



QUALITY MANUAL

AS/NZS ISO 9001:2008

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EBS-RAY PUMPS PTY. LIMITED

ABN 52 000 061 003

Head Office & Manufacturing Plant

628 Pittwater Road, Brookvale NSW 2100 Australia

Tel: (+61 2) 9905 0234 Fax: (+61 2) 9938 3825

Web site: www.ebsraypumps.com.au

Branch Sales Offices

Unit 1/6 Handley Crescent, Dandenong VIC 3175 Australia

Tel: (+61 3) 9706 7263 Fax: (+61 3) 9706 7312

1/80 Old Toombul Road, Northgate, QLD 4013 Australia

Tel: (+61 7) 3260 7411 Fax: (+61 7) 3260 7422

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This Manual outlines the quality management policy, systems and practices of all facets of product design, manufacture and repair applications encountered by EBSRAY.

Our policy has been established and is conscientiously promoted to ensure compliance of our quality management system with ISO9001: 2000 "Quality Systems for design/development, production, installation and servicing."

This Manual does not contain comprehensive detailed procedures. These are referenced separately in various sections of the Manual. An index of procedures that supports this Manual is included in Section 7.

The P-D-C-A Cycle

The Plan-Do-Check-Act (PDCA) concept is something that is present in all areas of our professional and personal lives, and is used continually, formally or informally, consciously or sub-consciously in everything we do.

Every activity, no matter how simple or how complex, falls into this never-ending pattern.

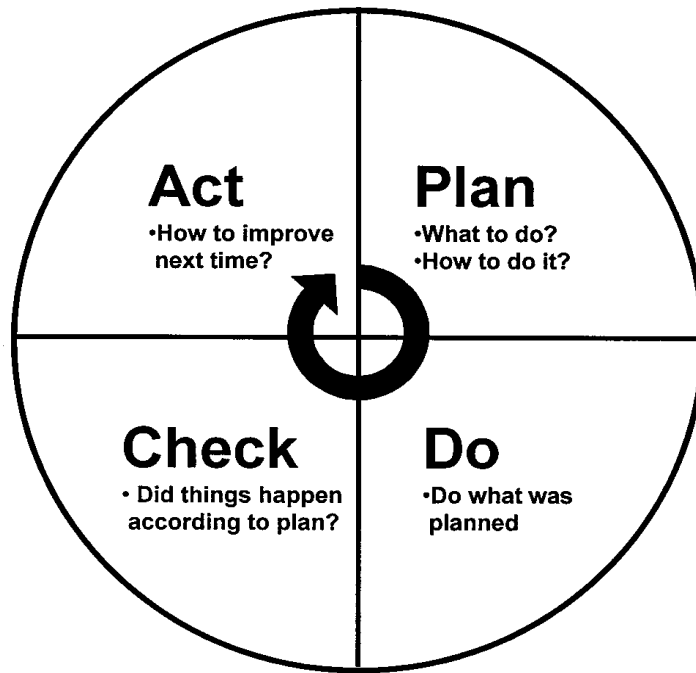


FIGURE 1: The "Plan-Do-Check-Act" cycle

Within the context of EBSRAY's Quality Management System, the PDCA cycle is deployed in each of the organization's processes and to the system of processes as a whole. It is associated with the planning, implementation, control and continual improvement of both product realization and other quality management system processes.

Maintaining and continually improving the process capability will be achieved by applying the PDCA concept to all levels within the organization.

Principal System Documentation

The hierarchy of principal documents comprising the Quality Management System below:

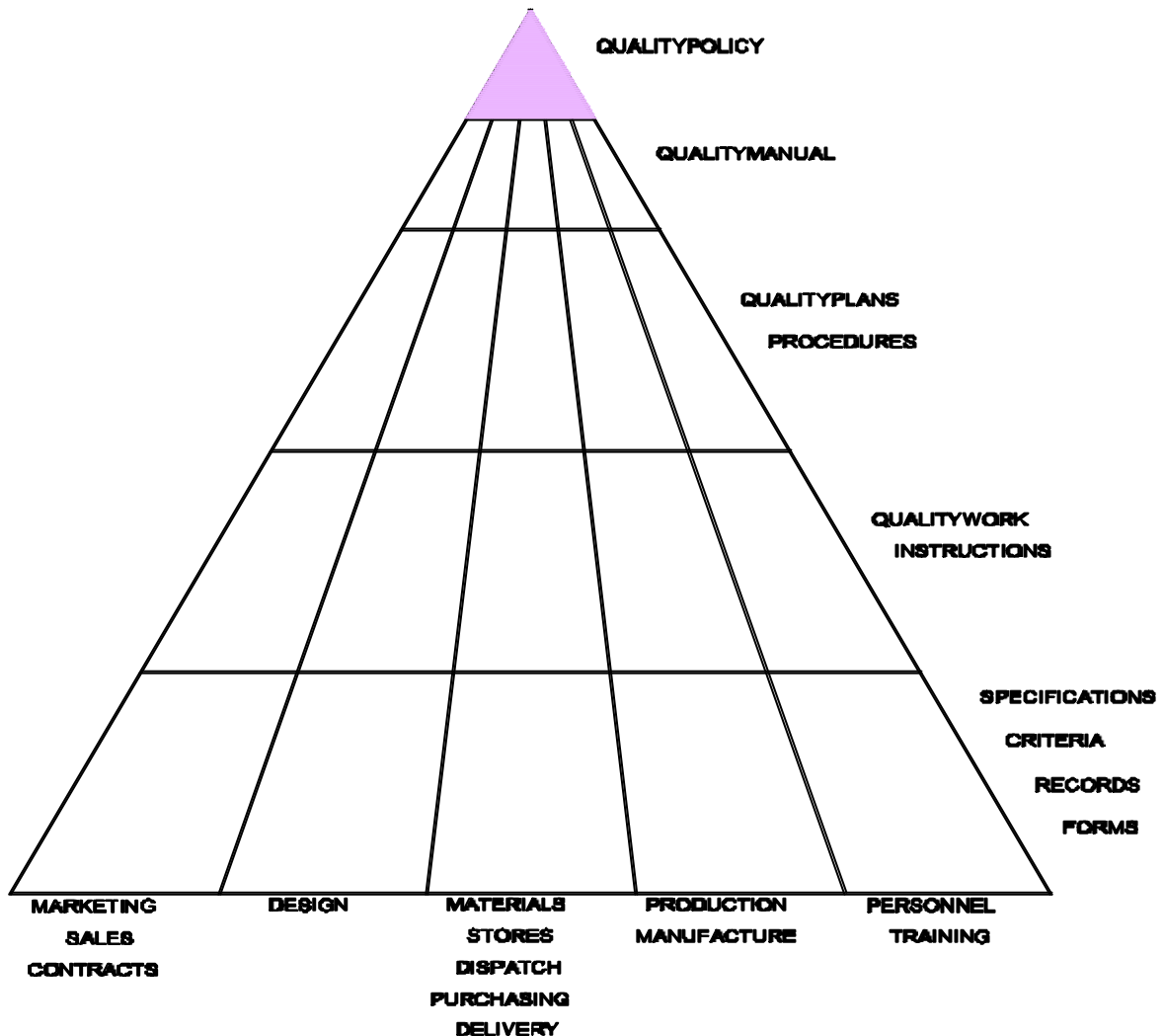


Figure 2: Documentation of the Quality Management System

Quality Plans

Quality Plans are documents setting out the specific quality practices, resources and activities relevant to a particular product, process, service, contract or project required by the customer. Each plan shall, in particular, specify all inspection and testing activities and shall reference all relevant documents to ensure manufactured product meets with the specified requirements of the customer.

The plans may be presented in a flow chart form or a customized Inspection and Test Plan (ITP) meeting with the specified requirements of the customer.

Customer Satisfaction

EBSRAY is totally committed to quality across the business. As an on going improvement to our product and service quality we have initiated a Customer Satisfaction Survey.

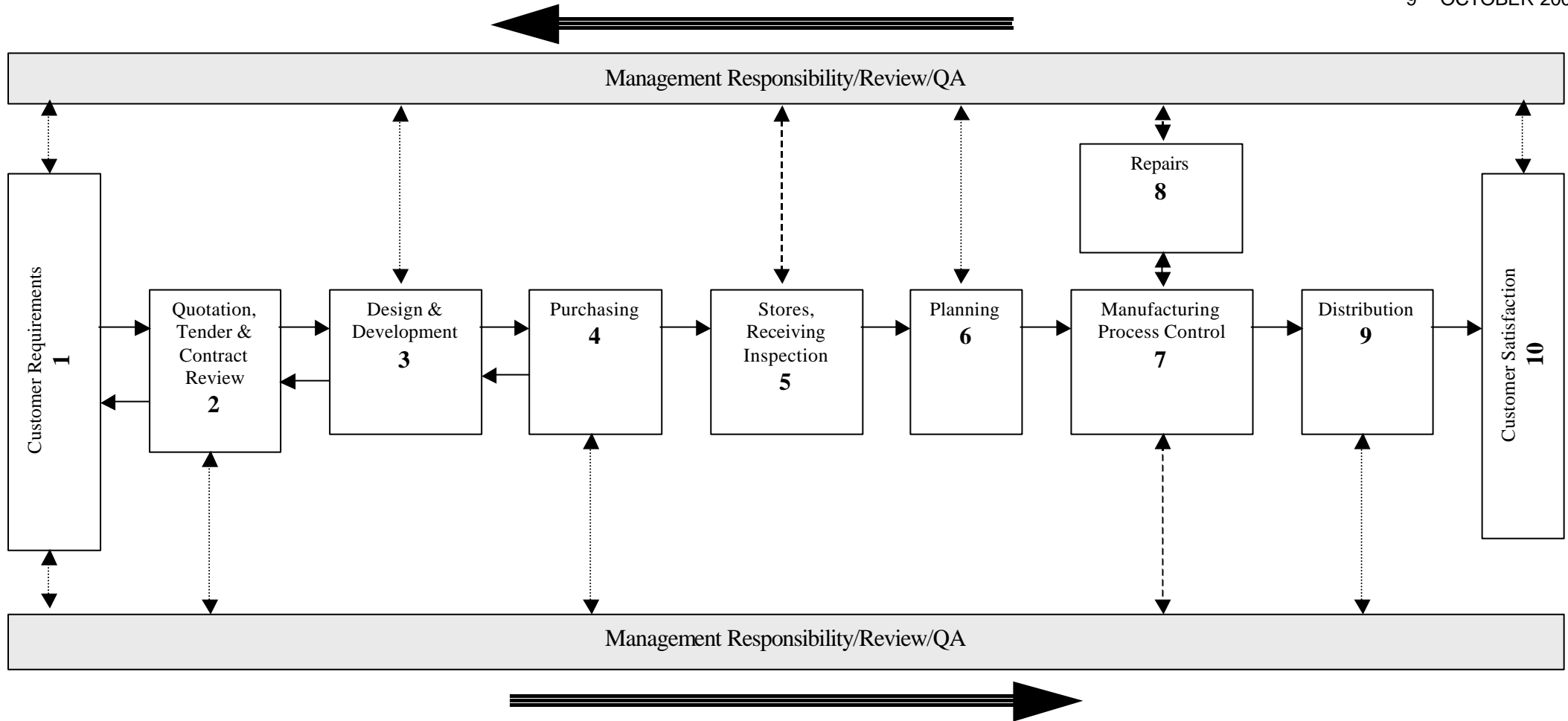
Our Customer Satisfaction Survey is in electronic median and is e-mailed to all our customers on a regular basis. By adopting this process it is convenient and time saving for our customers.

Our customer's feedback and comments are of paramount importance and a critical measure for us to improve our product and services.

Interaction of Processes

The core areas from the initial customer requirements through to distribution of the product are shown in flow chart form in Figure 3.

The flow chart shows the interaction of the processes at EBSRAY from the customers requirements right through to the end result of customer satisfaction.



Legend	QMS Documentation	Legend	QMS Documentation
1	Customers Specifications	7	All related Procedures and Work Instructions
2	Procedure for Contract Review (WP403001)	8	Procedure for Pump Repairs (WP409011)
3	Procedure for Design Control (WP404001)	9	Procedure for Handling, Storage and Delivery (WP415001)
4	Procedure for Purchasing (WP406001)	10	Customer Requirements / Customer Survey
5	Procedure For Receiving Inspection and Testing (WP410001)	11	
6	Work Instruction for Planning (QW409005)	12	

Fig 3. Interaction between processes of our Quality Management System

EBS-RAY PUMPS PTY. LIMITED is a privately owned Australian company.

Its founder established manufacturing capability concentrating on industrial pumps at Darlinghurst in Sydney in 1938.

During World War II, EBSRAY held Navy contracts for the development and supply of fuel oil flushing pumps for various classes of vessels and other defence forces contracts including pumps, aircraft components, jigs, fixtures, tooling and gauges for all major ordinance factories.

Following the war EBSRAY continued the design and manufacture of industrial pumps. In 1947 the current trading name of EBS-RAY PUMPS PTY. LIMITED was registered and in 1952 the Head Office and Works was relocated to its present position at Brookvale in Sydney's northern suburbs.

During the fifties and sixties EBSRAY was also involved in the biomedical engineering fields, designing and manufacturing specialised equipment such as the first Australian heart lung machine which complied with surgical requirements, unique respiratory apparatus, special surgical implant instruments and a hyperbaric unit.

This diversity of involvement by EBSRAY has led to a reputation for combining craftsmanship with production, technique with innovation, quality with quantity be it with its core 'pump manufacturing' business or with specific and specialised precision machining (sub-contract) business.

EBSRAY markets its products domestically and internationally to predominantly niche markets where specialised skills in the design, application and manufacturing are paramount for successful customer satisfaction.

Today EBSRAY employs personnel covering Administration, Sales, Marketing, Design, Manufacturing and Testing. CAD/CAM computer technology is extensively utilised to add to the resources relied upon by EBSRAY's skilled engineers to produce their industrial/process pumps, ancillary equipment and components. All the latest generation CNC and DNC lathes, machining centres and metrology equipment enable guaranteed precision manufacture for absolute Quality Control throughout all stages of production.

QUALITY POLICY STATEMENT

EBSRAY is committed to only the highest level of Quality for all products and services offered to our customers.

In achieving this objective, it is the policy of EBSRAY to implement an effective and efficient Quality Management System. Key factors enabling a consistent and uniform approach to our overall product quality include:

- ✓ The implementation and maintenance of a Quality System based upon International Quality Standard ISO9001: 2008 and the Quality System requirements for Manufacturers as required for the ANZEx, ATEX and IECEx Schemes.
- ✓ The implementation and adherence to the "Do it once - Do it right" philosophy.
- ✓ The innovative development of all internal procedures directed at achieving continued quality enhancement.
- ✓ The involvement of all employees in training, education and quality improvement techniques.
- ✓ The total commitment of management to enable these ongoing processes to develop and to continually improve the Quality Management System.
- ✓ A framework for setting and reviewing policy objectives relating to continual improvement.

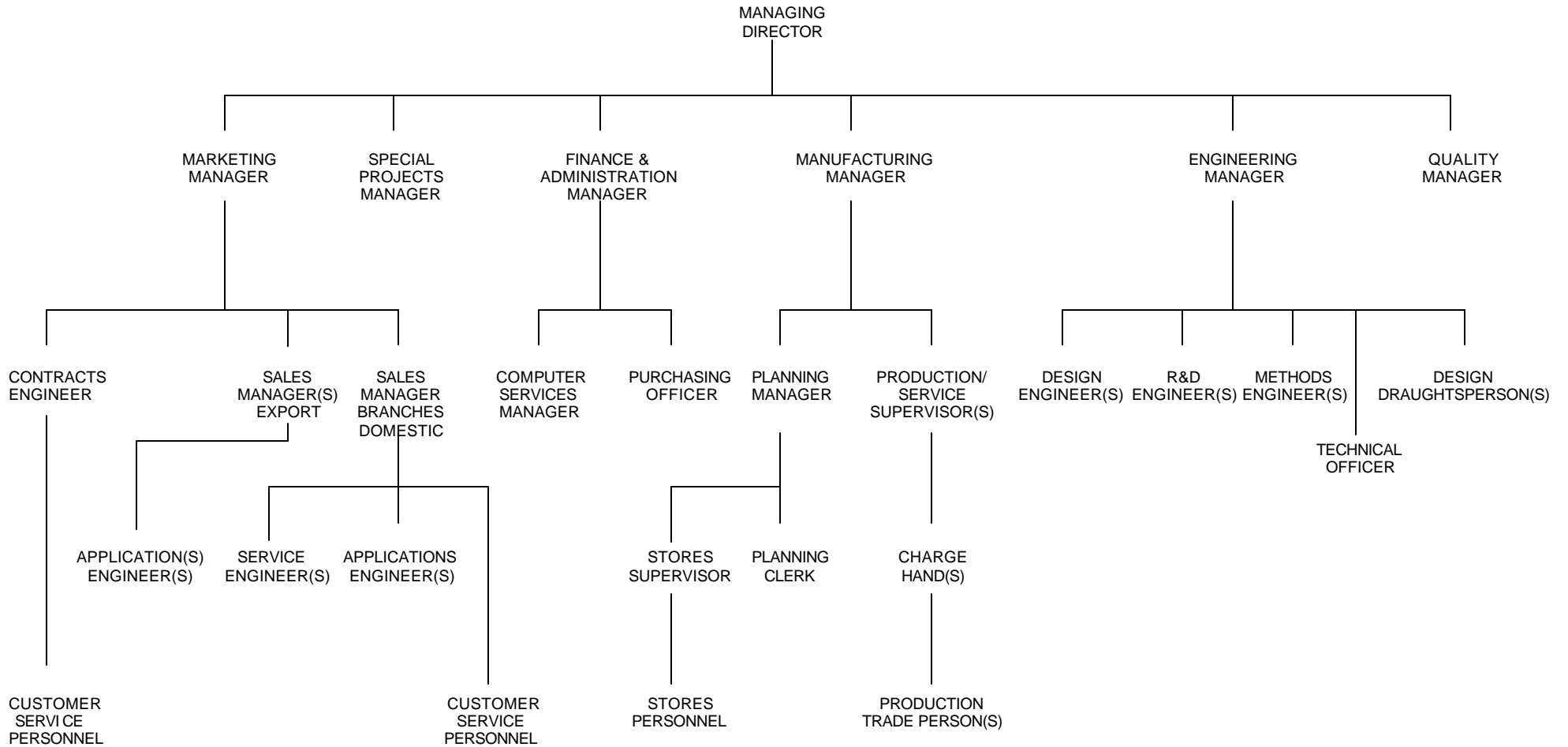
By the adoption of this policy, excellence will be achieved to completely satisfy customer requirements.



W.A. Ebsary
Managing Director
Ebs-Ray Pumps Pty. Limited
A.B.N. 52 000 061 003



COMMUNICATION STRUCTURE



CLAUSE NUMBER AS/NZS ISO9001:2000	ELEMENT TITLE	QUALITY SYSTEM PROCEDURE No(s).
4	QUALITY MANAGEMENT SYSTEM (Title Only)	
4.1	General Requirements	
4.2	Documentation Requirements (Title Only)	
4.2.1	General	
4.2.2	Quality Manual	EBSRAY Quality Manual
4.2.3	Control of Documents	Procedure for Document Control (WP405001)
4.2.4	Control of Records	Procedure for Quality records (WP416001)
5	MANAGEMENT RESPONSIBILITY (Title Only)	
5.1	Management Commitment	Quality Policy, Procedure for Management Responsibility (WP401001), Company Policy Handbook Section 4
5.2	Customer Focus	Quality Policy Statement
5.3	Quality Policy	Quality Policy Statement
5.4.1 & 5.4.2	Planning	Quality Policy Statement, Company Policy Handbook Section 4, Work Instruction for Planning (QW409005)
5.5.1 & 5.5.2	Responsibility and Authority	Position Descriptions, EBSRAY Quality Manual Sections 4 & 6
5.5.3	Internal Communication	Company Policy Handbook Sections 3 & 4
5.6.1, 5.6.2 & 5.6.3	Management Review	Company Policy Handbook Section 4
6	RESOURCE MANAGEMENT (Title Only)	
6.1	Provision of Resources	Company Policy Handbook Section 4
6.2.1 & 6.2.2	Human Resources	Position Description, Procedure for Training (WP418001), Company Policy Handbook
6.3	Infrastructure	Company Policy Handbook
6.4	Work Environment	Procedure for Process Control (WP409001) Company Policy handbook
7	PRODUCT REALISATION (Title Only)	
7.1	Planning of Product Realisation	Procedure for Process Control (WP409001) Procedure for Contract Review (WP403001)
7.2.1, 7.2.2, & 7.2.3	Customer Related Processes	Contract Review, Process control, Customer Complaints Procedures and related Work Inst
7.3.1 TO 7.3.7	Design and Development	Procedure for Design Control (WP404001)
7.4.1 to 7.4.3	Purchasing	Procedure for Purchasing (WP406001) Procedure for Receiving Inspection and Testing (WP410001)
7.5	Production and Service Provision (Title Only)	
7.5.1	Control of Production and Service Provision	Process Control (WP409001 to WP409011)
7.5.2	Validation of Processes for Production and Service Provision	Procedure for Process Control (WP409001)
7.5.3	Identification and Traceability	Product Identification and traceability (WP408001)
7.5.4	Customer Property	Procedure for Purchaser Supplied Product (WP407001)
7.5.5	Preservation of Product	Procedure for Handling, Storage, Packaging and Delivery (WP415001)
7.6	Control of Monitoring and Measurement Devices	Procedure for Inspection, Measuring and Test Equipment (WP411001)
8	MEASUREMENT, ANALYSIS AND IMPROVEMENT (Title Only)	
8.1	General	
8.2	Monitoring and Measuring (Title Only)	
8.2.1	Customer Satisfaction	Customer Surveys, Customer Complaints
8.2.2	Internal Audit	Procedure For Internal Quality Audits (WP417001)
8.2.3 & 8.2.4	Monitoring and Measuring of Process and Product	Procedure for in Process Inspection and Testing (WP410002) Procedure for Final Inspection and Testing (WP410003)
8.3	Control of Non-Conformity	Procedure for Non-Conforming Product (WP413001)
8.4	Analysis of Data	Monthly QA Reports, Customer Surveys
8.5	Improvement (Title Only)	
8.5.1	Continual Improvement	Internal Audit Reports, Company Policy Handbook Section 4, Corrective and Preventive Actions
8.5.2 & 8.5.3	Corrective and Preventive Action	Procedures (WP414001& WP414002)

NOTE: ALL PROCEDURES AND WORK INSTRUCTIONS ARE LISTED AND CROSS-REFERENCED IN SECTION 7

POSITION: MANAGING DIRECTOR

RESPONSIBLE TO: Board of Directors

PRINCIPLE RESPONSIBILITY:

To establish and ensure maintenance of the company's Quality Policy and Quality System in accordance with the Quality Manual and associated documentation.

OTHER RESPONSIBILITIES:

1. To review the organisational relationships as they affect quality and ensure that all positions are suitably staffed.
2. To assign defined responsibilities to each position consistent with the requirements of the Quality System.
3. To delegate to each position the necessary defined authority to enable these responsibilities to be carried out.
4. To ensure that all personnel are trained to levels of competence, which will enable them to implement the Quality System in their areas of responsibility and authority.
5. To nominate a management representative who irrespective of other duties shall have defined authority and responsibility for ensuring the requirements of AS/NZS ISO 9001:2000 are met.
6. To conduct management review meetings of the Quality System held at intervals as specified in the Procedure for Management Responsibility.
7. To ensure that quality matters arising from monthly internal audits, customer complaints or any other sources are discussed and recorded at management review meetings. He shall initiate corrective action resulting from management review meetings as required, and shall follow up on the implementation of previously initiated corrective action.
8. To arbitrate if necessary on all unresolved disputed concessions concerning non-conforming product.

AUTHORITY:

- (a) The Managing Director has the final authority on all matters pertaining to the Quality System.
- (b) The Managing Director has co-authority with the Quality Manager for the certification of the Quality Manual.

For all quality related matters, the Quality Manager shall be delegated the responsibilities and authority of the Managing Director during his absence.

POSITION: QUALITY MANAGER

RESPONSIBLE TO: Managing Director

PRINCIPLE RESPONSIBILITY:

To implement and maintain EBSRAY's Quality System in accordance with the requirements of AS/NZS ISO 9001:2000.

OTHER RESPONSIBILITIES:

1. To carry out regular audits on individual Quality System elements. Audit reports shall be reviewed at management review meetings.
2. To implement and/or carry out a comprehensive system of planned and documented internal quality audits to verify whether quality activities comply with planned arrangements and to determine the effectiveness of the quality system.
3. To ensure that all required corrective action is carried out, following up and reporting the effectiveness of such corrective action.
4. To maintain files of quality related issues, including master copy of Quality Manual, Registers, Non-Conformance reports and corrective actions, minutes of Management Review Meetings.
5. To ensure that quality related personnel are trained in the implementation of the quality system.
6. To establish and maintain a company Document Distribution Register.
7. To recommend to the Managing Director that when necessary approval be sought from customers for concessions on non-conforming product which could be used to satisfy customer requirements with no detrimental effect on quality.

AUTHORITY:

- (a) The Quality Manager has authority on all matters pertaining to the Quality System.
- (b) The Quality Manager has co-authority with the Managing Director for the certification of the Quality Manual.
- (c) The Quality Manager shall undertake the Quality System authorities of the Managing Director in his absence.
- (d) To stop manufacture, processing or delivery of product which is not to specification subject to consultation with all relevant personnel.
- (e) To ensure that Quality related personnel perform their responsibilities and exercise their own authorities.
- (f) To change Quality Plans, Procedures, Work Instructions and Acceptance Criteria subject to consultation with relevant personnel.

For all quality related matters, the Managing Director shall be delegated the responsibilities and authority of the Quality Manager during his absence.

SECTION 7 – PROCEDURE AND WORK INSTRUCTION LIST/CROSS REFERENCE

Procedure No	Title	Related Work Instructions
WP401001	Procedure for Management Responsibility	
WP402001	Procedure for Quality System	
WP402003	Procedure for Procedure Preparation	
WP402004	Procedure for Control of Quality Manual	
WP402005	Procedure for Control of Procedures and Quality Work Instructions	
WP403001	Procedure for Contract Review	QW403001 Instruction for Processing of Quotations/Orders
WP403003	Procedure for Preparation of Works Orders	QW403002 Instruction for Amendment of Works Orders
WP403004	Procedure for Special Projects	
WP404001	Procedure for Design Control	QW404001 Instruction for Design and Development Planning QW404002 Instruction for Design Review QW404003 Instruction for Design Change Proposal QW404004 Instruction for Design Proposal
WP405001	Procedure for Document Control	QW405001 Instruction for Drawing Number Allocation and Registration
WP405002	Procedure for Control of Standards	QW405002 Instruction for Amendment of Drawings QW405003 Instruction for Design Number Allocation and Registration QW405004 Instruction for use of Document Request Form
WP406001	Procedure for Purchasing	
WP406002	Procedure for Pattern Control	
WP407001	Procedure for Purchaser Supplied Product	

NOTE: Individual Procedures and Instructions reference other Procedures and Instructions, which are relevant to their use/implementation

SECTION 7 – PROCEDURE AND WORK INSTRUCTION LIST/CROSS REFERENCE

Procedure No	Title	Related Work Instructions
WP408001	Procedure for Product Identification and Traceability	QW408001 Instruction for Product Identification QW408002 Instruction for Serial Numbering QW408003 Instruction for Obtaining Stores Loan Part QW408004 Instruction for Marking of Heat Numbers
WP409001	Procedure for Process Control	QW409001 Instruction for CNC Program Amendment Request
WP409002	Procedure for Process Control of Components	QW409002 Instruction for Processing of Works Order QW409005 Instruction for Planning and Scheduling
WP409003	Procedure for Process Control of Assemblies	QW409006 Instruction for Painting - Primer Only QW409007 Instruction for Painting - to Finish
WP409004	Procedure for the Creation of CNC Programs	QW409008 Instruction for Equipment Repair and Maintenance
WP409007	Procedure for Special Processes	QW409010 Instruction for G Series Assembly QW409011 Instruction for Ultrasonic Cleaning Tank Operation
WP409011	Procedure for Pump Repairs	QW409012 Instruction for Wiring Electric Motors QW409013 Instruction for Assembly of A805001 Motor and RX10 Submersible Pumpset QW409014 Instruction for Spray Bar assembly QW409015 Instruction for Structural Welding QW409016 Instruction for Assembly of A805001-34 Motor and RX25 Submersible Pumpset
WP410001	Procedure for Receiving Inspection and Testing	QW410001 Instruction for Operation of EBSRAY Test Tanks
WP410002	Procedure for In-Process Inspection and Testing	QW410002 Instruction for Operation of EBSRAY Hydrostatic Test Rig QW410003 Instruction for Static Motor Test A805001
WP410003	Procedure for Final Inspection and Testing	QW410004 Instruction for Dynamic Test of A805001 Motor and RX10 Pumpset QW410007 Instruction for Dynamic Test of A805001-34 Motor and RX25 Pumpset
WP410005	Procedure for Receiving of Goods Returned	
WP411001	Procedure for Inspection, Measuring and Test Equipment	REFER CALIBRATION INSTRUCTION MASTER FILE AND REGISTER

NOTE: Individual Procedures and Instructions reference other Procedures and Instructions, which are relevant to their use/implementation

SECTION 7 – PROCEDURE AND WORK INSTRUCTION LIST/CROSS REFERENCE

Procedure No	Title	Related Work Instructions
WP412001	Procedure for Inspection and Test Status	
WP412002	Procedure for Control of Inspection Stamps	
WP413001	Procedure for Control of Non-Conforming Product	QW413001 Instruction for the Handling of Supplier Recalled Product
WP413002	Procedure for Handling and Review of Customer Complaints	
WP413003	Procedure for Handling and review of External Non-Conformances	
WP414001	Procedure for Corrective Action	
WP414002	Procedure for Preventative Action	
WP414003	Procedure for Reporting System Non-Conformance	
WP415001	Procedure for Handling, Storage, Packaging and Delivery	QW415001 Instruction for Packaging and Handling
WP416001	Procedure for Quality Records	
WP416002	Procedure for Backup of Computer Data	
WP417001	Procedure for Internal Quality Audits	
WP418001	Procedure for Training	
WP419001	Procedure for Servicing	QW419001 Instruction for Registration and Authorisation of I,O and M Data
WP420001	Procedure for Statistical Techniques	

NOTE: Individual Procedures and Instructions reference other Procedures and Instructions, which are relevant to their use/implementation



CERTIFICATE OF REGISTRATION

This is to certify that:

Ebs-Ray Pumps Pty Limited

ABN 52 000 061 003

628 Pittwater Road BROOKVALE NSW 2100 AUSTRALIA

operates a

QUALITY MANAGEMENT SYSTEM

which complies with the requirements of

ISO 9001:2008

for the following scope

The registration covers the Quality Management System for the design, development, manufacture, selection, testing and repair of industrial/process pumps and aligned fluid transfer equipment for applications in the petro-chemical, pharmaceutical, mining, food processing, transport and other process industries.

Certificate No: QEC3332

Issued: 11 May 2009
Expires: 16 May 2012

Originally Certified: 17 May 1994
Current Certification: 7 May 2009

Alex Ezrakhovich
General Manager – Certification Services

Duncan Lilley
Global Head – Assurance Services



ISO 9001



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