordance with Customer satisfaction and is consistent with design and engineering requirements.

5.5.2 Management Representative

5.5.2.1 Mr. Amos Barker is the PPN Quality Representative and has been appointed by the Board of Directors to ensure the operation of Quality Management System irrespective of any other duties. Asst. Quality Management Representative if assigned will report to the Quality Management Representative and assists him in the day to day implementation of Quality Management System. During the absence of the Quality Management Representative, the Asst. Quality Management Representative shall be the representative of PPN.

5.5.2.2 The Management representative's responsibilities are:

a. Ensure that processes needed for the Quality Management System are established, implemented and maintained;

b. Report to Senior Management on the performance of the Quality Management System and any need for

improvement during the Quality Management Review Meetings;

c. Ensuring the promotion of awareness of Customer requirements throughout PPN.

5.5.2.3 Operations Manager shall liaise with the client and communicate the customer requirements to the Quality Management Representative.

5.5.3 Internal Communication

5.5.3.1 The Senior Management should ensure that communication takes place regarding the effectiveness of the Quality Management System.

5.5.3.2 Orderly communication via the relevant channels is described in the relevant procedures. In order to prevent disorderly communication, any external communication shall be through the Operations Manager or with a copy to the Operations Manager.

5.6 Management Review

5.6.1 General

5.6.1.1 The Management Review Process evaluates the need for changes to Quality System including quality policy and quality objectives by reviewing specified inputs (improvement opportunities) and reporting specified outputs (related management actions and resource needs).(QSP 08)

5.6.1.2 The Quality Management Representative and representative of the board of directors must undertake Quality Management Review Meetings. At least the Operations Manager, Quality Management Representative, and functional heads must be in attendance at the meetings.

5.6.1.3 Quality Management Review Meetings will be held at least twice a year. The Quality Management Representative may call additional meetings at his discretion.

5.6.1.4 The meetings will be formally minuted and conducted with actions and completion dates set. Completed actions will be recorded in the minutes of the following meetings. The Quality Management Representative is responsible for the monitoring of all outstanding items.

5.6.2 Review input

5.6.2.1 All meeting inputs must address the following points:

a. Minutes of previous meetings;

b. Actions outstanding from previous meeting;

c. Result of Audits;

d. Customer feed backs;

e. Process performance and product conformity;

f. Status of preventive and corrective actions;

g. Follow-up actions from earlier management status;

h. Planned changes that could affect the Quality Management System;

i. Recommendations for improvement;

j. Review of training needs;

k. Any other business;

l. Date of next meeting.

5.6.3 Review Output

5.6.3.1 The Quality Management Review Meeting outputs include actions to ensure that there are improvements to the Quality Management System and all processes involved in the supply of products/services to the Customer. These actions are recorded in the minutes of the meeting. These are to include decisions and actions related to:

a. Improvement of the effectiveness of the Quality Management System and it's processes;

b. Improvement of product related to Customer Requirements;

c. Resource needs.

5.6.3.2 Where applicable, additional resources may also be specified during the meeting, in order to ensure proper realization of quality objectives.

6.0 RESOURCE MANAGEMENT

6.1 Provision of Resources

6.1.1 PPN will ensure that adequate resources are provided, in order to meet and where possible exceed Customer requirements and expectations.

6.1.2 PPN will determine and provide the resources needed to:

a. Implement and maintain the Quality Management System and continually improve its effectiveness.

b. Enhance Customer satisfaction by meeting or exceeding Customer requirements.

6.2 Human Resources

6.2.1 General

6.2.1.1 Personnel will be assigned to tasks for which they are adequately experienced, qualified and/or trained.

6.2.1.2 Personnel performing work affecting product quality must be competent on the basis of:

a. Appropriate education;

b. Training;

c. Skills, and

d. Experience.

6.2.2 Competence, Awareness and Training

6.2.2.1 PPN will ensure that all personnel are adequately trained, educated and experienced to enable them proficiently perform their duties. All job functions directly affecting quality of products/ services provided to the Customer are identified within the relevant procedures and their training needs defined as appropriate. **(QSP 14)**

6.2.2.2 Records of relevant qualifications, experience and training provided to personnel are maintained.

6.2.2.3 General Manager, and functional heads, shall review the training records of all personnel and shall consider the effectiveness of training provided, and shall determine future

training needs as appropriate. Records of the review and of the training supplied shall be maintained.

6.3 Infrastructure

6.3.1 PPN has provide adequate facilities to enable product conformity to be achieved and has considered the following aspects for this:

a. Process equipment, both hardware and software;

b. Supporting services such as transport, communication etc.

6.4 Work Environment

6.4.1 Within the applicable procedures, PPN has identified and manages the human and physical factors within the work environment that are needed to achieve product conformity.

7.0 PRODUCT REALIZATION

7.1 Planning of Product Realization

7.1.1 PPN Quality Management System plans for and documents the Product Realization Processes to ensure compliance with all applicable requirements including Customer requirements, statutory/legal requirements, as well as PPN product performance objectives (refer to Section 5.4.1).(QSP 12)

7.1.2 The outputs of Product Realization Planning include the specific methods, facilities, equipment, people and materials/support services needed to achieve all desired results for a particular product or contract.

7.1.3 Product planning also includes the identification of verification and validation activities, the criteria for acceptability and the records necessary to provide confidence of product conformance.

7.1.4 The elements of product realization planning that apply to all products are addressed in this Quality Management System Manual, it's associated procedures, instructions, forms, and departmental procedures.

7.1.5 When Customer specified requirements are beyond the control or capability of PPN Quality Management System, the Quality Management Representative has overall responsibility for developing and implementing a specific quality plan for that process, product or contract.

7.1.6 The approach of PPN to process management involves determining the Customer requirements, developing processes and systems capable

of meeting these requirements, ensuring that process inputs are appropriate, monitoring and measuring process activity and outputs to ensure desired results are achieved, and improving the process as needed to reduce variation, eliminate waste, and enhance Customer satisfaction.

7.2 Customer Related Processes

a. Achieving PPN Quality Policy "of meeting or exceeding Customer Requirements" necessitates to determine, understand and consistently meet or exceed the Customer's requirements and expectations, and to establish effective communication systems with the Customer's with regards to product information, inquiries, contract or order handling and related changes, and Customer feedback, including complaints. These efforts are described below.

b. The Quality Management Representatives has overall responsibility for developing and implementing the effective Customer related processes. Refer to Section 7.2.2

7.2.1 Determination of Requirements Related to the Product

7.2.1.1 Operations Manager generates quotes / bids with the assistance of Projects Department, negotiates final contracts / orders and receives Customer orders. Requirements of Customers are identified at the time of bidding and later reviewed, to ensure that the requirements are clearly defined.

7.2.1.2 Applicable Customer requirements include product requirements specified by the Customer including the requirements for availability, delivery and implied product requirements not specified by the Customer but necessary for intended or specified use and obligations related to product including regulatory and legal requirements. Refer to Section

7.2.2 Review of Requirements Related to Product

7.2.2.1 Projects/Engineering Department reviews Customer requirements identified during the determination process to ensure that they are clearly stated, understood, and recorded. This includes ensuring, that product requirements are defined; and where the requirements are not documented the same shall be suggested and got approved before acceptance; that contract or order requirement differing from those previously expressed are resolved and that PPN have the ability to meet defined requirement.

7.2.2.2 PPN ensure that these criteria are met prior to making a delivery commitment. When product requirements are changed,

PPN ensures relevant documents are amended and relevant personnel are made aware of the changed requirements.

7.2.3 Customer Communication

7.2.3.1 Product information is available through a number of different channels. These include the direct communication by the Project Department, advertisements, web site, etc.

7.2.3.2 PPN pay particular attention to Customer feedback, including Customer complaints and Customer appreciation. PPN has contact postal address, e-mail address, telephones and facsimile numbers to encourage and address Customer feedback, particularly Customer complaints. Management Representative evaluates Customer satisfaction on an on-going basis.

7.3 Design and Development

a. Design and Development processes are employed at PPN to transform Customer requirements into specifications, products, processes or systems. At PPN, the terms design and development are used synonymously and are referred to hereafter only as "design". Processes related to the provision of all products/services are discussed in Section 7.5.1; the process for designing products/services for whichPPNC has design responsibility is discussed in this section.(QSP 11)

b. Design records including design planning, results of design verification and validation activities are recorded and maintained.

c. The Operations Manager has overall responsibility for managing the design engineering, technical and administrative support processes.

7.3.1 Design and Development Planning

7.3.1.1 The Operations Manager is responsible for the Design Planning and identifies design stages.

7.3.1.2 Design plans are retained in a design folder established and maintained for each design project by the Operations Manager.

7.3.2 Design and Development Inputs

7.3.2.1 The Operations Manager defines design input requirements as derived from customer input. Before finalizing documentation of required inputs, the operations Manager takes up any incomplete, ambiguous or conflicting requirements with the client and resolves them.

7.3.3 Design and Development Outputs

7.3.3.1 The operations Manager ensures that design output will comply with the design input requirements, and be approved before issuance.

7.3.4 Design and Development Review

7.3.4.1 During the development of each product design or process development, the Operations Manager conducts design reviews as planned (refer to 7.3). Design reviews are intended to assure that requirements are being fulfilled; when they are not, the Operations Manager propose a remedy for each identified problem.

7.3.5 Design and Development Verification

7.3.5.1 The Operations Manager ensures design verification activities are carried out as planned. Design verification activities are intended to determine if design output meets design input requirements. Design reviews can be a form of design verification.

7.3.6 Design and Development Validation

7.3.6.1 The Operations Manager ensures design validation is carried out as planned. Refer to Section 7.3. Design validation is performed to ensure the product or service resulting from design efforts performs as intended.

7.3.7 Control of Design and Development Changes

7.3.7.1 The Operations Manager ensures that all design changes are identified, documented, reviewed, approved and communicated to all affected organizations and functions. Control includes the assessment of the impact of changes upon component parts and completed products including those that have already been delivered. Control also includes the determination of treatment required for each change.

7.4 Purchasing

a. PPN **works together with its Suppliers to ensure that purchased products and services meet all applicable requirements.(QSP 10)**

7.4.1 Purchasing Process

7.4.1.1 The type and extent of control over the purchasing process is dependent upon the effect on subsequent realization processes

and their output, as well as consideration of other characteristics including:

a. The type of product

b. The potential impact of the product on processes, products or services

c. The results of Supplier evaluations and past performance

d. The applicable regulation

7.4.1.2 The Commercial Head defines and documents the Supplier approval process including criteria for selection and periodic evaluation. Refer to Section 7.4.1. Suppliers are evaluated and selected based on their ability to supply products or services in accordance with the requirements. The result of evaluations and follow-up actions are recorded. Additionally, PPN maintains a master list of approved Suppliers.

7.4.1.3 The evaluation of supplier are carried jointly by the QC Head Commercial Head. The suppliers are re-evaluated once in two years and the master list of approved suppliers shall be updated.

7.4.2 Purchasing Information

7.4.2.1 Purchasing documents contain the appropriate data to clearly and fully describe requirements for purchased materials and services.

7.4.2.2 The Commercial Head ensures that all purchasing documents are reviewed for completeness and adequacy prior to issuance or replacement of an order.

7.4.3 Verification of Purchased Product

7.4.3.1 The QC Head ensures that incoming product is approved prior to release. Refer to Section 8.2.4. In some cases, criteria for approval of incoming product may include data submitted by the Supplier including statistical data, certificates of conformance, etc.

7.4.3.2 The QC In-Charge plans and implements appropriate statistical techniques to verify purchased product (refer to Section 8.1). All requirements for approval of purchased product and/or Supplier procedures, processes, equipment, personnel, and/or quality systems will be specified in applicable purchasing documents (refer to Section 7.4.2).

7.4.3.3 Neither PPN nor the Customers currently perform verification activities at PPN Supplier's premises. Should NNP or the Customers choose to do so in the future, the Quality Management Representative will document the intended verification arrangements and methods of product release.

7.5 Production and Service Provision

7.5.1 Control of Production and Service Provision

7.5.1.1 PPN utilize a process-oriented approach to control operations and support services related to the production and service provision. PPN initial focus is to ensure the quality of process inputs, which are, employees, materials, facilities and equipment, and methods.

7.5.1.2 Employees must be qualified to perform the process properly through appropriate education, training and certification. Material must meet specified requirements and be properly identified, stored and issued. Equipment and facilities must be adequate, accurate, available and properly utilized. Work instructions and other important data must be current, correct and available. Methods must be appropriate and capable of accomplishing the desired results.

7.5.1.3 The appropriateness of all these fundamental process inputs must be assured, and processes must be measured, monitored and controlled to assure effectiveness and evaluated for continual improvement.

7.5.1.4 Section 6.2 addresses PPN strategy for ensuring the competency, awareness and training of PPN employees. Section 7.4 addresses PPN strategy for ensuring that correct materials and services are procured and verified. Section 6.3 addresses PPN strategy for ensuring providing and maintaining appropriate and suitable facilities and equipment.

7.5.1.5 The Operations Manager has the overall responsibility for managing the production processes.

7.5.1.6 The Operations Manager periodically reviews operational data as well as progress towards achievement of corporate level product performance objectives (refer to Section 5.4.1) and provides related instructions to functional heads.

7.5.1.7 The Operations Manager ensures that production jobs are planned, scheduled and carried out in accordance with procedures detailed in Section 7.5.1 and summarized below:

a. Information

Information inputs to the process include both product characteristics and appropriate work methods and/or other pertinent information. Such information is provided through job schedules/plans, project meetings, and through job specific information included in individual job order.

b. Work Instructions

The need for detailed written work instructions is minimal, since production-related processes are detailed in the procedures and the drawings.

c. Equipment

The Operations Manager ensures the suitability and availability of all equipment and facilities for production and service operations.

d. Monitoring and Measurement Devices

The QC Head ensures the monitoring and measurement devices capable of meeting PPN measurement requirements are available for use during production and service provision. Refer to Section 7.6.

e. Monitoring Activities

Production Head ensures that production personnel monitor the quality of their own work and understand the procedures for reporting related problems and/or suspected non-conforming conditions. Refer to Sections 7.5.1 and 8.2.3.

The QC Head is responsible for planning and implementing in-process inspections needed to ensure process control and product quality. Refer to Section 8.2.4

f. Release and Delivery Processes

Release of product is dependent on it's compliance with all technical specifications and it's ability to meet Customer requirements including, packaging, shipping, and delivery, as identified in the contract or order.
QC Head ensures that records of product approval are maintained.

7.5.2 Validation of Processes for Production and Service Provision

7.5.2.1 PPN **define processes in which the results cannot be verified by subsequent monitoring or measurement as "special processes". This includes any processes where deficiencies may become apparent only after the product is in use or the service has been delivered.**

7.5.2.2 The welding process and painting process is identified as the validation process for production. To evaluate the welding process, PPN **has it's own Welding Procedure Specification. Each Welding Procedure Specification has been approved after certification by Independent Inspection Agencies. The Welders assigned for Production are all certified by Third Party Inspection Agencies. As per the codes for the processes welders are revalidated based on their performance. For critical welding, non-destructive tests are conducted as per the Customer Requirement and as per International Standard. To evaluate the painting process,** PPN **has it's own painting Procedure.**

7.5.2.3 However, if and when applicable, requirements for special process validation including qualification of the process; qualification of equipment and personnel; use of defined methodologies and procedures; requirements for records; and re-validation; will be carried out per quality plans developed by the QC Head.

7.5.3 Identification and Traceability

7.5.3.1 The identification and status of product is established and maintained throughout all product and service provision processes. Traceability records are established and maintained as required.

7.5.3.2 The Operations Manager, Production Head and QC Head have responsibility for establishing and maintaining product identification throughout all stages for design, production, installation and delivery.

7.5.3.3 PPN **establish and maintain product monitoring and measurement status through the use of both physical identification tags/labels and electronic records.**

7.5.4 Customer Property

7.5.4.1 PPN **identify, verify, protect and maintain Customer property provided for use or incorporation into the product,**

applying the same process control as PPN do for purchased product and other material inputs to the process.

7.5.4.2 The QC Head ensures that lost, damaged or unsuitable Customer property is recorded and immediately reported to the Customer.

7.5.5 Preservation of Product

7.5.5.1 The Operations Manager through the Production Head and QC Head has overall responsibility for ensuring, product conformity is preserved during internal processing and delivery to the intended destination. This system includes the handling, storage, packaging, delivery and protection of final product as well as constituents of the final product. (QSP 13)

7.6 Control of Monitoring and Measuring Devices

7.6.1 The QC Head is responsible for establishing and maintaining an effective system for identifying, selecting and controlling the use of monitoring and measurement devices used to provide evidence of product conformance to established requirements. Related procedures are detailed in Control of Monitoring and Measuring Devices, as summarized Sections 7.6.3.1 through 7.6.3.5.

7.6.2 PPN determine the measurements to be made and the accuracy required to assure conformity of PPN product to specified requirements. PPN identify and select monitoring and measurement devices and verify their capability of meeting such requirement prior to use. PPN does not use computer software in monitoring measurement of specified requirements.

7.6.3 Monitoring and measuring are used and controlled in a manner that ensures continuing suitability; this includes ensuring that the environmental conditions are suitable for the calibration, inspections, measurements and tests being carried out. PPN also define the processes employed for the on-going calibration, control and maintenance of monitoring and measuring devices including their identification, location, frequency/method of checks, uses/acceptance criteria and the action to be taken when results are unsatisfactory.

7.6.3.1 All monitoring and measuring devices that can affect product quality are identified and calibrated at prescribed intervals against certified equipment having a known valid relationship to internationally or nationally known standards. Where no such standards exist, the basis used for calibration is documented.

7.6.3.2 When monitoring and measuring devices are found to be out-of-calibration, they are adjusted or re-adjusted as necessary and the validity of previous measuring results is documented; actions taken are documented.

7.6.3.3 Appropriate calibration records are maintained to document results of calibration activities (refer to Section 4.2.4) and suitable indicators are used to show current calibration status.

7.6.3.4 All monitoring and measuring devices are safeguarded from adjustment that would invalidate the calibration.

7.6.3.5 All monitoring and measuring devices are handled, maintained and stored in a manner that ensures accuracy and fitness for use is maintained.

8.0 MEASUREMENT, ANALYSIS AND IMPROVEMENT

8.1 General

8.1.1 PPN shall define, plan and implement the monitoring, measurement, analysis and improvement processes required to assure product and QMS conformity and achieve continual QMS improvement. These activities include assessment of Customer satisfaction, conduct of internal audits, monitoring and measurement of processes, and the monitoring and measurement of product. Statistical Techniques details procedure governing the selection and use of statistical techniques in measurement, analysis and improvement.

8.2 Monitoring and Measurement

8.2.1 Customer Satisfaction

8.2.1.1 Data collected from Customer's representative during routine communications (refer to Section 7.2.3) provide PPN primary basis for assessing Customer satisfaction. The QC Department has the overall responsibility, as described in Customer Satisfaction for identifying and reviewing Customer requirements (refer to Section 7.2.2) and for monitoring and measuring Customer satisfaction, as follows:

a. Customer complaints, whether received in writing , verbally or electronically are immediately forwarded to the concerned functional head for action. If the concerned functional head cannot resolve the issue to Customer's satisfaction, then the complaint will be transferred to the operations Manager for assignment to another appropriate Person for resolution. Customer complaints are documented and monitored through resolution through corrective and preventive action processes. Refer to Corrective Action and Preventive Action.

b. The QC Department shall utilize the Customer Satisfaction Survey Form to ascertain the Customer's overall perception of how well PPN are meeting Customer requirements and to document any recommendations for improvements.

c. Customer survey data along with other Customer feedback, including written complaints are reviewed by the QC Department to initiate any corrective and preventive actions needed. Refer to Corrective Action and Preventive Action.

d. The QC Department shall periodically review the Customer Satisfaction Survey Form and other Customer feedback, including complaints, as well as progress towards achievement of corporate level Customer satisfaction improvement objectives (refer to Section 5.4.1) and provides related recommendations for review by the Operations Manager (refer to Section 5.6).

8.2.2 Internal Audit

8.2.2.1 The results of internal audits are critical to aid in assessing the effectiveness of PPN QMS and in identifying opportunities for improvement. The purpose of this is to:

a. Determine whether QMS conforms to ISO 9001:2008 requirements;

b. Determine whether the process has been effectively implemented and maintained;

c. Identify opportunities for improvement.

8.2.2.2 The QMS processes, procedures (QSP 03) or instructions under review are effective if the desired results or established objectives are achieved (refer to Section 5.4.1). In addition, ideas for improving process effectiveness or efficiency are actively sought during internal audits. Internal audit results are also used to determine the scope, nature and frequency of future internal audits of processes, procedures or instructions where ineffectiveness or inefficiency is most likely to be found. Accordingly, the internal audit process is a key tool for communicating with and involving employees in continual improvement. Department Heads may also request that the audit be used to gather "value added" data serving as input to aid in monitoring, measurement and improvement of QMS

processes, procedures and instructions (refer to Section 8.2.3 and 8.5).

8.2.2.3 The Quality Management Representative has overall responsibility for managing the internal audit process in accordance with Internal Audits.

8.2.2.4 The internal audit process is summarized below:

a. Internal audits are conducted in accordance with a published schedule that identifies the audit scope and frequency (twice a year). The schedule is developed on the basis of status and importance of the activity to be audited and previous audit results. Each of PPN key QMS processes, procedures and instructions is reviewed at least once annually.

b. Trained personnel who do not have direct responsibility for the activity being audited carry out audits. External auditors can be utilized for internal audits, if sufficient number of internal auditors are not available with FIS. The checklists are prepared and used to aid in ensuring audit consistency and comprehensiveness. QMS Internal Auditors record audit results and submit findings to Functional heads with responsibility for the process, procedure or instruction audited.

c. Functional heads are responsible for the area audited implement timely corrective action to eliminate detected non-conformances and root causes, and initiate other appropriate action in response to employee-identified opportunities for improvement. Follow-ups are conducted to verify timely and effective implementation of the proposed action.

d. The Quality Management Representative maintains all internal audit records including training records and results of internal audits related follow-ups; periodically reviews internal audit results as well as progress towards achievement of Senior Management objectives aimed at improving overall QMS effectiveness (refer to Section 5.4.1); and provides related recommendations for review by Senior Management (refer to Section 5.6).

8.2.3 Monitoring and Measurement of Processes

8.2.3.1 PPN apply methods for monitoring and measuring all QMS processes. QMS processes described in Appendix II (Sequenc and Inter-action of PPN Quality Management System) are documents meusured, controlled and evalusted to ensure they are effective (achhieve desired results) and to identify

opportunities for improvement. The concerned Functional head with overall responsibility for the process develops key process measures used to quantify process effectiveness and/or efficiency.

8.2.3.2 A process is effective if desired results are achieved. Effectiveness can be measured in terms of product quality, process accuracy, delivery/schedule performance, cost/budget performance, employee performance against established objectives, and/or Customer satisfaction.

8.2.3.3 A process is efficient when resource utilization is optimal. Efficiency can be measured in terms of total resource utilization, productivity indicators, and or waste/rework costs or hours.

8.2.3.4 Since effectiveness is of primary importance to PPN's Customers and efficiency is of primary importance to Senior Management, achieving and improving effectiveness and efficiency of PPN QMS processes, procedures and instructions are critical to PPN's success.

8.2.3.5 As discussed in Section 8.2.2, PPN primarily utilize the Internal Audits process to assess the effectiveness of PPN QMS processes, procedures and instructions (achieve the desired results or established objectives are achieved).

8.2.4 Monitoring and Measurement of Product

8.2.4.1 The QC head has overall responsibility for planning and implementing effective product monitoring and measurements systems including receiving, in-process and final inspection and test activities and the use of appropriate statistical techniques needed to ensure process control at the product, project or contract level. Refer to Sections 7.1 and 8.1.

8.2.4.2 Receiving inspection is performed to ensure quality of purchased product.

8.2.4.3 Production/service personnel throughout all product/service realization processes perform process monitoring. Refer to Section 7.5.1. Formal in-process inspections are performed by Quality Control personnel in accordance with the Project Quality Plan and procedures in Section 8.2.4. All finished product and completed service is verified by final inspection/tests specified in the Project Quality Plan and procedures in Section 8.2.4.

8.2.4.4 Products are not released for delivery or further processing, until the objective evidence for all the requirements are available.

a. Evidence of Conformity

Test and inspection records are maintained for a minimum of three (3) years. These records include final inspection. Authority and identify and confirm that all critical parameters are in accordance with established requirements and specifications.

b. Product Release and Delivery

Product is not normally released or delivered until all planned inspections and tests have been all completed, and records have been maintained providing evidence of conformity with acceptance criteria and identifying the person(s) authorizing release. In rare cases (due to Customer demands and/or production emergencies) unverified product may be released or delivered under controlled conditions of positive recall, documented and authorized by the QC head, and where applicable, approved by the Customer. Non-conforming product is identified and controlled to prevent its inadvertent use. Refer to Control of Non-Conforming Product.

8.3 Control of Non-Conforming Product

8.3.1 PPN ensure that non-conforming purchased products, in process materials and finished products are identified and controlled to prevent inadvertent use. The QC head has overall responsibility for implementing an effective process for identifying, documenting, segregating, evaluating, and disposing of non-conforming product in accordance with Control on Non-Conforming Product, as summarized below:

8.3.1.1 Identification

Identification of non-conforming product originates from inspection, internal testing or Customer complaint. Employees clearly mark or otherwise identify non-conforming product. Where required by contract, QC Head will notify the Customer.

8.3.1.2 Documentation

The QC head, through authorized Quality Control Personnel, will enter the non-conformance to Corrective Action Report identifying the non-conforming product, description of non-conformance, control number of the report and location where the non-conforming product is being held pending further review or disposition.

8.3.1.3 Segregation

Non-conforming product is segregated pending evaluation and disposition.

8.3.1.4 Evaluation

The QC head through authorized Quality Control personnel will perform the initial evaluation of non-conforming product in accordance with approved test and inspection procedures. Where needed, Production and other technical personnel may become involved in the evaluation and recommendation for disposition.

8.3.1.5 Disposition

The result of the evaluation and resultant disposition determinations will be documented. Dispositions resulting from the evaluation of non-conforming product may include the following:

a. rework to meet specified requirements
b. re-grade for an alternative application
c. use as is (under Customer concession or other required approval authority)
d. obtain (from relevant authority) a waiver of or deviation from requirements
e. return to supplier
f. scrap or other disposal (in accordance with applicable environmental controls)

8.3.2 Correction and Re-Verification

8.3.2.1 Rework non-conforming product is re-verified after correction to demonstrate conformity to original documents.

8.3.3 Product Recall

8.3.3.1 In the event non-conforming product is detected after delivery, the QC head will notify the Customer and initiate action appropriate to the effects, or potential effects, of the non-conformity. Where appropriate, product recall will be initiated based on trace and recall data and records. Refer to Product Identification and Trace ability.

8.3.4 Non-Conformance Reporting

8.3.4.1 Records of the nature of non-conformities and any subsequent actions taken, including concessions obtained, will be

maintained in accordance with Control of Non-Conforming Products and Control of Quality Records.

8.3.5 Customer complaint

8.3.5.1 Customer complaints for the fabricated materials are addressed by raising a non conformance report, analyzing the root cause for the non conformance and by a suitable corrective action. While recommending the required corrective action, the required preventive action is also recommended to avoid the repetition of the non conformance in the future.

8.4 Analysis of Data

8.4.1 Senior Management, Functional heads collect and analyze appropriate data using Statistical Techniques to determine the suitability and effectiveness of elements of the QMS applicable to the area(s) of responsibility and to identify opportunities for improvement. At a minimum, data is analyzed to assess achievement of the corporate level quality objectives related to:

8.4.2 At a minimum, data is analyzed to assess achievement of the corporate level quality objectives related to:

a. Customer Satisfaction

b. Supplier Performance

c. Overall QMS Effectiveness (which as a minimum will include a measure of repeat internal audit findings and other internal failures and ineffective corrective/preventive actions)

d. Overall Operational Efficiency, Competency and Training Effectiveness, and Product Performance (refer to Section 5.4.1).

8.4.3 Another tool for determining the effectiveness of PPN QMS and identifying opportunities for improvement is PPN annual assessment against the criteria established in Annex A (Guidelines for Self-Assessment) of ISO 9004:2008. On an annual basis, the Quality Management Representative, with input from Senior Management and other key personnel, performs a self-assessment against these criteria and uses the results to identify current strengths and weaknesses, and to opportunities for improvement.

8.4.4 Results of data analysis together with related recommendations are presented to Senior Management for review and action during Management Reviews. Refer to Section 5.6.

8.5 Improvement

8.5.1 Continual Improvement

At PPN, the continual improvement process beings with the establishment of Quality Policy (refer to Section 5.3) and objectives for improvement based on key measures established by Senior Management (refer to Section 5.4.1).

8.5.1.1 Customer satisfaction, internal audits, process and product performance data is then collected, analyzed and monitored to assess progress against objectives and identify opportunities for improvement.

8.5.1.2 Corrective actions are initiated when desired results are not achieved and preventive actions are initiated to prevent the occurrence of problems or to implement other improvement actions. Actions are prioritized and implemented on the basis of data:

a. the impact of failures/problems is used to prioritize needed corrective actions

b. risks are evaluated to identify and prioritize needed preventive action.

8.5.1.3 The effectiveness of corrective and preventive actions taken as well as the overall progress towards achieving corporate level improvement objectives is assessed through Management Review process. At PPN, our "baseline" performance begins with meeting Customer and ISO 9001:2008 requirements. PPN identify opportunities for satisfying the requirements of all other interested parties (owners, employees, etc.) through the use of the annual self-assessment against improvement criteria contained in Annex A (Guidelines for Self - Assessment) of ISO 9004:2008 (or other criteria).

8.5.1.4 All inputs to the Management Review process are used to established new/changed improvement objectives and to initiate additional improvement actions. Refer to Section 5.6.

8.5.1.5 The Quality Management Representative has overall responsibility for establishing and implementing an effective corrective and preventive action system in accordance with Corrective Action and Preventive Action as summarized below.

8.5.2 Corrective Action

8.5.2.1 As evidence of non-conforming product, Customer dissatisfaction, and effective processes is used to drive out corrective action system because they indicate that a current problem exists requiring immediate correction and possible additional action at eliminating or reducing the likelihood of it's recurrence. Investigating and eliminating the root cause of these failures is a critical path of PPN continual improvement process. PPN apply controls and follow-up to ensure that effective corrective action is taken appropriate to the impact of the problem encountered.

8.5.2.2 In addition, the Quality Management Representative summarizes and analyzes corrective action data to identify trends needed to assess overall effectiveness of the corrective action system and to develop related recommendations for improvement. The corrective action system is considered effective if specific problems are resolved or corrected and data indicates that the similar problems have not recurred. Results of this analysis and related recommendations are presented to Senior Management for review and action during Management Reviews.

8.5.3 Preventive Action

8.5.3.1 Data from internal audits, Customer feedback, employee suggestions, and the annual self-assessment against criteria contained in Annex A (Guidelines for Self-Assessment) of ISO 9004:2008 (or other criteria) is collected and analyzed (refer to Section 8.4) to identify the actions needed to eliminate the cause of potential problems and thereby prevent their occurrence. Investigating and eliminating the root cause of potential failures is a critical part of PPN continual improvement process. PPN apply controls and follow-up to ensure than effective preventive action is taken appropriate to the risk and impact of potential problems and losses.

8.5.3.2 In addition, the Quality Management Representative summarizes and analyzes preventive action data to identify trends needed to assess effectiveness of the preventive action system and to develop related recommendation for improvement. The preventive action system us considered effective if potential losses were avoided. Results of this analysis and related recommendations are presented to Senior Management for review and action during Management Reviews.