

Generic CMMS Quality Assurance Plan

Scope

In accordance with the Quality Policy, the Quality System of CMMS is based upon the requirements and structure of ISO (the International Organization for Standardization) 9001:2000, Model for quality assurance in design/development, production, installation, and servicing.

In addition to these requirements, the Quality System also meets the requirements of the CMMS Quality System as laid down in the Quality Assurance Manual `Qa. This manual is issued by the CMMS.

Philosophy

The management commitment of CMMS to Quality as a key business objective is laid down in the following Quality Policy:

- ▶ Market only those products and services that will ensure customer satisfaction
- ▶ Operate reliable processes capable of fulfilling approved specifications
- ▶ Maintain a program of continuous improvement
- ▶ Aim for total quality in everything we do

The CMMS Quality System is being continuously developed and refined, and CMMS is regularly audited against the requirements of the system by CMMS Quality Staff.

CMMS is committed to operating quality systems and procedures in accordance with the CMMS Quality Assurance Manual: Conformance is mandatory and measured by a SGS SWITZERLAND.

Methodology

The method employed to accomplish quality assurance is based on the following structure:

- ▶ CMMS Quality Policy
- ▶ Qa Quality Management Systems Standard
- ▶ Qb Quality Management Systems Procedures
- ▶ Qc/Qd Company Quality Manual (described in the Procedures below).

Definitions

Quality Assurance

Quality Assurance is the formulation, compilation, and assertion of Standards or systems and methods in the form of:

- ▶ Manuals
- ▶ Procedures
- ▶ Specifications
- ▶ Plans
- ▶ Actions

in order to assure that the necessary quality requirements of a product comply with the working demands placed upon the finished product and in accordance with its fitness for purpose.

Quality Control

Quality Control comprises the operational techniques and activities which sustain the product or service quality to specified requirements.

Inspection

Inspection is the inter-stage final physical determination measurement and testing of a product to assure its conformance with quality and design requirements.

Quality cannot be inspected into a product. Inspection is only a means of checking the product specification during or after manufacture.

The Quality Manual

The Quality Assurance Manual is an organized collection of policies and procedures with necessary explanations and justifications to show a complete understanding of the quality system within an organization.

Its prime purpose is to state and explain policy so that it can be readily understood and practiced by all company employees, not just those in the Quality or Inspection department. Thus it will serve to promote a "Quality Philosophy", the application of which will be of reassuring interest to existing and prospective customers.

The manual will be beneficial as a training document as well as in providing the basis for auditing procedures to guard against the common tendency of systems to deteriorate. Codes of Practice shall be written to supplement in detail the broader issues outlined in the document.

Applicable Documents

Qa CMMS QUALITY MANAGEMENT SYSTEM STANDARD

Qb CMMS MANAGEMENT SYSTEM PROCEDURES

Qc/Qd CMMS QUALITY MANUAL

Quality Organization

Management Representative

CMMS shall maintain a person at management level for all quality related matters. This person shall be given full authority to execute this responsibility to satisfy customer specified requirements.

The current "Management Representative" is ONDREJ VALENT, Manager of Quality. His responsibilities relating to quality shall be:

- ▶ to coordinate and monitor the quality system
- ▶ to resolve any nonconformance in the system
- ▶ to see that timely and effective action is taken by the appropriate departments to ensure compliance with the specified requirements

Supporting Resources and Personnel

Responsibility for quality shall be expected not only from those directly concerned with the product, but also in terms of customer service provided to both internal and external customers.

Personnel shall be trained/experienced as appropriate. Resources shall be provided as warranted to accomplish this training.

Responsibilities for quality related functions shall be variously prescribed in Job Descriptions and/or Codes of Practice within the CMMS Quality Assurance Manual.

Activity and Item Categories

The activities in which Quality organization shall exercise its functions are as listed below:

- ▶ Management Responsibility
- ▶ Quality System
- ▶ Contract Review
- ▶ Design Control
- ▶ Document Control
- ▶ Purchasing
- ▶ Purchaser Supplied Product
- ▶ Product Identification Traceability
- ▶ Process Control
- ▶ Inspection and Testing
- ▶ Test, Measurement and Diagnostic Equipment
- ▶ Inspection and Test
- ▶ Control of Non-Conforming Product
- ▶ Corrective Action
- ▶ Handling, Storage, Packaging, and Delivery
- ▶ Quality Records Internal Quality Audits
- ▶ Training
- ▶ Servicing
- ▶ Statistical Techniques
- ▶ Annual Quality Improvement Plan

Each of the sub-sections corresponds to the classification of sections of ISO 9001:2008.

Standards and Procedures

The CMMS Quality Manual is divided into the following sections:

- ▶ Forms
- ▶ General Requirements
- ▶ Management Responsibility
- ▶ Procedures
- ▶ References
- ▶ Work Instructions
- ▶ Procedures - "What shall be done"

CM201 through CM1003 contains the Procedures part of the Quality System. These procedures are in effect a translation of the requirements of ISO 9001 1994 and the Group Quality System (where applicable) into a set of detailed requirements relating to the everyday business process as it occurs in the company.

Essential features of these procedures are:

- ▶ Statement of Purpose - The reason for having the procedure
- ▶ Statement of - The scope of activities
- ▶ Application covered by the procedure and what should take place to satisfy the Quality System requirements
- ▶ Administration - Quality Manual page, reference number, issue revision, and section together with originator's signature and approver's signatures.

► Responsibility - Who is responsible for executing the described activities

In addition to the Quality Manual Procedures customer requirements shall be transmitted to manufacturing departments by a combination of Drawings, Specifications, Bills of Materials, Routings, Engineering Change Orders, Quality Criteria, and Work Orders. Acceptance and rejection procedures are defined by written work instructions and procedures. Work specifications may take the form of travelers/routings, calibration procedures, or reports.

Inspection points shall be determined through Travelers/routings, Engineering documentation, and Procedures.

Procurement and Receiving

Those placing orders for CMMS are responsible for purchasing material and services at the best prices within quality and reliability specifications. The means by which goods or services shall be ordered is the purchase order which is required to give a precise, unambiguous description of the material, item, or service required, and shall include the following:

- Describe the product, material or service required in precise detail
- Refer to specifications, samples, and other explanatory data wherever applicable
- Indicate to the supplier where the product, material, or service is critical
- Where necessary, define performance tests and establish acceptance limits
- Where appropriate, specify identifying part numbers or marks
- Ensure that the supplier informs CMMS Condition Monitoring of any intended change in specification

Suppliers may be required to provide certification that their goods are within agreed and stated specifications.

Where applicable, reference shall be made to the international quality system, title, number, and issue to be applied to the product or service. Where orders are repeats of original (Blanket Purchase Orders), reference shall be made to the original order which shall meet the criteria stated above.

When it becomes necessary to reject materials or services for failing to meet specified requirements, CMMS shall record the event so that the supplier may be informed (to take corrective action) and so that CMMS records may show supplier performance at subsequent review.

Supplier Assessment

The prime purpose of Supplier Assessment is to ensure that suppliers of materials, goods and services have the capability to provide such goods to the satisfaction of CMMS and its customers.

Suitability of a supplier is normally judged by their expressed capability to supply to the stated specifications, followed by monitoring their quality performance over time.

CMMS reserves the right to visit a prospective supplier's premises before commencing trading to establish their suitability to supply. The same practice may be invoked at any later stage with existing suppliers, especially where changes in the organization, management, or facilities have taken place. Such supplier assessments shall be carried out at the discretion of any of the following: Manager, Purchasing, Engineering, Manufacturing and Quality. Suitable records shall be maintained.

The results of the Supplier Assessment shall be communicated to the supplier as a way of demonstrating the importance of quality matters.

Reassessment of Sub Contractors

Sub Contractors not used for a period exceeding one year shall be reassessed prior to placing of a purchase order.

Supplier Performance Evaluation

The overall performance of suppliers may be assessed at any time by reference to the Supplier's Purchase History File, in which shall be recorded documentary evidence of faulty deliveries, late deliveries, and other problems. Whenever new orders are to be placed, reference shall be made to the supplier's file as a guide to future dealings. Supplier's performance evaluation shall be a continuous process.

Approved Suppliers List

Suppliers whose overall performance has been judged satisfactory over a suitable period of time, or have been established as being capable by means documented in Codes of Practice, shall constitute the approved supplier list. This list shall be updated, maintained and retained.

Verification of Purchased Products

If specified in the contract, customers have the right to check acceptability of products on CMMS Dynamic Monitoring Analysis and Control's premises. However, such verification by the customer shall not override the responsibility of CMMS or its suppliers to provide products and services to specified requirements.

Verification of requirements by suppliers and sub-contractors must be exercised by CMMS irrespective of customer verification.

Incoming Inspection, Receiving and Certification

All incoming materials, products, and non-products, shall be verified to the requirements of the Purchase Order; certificates of conformity and specified inspections or tests performed. Materials awaiting verification shall be quarantined or identified to prevent unauthorized use. Suspect or non-conforming materials shall be quarantined or identified for the same reason.

The nature and extent of inspection/verification shall depend upon the quality performance demonstrated by the suppliers. Objective evidence of that performance shall be maintained to support the degree of verification applied.

Materials received from suppliers already accredited to ISO 9001:2008 may receive only minimal verification.

In-process Inspection

As part of the quality plan for products, in-process inspections and tests shall be defined by written work specifications and procedures. Work specifications may take the form of travelers/routings, calibration procedures, or reports. Records shall be kept for the prescribed period.

Production operators shall be trained in the quality aspects of their positions and in the detection of in-process defects so that non-conforming materials/products can be set aside for remedial action.

Testing

According to the nature and complexity of the product, functional test criteria shall be prescribed to verify that the design criteria satisfactorily meet Engineering specifications and any special customer contractual requirements. Records shall be maintained to provide evidence of conformance to defined acceptance criteria.

All measuring and test equipment used for product process control shall be clearly identified and recorded. It shall be checked and calibrated periodically according to the procedure documented in Codes of Practice. Measurement equipment shall be traceable to international or national standards of known accuracy. Where no such standard exists, reference will be made to specially developed criteria.

A schedule shall be maintained to ensure measurement equipment is maintained to the accuracy required. Equipment shall be used in a manner which ensures that limits of accuracy are known and that they are consistent with required measurement capability.

Delivery and Installation

Safe and proper handling methods shall be applied to those materials and products which are susceptible to damage. Such methods shall form part of training programs as appropriate for those personnel concerned.

The stocking of materials and products will be accomplished in a secured stockroom location as far as practical, stock rotation shall be on a "First In/First Out" basis. If not already indicated, materials with a shelf life shall be date stamped, or equivalent, on receipt. Stocked shippable goods shall be maintained at the latest revision levels as determined by Engineering Change Orders.

Packaging shall preserve quality in transit. Special packaging requirements shall be specified in the Sales Order detail. Specification/guidelines for packaging shall be available in the shipping department and personnel will be trained in proper methods and application.

Details of packaging instructions shall be given in the Codes of Practice. Delivery methods of products shall be selected to protect the quality of the product and shall be described in the Code of Practice. Care in handling packaged product shall be practiced.

Spare Parts Provision

All spare part orders are inclusive and not held separate from the Quality Assurance System of CMMS Dynamic Monitoring Analysis and Control. All Procedures apply.

Records and Reports

Where agreed contractually records will be made available for evaluation by the customer. Quality records provide objective evidence that the prescribed quality system is being adhered to and that the required quality system is being achieved. Quality records shall be identified in procedures together with those responsible for maintaining them in good, current order. Also specified shall be periods of retention for each record prescribed in the quality system.

Records of test and inspection shall be retained for five years or as agreed contractually.

Records typically shall contain:

- ▶ Job Identification
- ▶ Model
- ▶ Quantity
- ▶ Description
- ▶ Part Identification
- ▶ Revision Status
- ▶ Pertinent Dates
- ▶ Operational Sequence
- ▶ Signature approval/Stamp
- ▶ Remarks

Stamps

Stamps shall be issued to all CMMS employees involved in Quality Assurance assembly, burn-in, test, calibration, and inspection of CMMS products and/or materials. The types of stamps issued shall be determined by the position and/or job description of a given employee. Control of stamps is maintained with a stamp control log.

Source Inspection

If the contract so states, the Customer may request to inspect or accept products at CMMS facility. This must be stated in the purchase order and agreed to by CMMS at time of order acceptance.

Large contracts' terms may allow for inspections at no charge. Inspections are for completed products only.

CMMS will notify the Customer in writing ten (10) working days prior to the on-site visit. Customer must be specific as to what products they will inspect, the type of inspection required (visual or functional), and whom they wish to meet with at time of inspection.

Per contractual agreement CMMS will supply Customer with all non-proprietary prints/drawings and information pertaining to the specified product. All travel and expenses are paid by the Customer unless otherwise negotiated. Any office space requirements will be supplied at the convenience of CMMS who will make every effort to accommodate purchaser or his agents within reason. Any test reports required beyond standard CMMS forms will be supplied on a case by case rate to be determined by CMMS.

CMMS cannot authorize purchaser access to any of its suppliers nor will we provide copies of or access to purchasing information.

Quality Audit

Compliance to the Quality System of CMMS is ensured by first party and second party audits of the CMMS Quality System. Quality Audits specific to a Customer Order shall be defined by a contractual agreement.

Special Considerations

None.