ISO 9001 & AS 9100
Quality Management System

Authorised by:	Approved by:
Stuart Handley Managing Director	Tim Holmes Head of Quality

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Quality Manual Amendment Record

Amendment No.	Section No.	Description of Change	Date
A	All	New issue	16/07/15
B	All	Reviewed and updated for AS9100C	04/03/16
C	All	Post LRQA stage 1 findings	10/08/16
D	All	Consistently aligned with AS9100 paragraphs and referencing relevant owners and documents. Logistics removed as a process. Sales & Enquiries processes merged.	24/10/16
E	All Page 3 Section 3 Section 4 Section 4 Section 8 Section 6	Updated issue no, removed revision of ISO & AS, scope changed as agreed with top management, exclusions changed. Organisation chart revised. Processes and interactions edited to remove Enquiry PM and Special projects PM. Removed reference to F4N, due to customer feedback. New sentence added to cover Organisational knowledge.	01/03/17
F	Section 5	Update Process Interaction Diagram Update Head of Quality to reflect change of personnel	13/10/17
G	Section 3 Appendices	Update of Organisation Chart and related notes. Removed; PEARs integrated into Process Interaction diagram. Roles and responsibilities detailed in Process Maps and PEARs	18/10/2018
H	Section 1	Extending detail of Interested Parties, Mgt Rep – Freedom and Unrestricted Access statement.	15/07/2019

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1. COMPANY PROFILE - SCOPE

SPE is a family owned business maintaining Quality Management certification and approved by clients including GE Oil & Gas, Aker Subsea, and Rolls Royce Power Engineering.

We offer a full manufacturing and project management service for parts and assemblies ranging from Fixed and Flying stab plate systems and tooling to high integrity component parts used in the reactor core on the current class submarine fleet.

The business was founded in 1977 as a small tool making company and whilst a plastic mould tool hasn't been produced by the company for over 30 years it still retains the original company name that customers have come to recognise and associate with quality, on time delivery, and excellent technical support.

The company is based in the heart of England, right next to the main M1 motorway at junction 28 near Mansfield, Nottinghamshire. The 30,000-sq. ft. facility runs 2 shifts and is equipped with the very latest machine tools and utilises the very latest technology including CAD CAM and its very own scheduling and efficiency monitoring software 'VIPER'. The award-winning family business has achieved average yearly growth of 25% and has recently gained AS 9100 certification as its next step to maintaining this level of growth and to further improving the overall efficiency of the business.

Stakeholders and Interested Parties

Customers, Suppliers, Business Owners, Directors, Managers, Employees, Regulatory Bodies, National & International Governments, Industry Bodies, External Partners, Financial Stakeholders and Local Community.

Company Policies

The Managing director shall ensure that appropriate supporting policies are available in the areas of quality, environment and health and safety (H&S) that are supported by the company values.

The quality and environmental policies shall take the core values and requirements of the standards and translate them into meaningful mission statements for the company within the defined topics. Policies shall be

- Defined and authorised by the Managing Director and reviewed annually.
- Appropriate to the nature and activities of SPE Precision Engineering Ltd.
- Set out key values and objectives employees and other stakeholders
- Meet the requirements of the customer, statutory and regulatory incl accreditation standards
- Provide a framework for setting appropriate objectives and targets, wherever possible SMART

SPE Precision Engineering Ltd has established, documented and implemented a Quality Management System (QMS) in accordance with the requirements of ISO 9001 & AS 9100 and statutory and regulatory requirements. The system is maintained and continually improved through the use of the quality policy, quality objectives, management review, audit results, analysis of data, by assessing and managing risk through mitigation and effective corrective & preventive actions.

The QMS processes, their sequence and interaction are shown in this manual, adequate resources and information necessary to support the operation and monitor processes are provided.

The company's certified scope of activities includes ***"Precision engineering of high integrity machined components, kits, mechanical assemblies, turnkey engineering projects and hardness testing of metallic raw material to the Nuclear, Oil & Gas and Aerospace Sectors."***

This QMS does not include the following activities from ISO 9001 & AS 9100. **Exclusions from scope**:

8.3.2 Design and Development Planning 8.3.3 Design and Development Inputs 8.3.4 Design and Development Controls 8.3.5 Design and Development Outputs 8.3.6 Design and Development Changes	The organization does not undertake any design of products, but manufacture to customer-supplied drawings/data only. Note* Design Reviews when requested, contribute to customer design & development but do not hold any product design proprietary responsibility.
8.5.5 f) g) & h) Post Delivery Activities	The organization is not involved in any form of service, maintenance or repair operations. We are committed to Investigating potential non conformances, customer feedback and assisting with technical queries.

The above exclusions do not affect the ability or responsibility of **SPE** to meet customer, statutory and regulatory requirements

2. QUALITY POLICY

It is the intention of the company to supply our Customers with products and/or services of the highest quality, to meet or exceed their requirements and ensure we comply with current statutory and regulatory requirements. We will measure our performance through periodic management review and address any concerns through the quality objectives which are reviewed periodically.

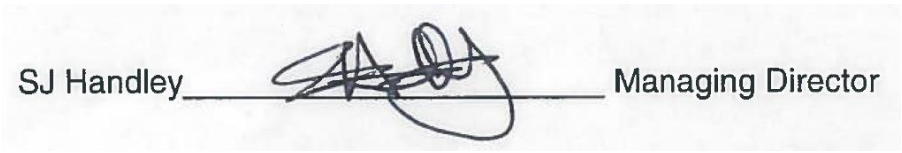
The company recognises the necessity for the involvement and the co-operation of all departments, embraced by all employees, in the achievement of the required quality of its products and services, in order to achieve this, we update our CSIP and set regular CI activities reported back at each monthly management meeting. We promote the company values through regular behaviour based competency appraisals and by displaying them around the company.

A comprehensive system of Quality Planning, Assurance and Control is in operation throughout the company as described in the Quality Management System, and the company is fully committed to continuous improvement and customer satisfaction.

We are committed to maintaining our Quality Management Systems certification, and to ensuring that our Customer's requirements are fully met.

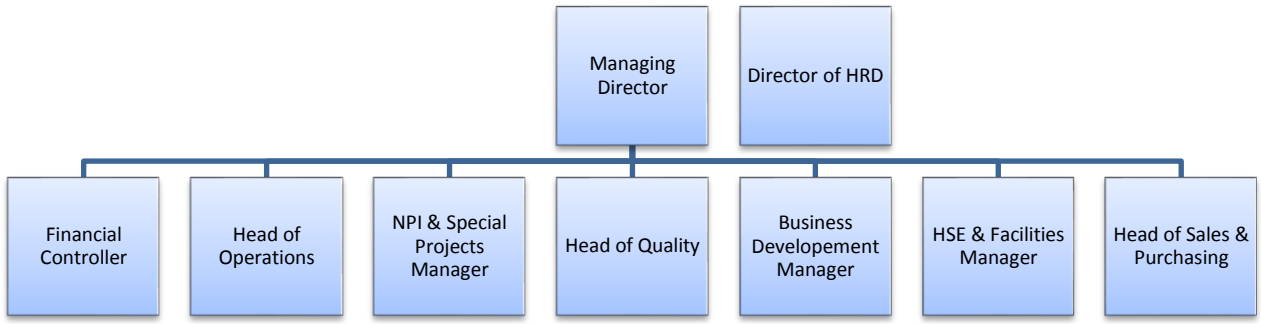
The quality policy statement and objectives shall be reviewed at least annually at the management review meetings.

This policy is communicated to all employees and is available to other interested parties on request.



SPE Ltd
Swiftool House, Brookside Way, Huthwaite
Nottinghamshire, NG17 2NL
Telephone: 01623 515544
www.SPE.co.uk

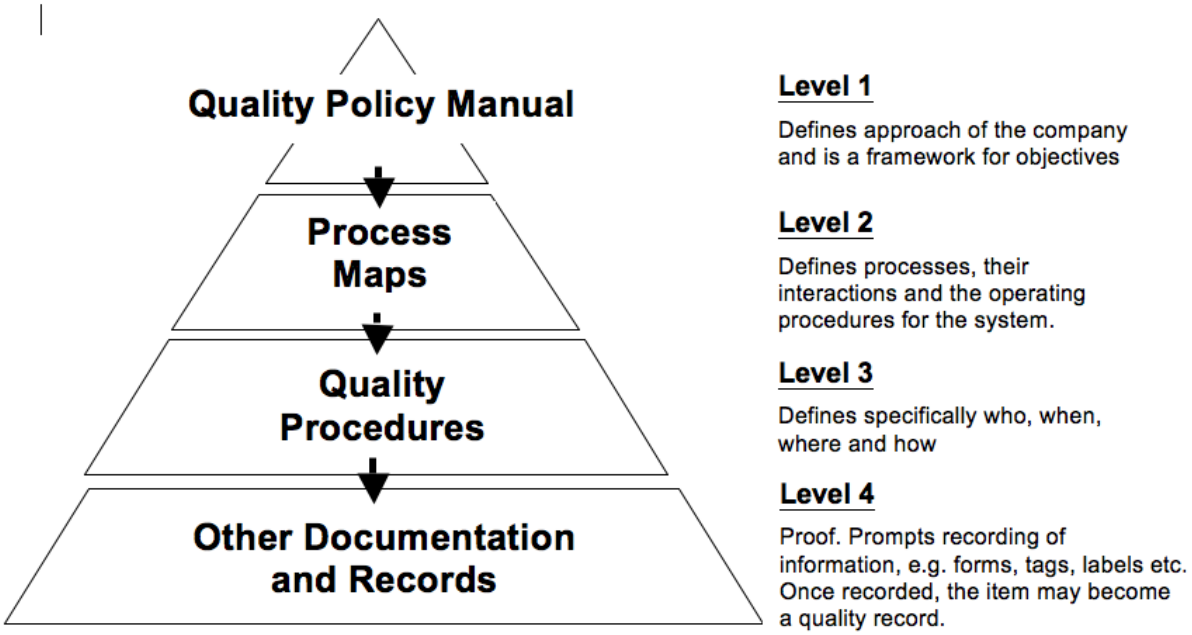
3. ORGANISATION CHART



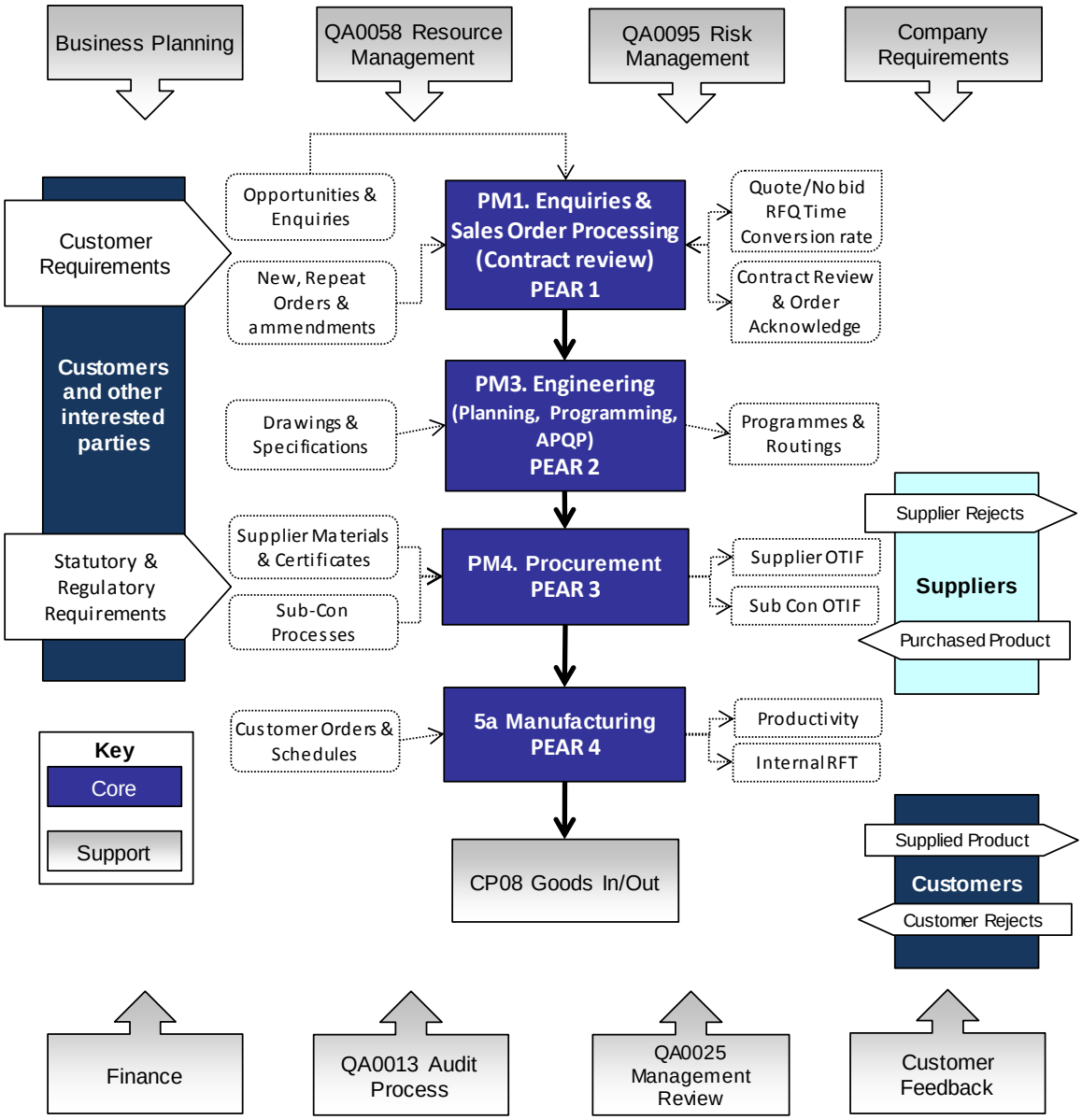
NB:The Director of HRD controls the organisation chart for the full company via iTrent.

4. QUALITY MANAGEMENT SYSTEM ("QMS")

- The company has determined the processes and resources necessary for an effective quality management system which compiles with AS 9100 and consists of:



- The system is process driven and the interactions of the various elements of the system are depicted in the schematic overleaf with documents referenced throughout this manual.



Process Interaction

- This quality manual contains the scope of approval and the declared quality policy. Appendix 1 refers to the declared quality documents
- The documents can be hard copy or electronic and together with resultant records are controlled by the Quality Department adhering to QA0080 Control of Documents
- Documents are issued under controlled conditions by uploading to a controlled document register fronted by a read only QMS Navigator ensuring only correct versions of documents are available together with listed hard copy versions.
- Records are stored by the Quality Department in an organised manner in a suitable office environment to ensure ease in retrieval against agreed retention periods in accordance with: QA0081 Control of Quality records

- The above aspects of the system are reviewed on a regular basis via internal audits and management review meetings to continually improve the effectiveness of the QMS.

5. MANAGEMENT RESPONSIBILITY

- Top management are committed to the development, implementation and continual improvement of the QMS via a quality policy, PEAR metrics which are consistent with policy, contained in Process Map documents and that adequate resources are made available as listed on the organisation chart.

- Planning of the QMS will be carried out to meet the requirements of the standard, as well as the PEAR metrics, and to maintain the integrity of the QMS during periods of change.

- The requirements of the customer will be determined to enhance customer satisfaction and staff made aware of the need to meet these as well as any statutory or regularity requirements.

- The organisational chart for top management is contained in this manual in Section 3 and staff responsibilities and authorities are appended.

- The Head of Quality is management representative for the QMS with necessary responsibility and authority to maintain the QMS. The management representative shall have freedom and unrestricted access to top management to resolve quality management issues.

- The Head of Quality in conjunction with the Management Team shall ensure that adequate communication occurs internally on the Policy, the effectiveness of the QMS, associated PEAR metrics & objectives. Communication can occur via:
    a. Information posted on the notice boards
    b. E-mails to all employees
    c. Awareness training
    d. Verbal direction from the Directors
    e. Training and Education sessions
    f. “Companyweb” the companies Internal web site.

- Top management reviews of the policy and system will be undertaken at least annually in accordance with the standard and the written procedures:

    QA0094 Quality Objectives
    QA0084 Management Review
    QA0025 Management Review minutes

6. RESOURCE MANAGEMENT

- Employees performing work which impacts product quality are made aware of the relevance of their activities in meeting the quality objectives & customer satisfaction.

- Appropriate records such as education, training courses, skills and experience are held on file. Records may contain attendance & training undertaken. Records may be a mix of hard & soft copies controlled i.a.w QA0096 HR Training

- The Director of HRD reports on training needs & requirements as required and reviews held at Mgt Review Meetings.

- The Director of HRD works with each department to carry out formal succession planning using principles of the nine

box grid or matrix (McKinsey, leadership performance v leadership potential).

In addition knowledge transfer sessions are built into department KPI's for appraisals. The appraisal cycle includes Personal Development Plans.

- The necessary infrastructure required by staff to conduct their duties effectively so as to achieve conformity of the product to customer requirements shall be assessed by top management e.g. fabric of the premises, utilities and services, hardware and software and general supporting services at monthly management meetings.

- Likewise the work environment will be addressed e.g. noise, lighting, temperature, humidity, access etc.

7. PRODUCT REALISATION

- Orders shall be planned and launched by Sales and Engineering in a way that is consistent with the requirements stated by the customer and in line with related processes contained in the QMS by adherence to written procedures:

  CP2 Batch Card
  CP3 White Batch Cards
  CP4 Yellow Batch Cards
  CP5 Blue Batch Cards
  CP7 Booking out of Tools
  PM05a Manufacturing Process
  QA0082 Control of Works Transfers
  QA0095 Risk Management (In Process)

  Subsequent processing shall be conducted under controlled conditions in accordance with the relevant batch card issued for the item(s) together with the use of appropriate product information, process information, drawings, machinery, testing equipment, customer documentation required, product release, witness inspection and delivery.

- The requirements and expectations of the customer shall be obtained by Sales staff and include specific QMS system requirements, statutory & regulatory requirements, where specified at both the enquiry and order stage. These shall be obtained, reviewed and where necessary resolved i.a.w. with written procedures:

  PM01 Sales Enquiries and Orders
  QA0095 Risk Management (Planning)

  This includes assessment of SPE's ability to meet customer requirements and communication throughout life of order.

- Engineering shall create the required programmes by conforming to:

  PM03 Engineering process
  QA0095 Risk Management
  SPE-CNCPC- 01 Control of CNC programmes

- Purchasing is controlled by Procurement in relation to materials and subcontract activities by conforming to:

  PM04 Procurement process
  QA0020 Goods Inwards Detailed Instruction
  QA0026 Stock Appraisal
  QA0067 Avoidance of Counterfeit Items
  QA0095 Risk Management
  QA0101 Supplier Approval
  SPE/GI Raw Material Identification

- Project management is controlled by Production & Sales Departments in accordance with customer requirements and:

  CP2 Batch Card
  CP5 Blue Batch Cards
  QA0092 Project Management
- Configuration management is controlled through the Progress Plus system accessed by all staff.
- FOD requirements are covered by relevant guidance, training from customers e.g. Rolls Royce, adequate signage around the site and regular checks.
- Prevention of counterfeit items is controlled by staff i.a.w QA0067 Avoidance of Counterfeit Items
- Traceability, identification of product and inspection status is controlled at all times by unique route cards raised per drawing and part. They state as a minimum the Job, Item, Drawing and Quantity and are kept with the materials at all times with Supervisors and Operators conforming to:

  CP1 Operator control
  CP2 Batch Card
  QA0083 Identification and Traceability
  SOCS.DOC.PK Operator check sheet
- Product is preserved during processing by using rust inhibitors where required and using plastic bags. The bagged product is then over packed with bubble bags or corrugated card and placed in plastic trays, dedicated boxes with foam inserts or on pallets. Conforming to:

  CP9 Control of Parts between Manufacturing Processes
  SPE-PK-DGSPS5104/9 Cross contamination
- Free issue material is controlled by the MHD and identified, verified, protected and safeguarded whilst on site. Customer will be informed of any items incorrectly counted or identified on receipt, lost, damaged or deemed unsuitable. The Head of Quality controls free issue gauges.
- Customer drawings are scanned onto system unless restricted. A copy is reprinted and stamped with a Production Release stamp. These are subsequently filed with completed packs and subsequent amendments are scanned to create updated versions. Records of previous issues are maintained
- Control will be exercised by the Supervisors to ensure accountability of all products supplied and despatched. Any discrepancies shall be noted on the Batch Card.
- Adherence to planned procedures shall be verified by signing / stamping Batch Cards by operators and inspectors.
- Amendments to process routes shall be authorised persons. Documents may be withdrawn, amended and re-issued using hand annotations i.a.w customer requirements
- Measuring equipment is logged in the Calibration record Action is taken as required by the Inspection Supervisor.
- Inspection and testing equipment shall be controlled by storage in boxes and on shadow boards in designated areas when not in use. There is a positive recall system for instruments based on usage and calibration periods.
- Preventive maintenance is covered with weekly checks on the Machine maintenance schedule, the Head of Operations manager has overall responsibility.

8. MEASUREMENT, ANALYSIS AND IMPROVEMENT

- Top management shall conduct measurement, analysis & improvement processes to demonstrate conformity of both the product and the QMS and seek to continually improve. CI is managed and demonstrated via a number of ways:

  - Actions arising from Management Review, Audit results, CSIP & Project planning, Use of KPIs to monitor & measure performance, Quality, Cost & Delivery (QCD) & HS&E objectives, Deployment of SC21 (Supply Chain Twenty First Century) and other diagnostic frameworks.

- Managers and directors are responsible for collecting information relating to the customers' perception via suitable means e.g. correspondence, meetings, customer ratings and scorecards.

- QMS effectiveness will be monitored via KPIs and i.a.w QA0064 Internal audit & QA0086 Internal audit procedure. Auditors shall be objective, impartial and not audit their own work.

- Top management shall ensure that suitable methods are deployed to ensure planned results within the QMS are being achieved. This will require the collection of appropriate data that shall at least include:

  - PEAR metrics
  - customer satisfaction
  - product conformity
  - characteristics and trends of both product and processes

- The operators signing off each process maintains evidence of conformity to requirements at the required points in the process route for the products. Authority is controlled via:

  QA0099 Stamp Control procedure
  QA0022 Control of Operator Stamps
  QA0021 Control of Inspection Stamps

- Nominated members of the Quality Department and the Directors can authorise release for delivery to the customer with, where relevant, customer nominated inspectors or a visiting customer inspector e.g. Rolls-Royce.

- They shall have determined that the planned arrangements have been completed via the signed off Batch Cards and/ or customer specific processes together with the provision of the required documentation to accompany the order at despatch.

- Non conforming product shall be controlled by Inspection raising the NCR record and moving items into a designated Quarantine area so as to prevent unintended use or delivery whilst adhering to the written procedure:

  QA0087 Non-Conforming Product

  This may involve use of customer supplied forms where part of the contract. Orders that the customer puts on hold will not be deemed non-conforming but shall be segregated into an 'On Hold' area.

- The aforementioned processes will continually be used by senior management to improve the QMS whilst eliminating the causes of actual and potential non-conforming product shall be controlled by the written procedure:

  QA0088 Corrective Action

*****End of Document*****