

CONTRACT CONDITIONS, TECHNICAL, STANDARD FOR

SUBTITLE : PART 6: MAINTENANCE PROGRAMMES

SUMMARY : ARMSCOR'S TECHNICAL CONTRACT REQUIREMENTS FOR MANAGEMENT OF ENGINEERING EFFORT AND OTHER TECHNICAL WORK DURING MAINTENANCE.

KEY WORDS : TECHNICAL CONTRACT CONDITIONS, ENGINEERING EFFORT, PRODUCT SYSTEMS, MAINTENANCE

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1 SCOPE

1.1 PURPOSE

A-STD-61 formulates different sets of technical contract conditions from which Armscor's requirements for the management of the technical effort during the execution of a contract or order should be selected.

1.2 APPLICATION

These sets of requirements must be tailored to suit the acquisition / procurement of specific product systems, products, product sub-systems and components for the specific ORDER.

When these requirements are applied to an ORDER between the Prime CONTRACTOR and a Sub-contractor, the Prime CONTRACTOR may, at his discretion or as specified by Armscor, impose tailored requirements based on these requirements.

2 REFERENCE DOCUMENTS

MIL-STD-756	Reliability Modelling and Prediction
MIL-STD-1543	Reliability Program Requirements for Space and Launched Vehicles
RSA-MIL-STD-3	Acquisition Baseline, Standards for
RSA-MIL-STD-8	Minimum requirements for Software Development
RSA-MIL-STD-10	Manuals, Technical : General Style and Format Requirements
RSA-MIL-STD-122	Documentation, User System, General Requirements for (SA Army)
RSA-MIL-STD-128	Training, User System, General Requirements for (SA Army)

3 DEFINITIONS

3.1 ARMSCOR'S PROGRAMME MANAGER

The person, or his delegated representative, designated by ARMSCOR to assume the programme management responsibility for user and CONTRACTOR interfaces.

3.2 CERTIFICATION

Legal recognition by the certification authority that a product, service, organisation or person complies with the requirements. Such certification comprises the activity of technically checking the product, service, organization or person and the formal recognition of compliance with the applicable requirements by issue of a certificate,



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license, approval or other documents as required.

3.3 CERTIFICATION FOR SAFETY OF FLIGHT

The definition in §3.2 applies.

In addition certification of a product for safety of flight involves:

- i. The process of assessing the design of a product to ensure that it complies with a set of standards applicable to that type of product so as to demonstrate an acceptable level of safety;
- ii. The process of assessing an individual product to ensure that it conforms with the certified type design; and
- iii. The issuance of a certificate required by national laws to declare that compliance or conformity has been found with standards in accordance with items (i) or (ii) above.

3.4 CONCEPT PHASE

The period during which comprehensive system studies and experimental hardware efforts are accomplished. Activities that are included are:

- Feasibility assessment;
- Logistic support estimate;
- Trade-off studies; and
- Cost-effectiveness and utility studies.

The product of this phase is normally the Functional Baseline.

3.5 CONTRACTOR

The party with whom the order has been placed by ARMSCOR, and includes the CONTRACTOR's successors, legal representatives and permitted assignees.

3.6 CONTRACT BASELINE

A document or set of documents formally designated and fixed at a specific time during a configuration item's (CI's) life cycle forming the basis for contracting and control. Baselines, plus approved changes to those baselines, constitute the current basis for control.

RSA-MIL-STD-3 identifies and defines the following six baselines:

- Statement of Requirements Baseline (SRBL);
- Functional Baseline (FBL);
- Allocated Baseline (ABL);
- Product Baseline (PBL);
- Manufacturing Baseline (MBL); and
- Operational Support Baseline (OSBL).



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3.7 DEFINITION PHASE

The objective of the Definition Phase is to identify and analyse major system alternatives, examine risky sub-systems and determine whether to proceed with development. The product of this phase is normally the Allocated Baseline.

3.8 DEVELOPMENT PHASE

The purpose of the Development Phase is to provide the design documentation necessary for production and the integrated logistic support documentation necessary to fully support the system. This is done by completing detailed design and demonstrating that reliability, producibility, supportability and performance requirements have been met. The product of this phase is normally the Product Baseline.

3.9 PRODUCTION PHASE

The primary objective of the Production Phase is to produce and deliver an effective, fully supported system at an optimal cost within the timescales.

3.10 QUALIFICATION

The process of objectively demonstrating whether an entity is capable of fulfilling specified requirements.

3.11 QUALITY RECORD

A quality record provides objective evidence of the extent of the fulfilment of the requirements for quality or the effectiveness of the operation of a quality system element. The following are examples of quality records:

- Test data;
- Qualification reports;
- Calibration data; and
- Inspection reports.

3.12 SEGMENT PLAN

A Segment Plan is an engineering management plan which covers all the phases in the acquisition process of a specific sub-programme.

Such a plan, agreed upon between the contracting parties, constitutes a memorandum of agreement between the parties and cover aspects such as:

- Major acquisition milestones and schedules;
- Key milestone schedule;
- Interface milestone schedule;
- High level Work Breakdown Structure (WBS);
- High level Contract WBS (CWBS);
- Deliverables;



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- Client-furnished equipment (CFE);
- Mandates, policies, values;
- Technical conditions;
- Resource requirements and cash flow;
- Contract phasing; and
- Security.

3.13 USER

The delegated representative of the end user of the system(s)/equipment.

3.14 VALIDATION

Confirmation by examination and provision of objective evidence that the particular requirements for a specific intended use are fulfilled.

3.15 VALUE SYSTEM

A collection of elements, including goals, limitations, evaluation factors and criteria for decision-making, which provides a basis for rational decision-making.

3.16 VERIFICATION

Confirmation by examination and provision of objective evidence that specified requirements have been fulfilled.

4 GENERAL REQUIREMENTS

4.1 DOCUMENT BREAKDOWN

Part 1 : Contract Conditions, Technical, Standard for Highly complex programmes

Part 2 : Contract Conditions, Technical, Standard for Medium complex programmes

Part 3 : Contract Conditions, Technical, Standard for Non-complex programmes

Part 4 : Contract Conditions, Technical, Standard for Production programmes

Part 5 : Contract Conditions, Technical, Standard for Commercial Off-the-shelf (COTS) procurement

Part 6 : Contract Conditions, Technical, Standard for Maintenance programmes

Part 7: Contract Conditions, Technical, Standard for Refining an Operating Baseline for Existing Systems.

4.2 SELECTION GUIDELINES

When these requirements are used for contracting, the following selection guidelines should be considered in order to select the most applicable contracting base (Parts 1 to 7) for compiling specific CONTRACT conditions (see Parts 1 to 7):



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4.2.1 Part 1 should be used when:

- The programme's technical complexity is high, i.e. many complex interfaces, multi-discipline, unknown/untried technologies, etc;
- Technical and financial risks are medium to high;
- System complexity and/or system CONTRACTOR maturity requires a well-structured engineering process and detailed Armscor management;
- System level 5 or higher is involved.

4.2.2 Part 2 should be used when:

- The programme's technical complexity is high, i.e. many complex interfaces, multi-discipline, unknown/untried technologies, etc;
 - Technical and financial risks are medium to high;
 - System level 5 or higher is involved;
 - Management of the system engineering process is delegated to the CONTRACTOR because his maturity does not require in-depth Armscor management;
- OR
- The technical complexity is medium;
 - Technical and financial risks are low to medium;
 - System level 5 or lower is involved;
 - The system complexity does not require in-depth Armscor management.

4.2.3 Part 3 should be used when:

- The technical complexity and risks are low, i.e. single-discipline, known technologies, simple or well-defined interfaces;
- There are well-defined and developed components for complex items;
- The system engineering process requires minimal Armscor involvement.

4.2.4 Part 4 should be used when:

- The scope of the ORDER is limited to production.

4.2.5 Part 5 should be used when:

- The scope of the ORDER is limited to procurement of commercial off-the-shelf items (COTS).

4.2.6 Part 6 should be used when:

- The scope of the ORDER is limited to maintenance.



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4.2.7 Part 7 should be used when:

- The scope of the order is limited to the refining of an Operating Baseline for existing systems.

4.3 TAILORING

Since it is seldom possible to apply such a detailed set of conditions as is, tailoring normally becomes necessary. To assist with tailoring the separate parts of A-STD-61 are available in electronic format.

The basic procedure for tailoring these sets of requirements is as follows:

- i. Select the part (i.e. Parts 1 to 7) of these sets of requirements that is most applicable to the programme and use it as a basis for tailoring.
- ii. Select those individual requirements that need to be upgraded/downgraded and replace them with the relevant requirements from the remaining parts (without change).
- iii. Update general or unique specifications, reporting frequencies and/or people responsible, if required (example : MIL-STD-756 for general components or MIL-STD-1543 for space systems, changing from monthly to two-monthly; replacing programme manager with quality assurance representative, etc.).
- iv. Update those requirements which need to be adapted for use in the specific CONTRACT.
- v. Add special requirements which are not included in the standard set of requirements.

5 DETAILED REQUIREMENTS

See Appendix 1 of Parts 1 to 7 for the detailed sets of standard CONTRACT conditions.

6 NOTES

- 6.1 Documents applicable only to certain Arms of the Service e.g. RSA-MIL-STD-122 and RSA-MIL-STD-128 for the SA Army or RSA-MIL-STD-10 for the SA Air Force, are not referred to in parts 1 to 7 of the standard contract conditions.
- 6.2 **MINIMUM REQUIREMENTS FOR SOFTWARE DEVELOPMENT**
When tailoring contractual requirements for software development, minimum requirements as described in RSA-MIL-STD-8 must be adhered to.
- 6.3 Guidelines for tailoring of A-STD-61 for technology development are provided in the form of Annexures to Part 1, Part 2 and Part 3. Programme managers must select the part most relevant for the specific technology programme.



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- 6.4 When a CONTRACTOR subcontracts, using the technical contract conditions of A-STD-61, the name ARMSCOR must be replaced by the CONTRACTOR's own name.

**APPENDIX 1:
CONTRACT CONDITIONS, TECHNICAL
MAINTENANCE PROGRAMMES
(Superseding ACSA/E12)**



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1 GENERAL

1.1 APPLICABILITY OF DOCUMENTS

This document forms ARMSCOR's standard for technical contract conditions.

Where any of these conditions are in conflict with any special terms, conditions, stipulations or provisions incorporated in any documents in the CONTRACT, the following order of precedence of documentation shall prevail:

- i. Special terms and conditions of the CONTRACT;
- ii. ARMSCOR's general conditions of CONTRACT (e.g. A-STD-0020);
- iii. ARMSCOR's standard technical contract conditions;
- iv. RSA Military standards and directives;
- v. DOD Military standards and directives;
- vi. Other interpretive documents.

1.2 DOCUMENTS

The following documents, of the issue in effect on the date of request for proposal or as stated in the CONTRACT, form part of these conditions of the CONTRACT to the following extent:

1.2.1 Applicable Documents

Conformance required to the extend stipulated in the CONTRACT.

ISO 9002	Quality Systems Model for Quality Assurance in Production, Installation and Servicing
MIL-STD-498	Software Development and Documentation.
MIL-STD-973	Configuration Management
RSA-MIL-STD-176	Configuration Management Forms
K217	Modification Proposal.
K218	Component Change Proposal
K225	Inspection / Release / Acceptance Certificate.
K226	Inspection Rejection Note.
K227	Concession (Waiver).
K228	Deviation Permit.
K229	Corrective Action Request / Advise Note

1.2.2 Reference Documents

To be used as guidelines only - refer to Annexure A.



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1.3 DEFINITIONS

The definitions in paragraph 3 of the main part of A-STD-61 are applicable. For additional definitions refer to Annexure B.

1.4 GENERAL NOTES

- 1.4.1 Where practical, different deliverable documents may be consolidated into one document for cost-effectiveness reasons. This note does not allow for any changes to contractual requirements with regard to content or authorisation.
- 1.4.2 The CONTRACTOR can obtain contracted technical documentation from ARMSCOR where copyright is vested in ARMSCOR.
- 1.4.3 In subcontracting, the CONTRACTOR shall make the relevant technical contract conditions applicable. (Refer to paragraph 6.4 in the main part of A-STD-61.)

2 GENERAL RIGHTS OF ARMSCOR

If required, the CONTRACTOR shall provide, free-of-charge, to the Quality Assurance Representative (QAR) and each member of his staff:

- Suitable partitioned office accommodation;
- Secure documentation storage facilities; and
- Equipment which is necessary for the QAR's acceptance / formal testing and evaluation.

If required by ARMSCOR, the sub-contractor shall provide the same facilities as specified above or as agreed upon during the pre-contract conference.

During the execution of the maintenance CONTRACT, the CONTRACTOR shall supply the Programme Manager, and if requested, the QAR, with monthly summary reports. These reports shall contain at least:

- CONTRACT status and forecast;
- Work in progress;
- The cost breakdowns of maintenance work done;
- Average hours spent per maintenance task; and
- Spares used and failure statistics.

3 REQUIREMENTS FOR MAINTENANCE CONTROL

3.1 MAINTENANCE PLAN

The CONTRACTOR shall draw up a comprehensive plan for the maintenance services he is to render. This plan shall be subject to the approval of the Programme Manager at the CONTRACT proposal stage.



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Once the Maintenance Plan has been approved, any alterations to it shall be subject to approval by the Programme Manager.

The CONTRACTOR shall be responsible for its implementation and shall ensure that the necessary equipment, manpower and management systems are available and operating effectively.

3.2 MAINTENANCE CONTROL

The CONTRACTOR shall have a management system for the execution and control of all phases of the maintenance task.

The minimum requirements are as follows:

3.2.1 Equipment Control

The CONTRACTOR shall have procedures for the receiving and delivering of equipment and the transfer of responsibility. These procedures shall incorporate the use of specific receipts and vouchers mandated by ARMSCOR.

The procedures shall include the identification of equipment, recording its condition (including any abnormalities or damage) and any specific maintenance tasks. This information shall preferably be entered directly onto job cards or equipment control forms.

3.2.2 Task Control

The CONTRACTOR shall have procedures for scheduling and control of all maintenance tasks.

The job card or equipment control form shall be the instrument for the recording of information on all maintenance tasks. It shall consequently be the key control document in the maintenance process.

In addition to receiving and delivery information, these documents shall contain at least the following:

- Equipment description;
- CONTRACT number;
- The work performed on the equipment;
- The fault/s or failure/s found;
- The time taken to complete the maintenance task/s;
- Calibration time;
- The spares and materials utilised;
- The dates of:
 - Receipt of equipment;
 - Completion of task/s; and
 - Despatch of equipment to the user's representative.
- Beyond economic repair information. Supporting documentation substantiating the



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costs and defining the category of work, eg guarantee, maintenance or modification, shall be attached to the job card or control form; and

- Failures, faults not repaired.

3.2.3 Materials Control

The CONTRACTOR shall have control systems and procedures for:

- The sourcing of spares and materials;
- Vendor qualification; and
- Stock control.

These systems shall be visible and accessible to the QAR for auditing.

3.2.4 Beyond Economic Repair (BER)

The CONTRACTOR shall have procedures, approved by ARMSCOR / Technical Committee, for the determination of the BER condition of equipment, and the reporting on and disposal of BER items based on the User's requirements.

The BER level is usually signalled when the corrective maintenance/repair cost on an item exceeds 60% of its replacement value unless otherwise requested by ARMSCOR.

3.3 LOG BOOKS AND HISTORY RECORDS

3.3.1 Log Books

Where equipment is accompanied by log books which include maintenance records, these records shall be scrupulously updated.

3.3.2 History Records

History records shall be kept for preventive and corrective maintenance tasks. Where history records are available from the User, it shall be updated and maintained on all tasks and equipment.

If the log book makes provision for the entry of such information, it shall be recorded in the log book.

The history record shall include at least:

- Unique item identification;
- Job card reference;
- Dates of:
 - Failure (when applicable);
 - Completion of maintenance task/s;
 - Handover (receiving and return); and
- Description of tasks which shall indicate whether it was guarantee, preventive or corrective maintenance/repair or modification work.



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3.4 SPECIFICATIONS AND OTHER TECHNICAL DOCUMENTATION

The CONTRACTOR shall build up and maintain a library of all specifications and other technical documents required for the execution of the CONTRACT.

3.5 STANDARDS AND TEST PROCEDURES

The CONTRACTOR shall propose and apply at least the following standards and procedures:

- Test procedures and standards to be applied to equipment during the maintenance process; and
- Performance standards which the equipment must be returned to by the maintenance process.

3.6 MAINTENANCE OF COMPUTER SOFTWARE

The CONTRACTOR shall maintain and make upgrades to software following the normal software development life cycle as described in MIL-STD-498, consisting of:

- System Requirements Analysis;
- System Design;
- Software Requirements Analysis;
- Software Design;
- Coding and Unit Testing;
- Unit Integration and CSCI Testing; and
- CSCI/HWCI Integration and Testing.

The CONTRACTOR shall be responsible to update all applicable, effected documents. Should these not exist, the CONTRACTOR shall document the impact of the changes made (or red-lines) in a Software Development File (SDF).

The CONTRACTOR shall conduct reviews on the requirements and design to determine the completeness and integrity thereof. The CONTRACTOR shall perform a Test Readiness Review before CSCI testing to ensure that all relevant issues have been addressed.

The CONTRACTOR shall conduct acceptance testing according to an approved Acceptance Test Procedure. The CONTRACTOR shall generate a test report which must be included or referred to in the SDF. ARMSCOR shall approve the format of the test report beforehand. The CONTRACTOR shall present the test results to ARMSCOR for acceptance.

The CONTRACTOR shall maintain SDF's as described in MIL-STD-498, which shall be under formal configuration management.

3.7 EQUIPMENT IMPROVEMENT FEEDBACK

Where it is feasible, the CONTRACTOR shall utilise the data recorded during maintenance to identify weaknesses in the equipment design to serve as an input for equipment improvement programmes.



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4 CONFIGURATION MANAGEMENT

4.1 GENERAL

The CONTRACTOR shall be able to demonstrate prior to placement of CONTRACT an integrated configuration management system conforming to MIL-STD-973 and RSA-MIL-STD-176, tailored to satisfy the requirements of the CONTRACT.

ARMSCOR shall have the right to carry out periodic audits of the CONTRACTOR's configuration management system, including build state audits and independent Physical and Functional Configuration Audits.

4.2 CONFIGURATION CONTROL FOR MAINTENANCE CONTRACTS

The CONTRACTOR's configuration management system shall provide for procedures which will ensure that the latest applicable drawings, specifications and instructions, as well as authorized changes thereto, are used for maintenance, inspection and testing.

The equipment shall be maintained (preventive or corrective / repair) to an operational condition as specified in the CONTRACT.

Only those parts specified in approved parts lists shall be used as spare parts during maintenance.

If the maintenance is performed on a system which has a build state document and a build history document, these documents shall be fully updated.

There shall be no variation from any specification, drawing or laid down process, treatment or procedure as set out in the CONTRACT and/or embodied in the approved prototype unless approved by ARMSCOR.

Should any variation be necessary, the following procedure shall be adhered to:

4.2.1 Engineering Changes

If, on any equipment, re-design must be effected due to a component becoming unobtainable, the modification proposal (form K217) shall be backed up with sufficient evaluation data which shows that the performance and reliability of the equipment will not be adversely affected by the change.

The CONTRACTOR shall classify Engineering Change Proposals (ECP's) into class I or class II in accordance with MIL-STD-973.

The CONTRACTOR shall submit, with sufficient supporting documentation, to ARMSCOR, on form K217, or an agreed upon alternative, class I engineering change proposals for consideration and decision-making and class II changes for concurrence of classification.

When the change is approved, the CONTRACTOR shall be responsible for updating the official parts list and forwarding it to ARMSCOR for logistic purposes.



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4.2.2 Deviations

The CONTRACTOR shall classify all deviations as critical, major or minor, in accordance with MIL-STD-973.

The CONTRACTOR shall submit to ARMSCOR, on form K228, or an agreed upon alternative, critical, major or minor deviations for consideration and decision-making, unless otherwise delegated.

4.2.3 Concessions (Waivers)

The CONTRACTOR shall classify all concessions (waivers) as critical, major or minor, in accordance with MIL-STD-973.

The CONTRACTOR shall submit to ARMSCOR, on form K227, or an agreed upon alternative, critical, major or minor classified concessions (waivers) for consideration and decision-making, unless otherwise delegated.

5 QUALITY MANAGEMENT

5.1 CONTRACTOR'S QUALITY MANAGEMENT SYSTEM

The CONTRACTOR shall maintain a Quality Management System and demonstrate its conformance to ISO 9002 before commencement of the CONTRACT.

ARMSCOR's representative shall have the right to perform audits and assessments on the CONTRACTOR's maintenance and quality management systems. The CONTRACTOR shall render all material assistance to enable the completion of such audits with a minimum of disruption.

5.2 RIGHT OF ACCESS

ARMSCOR or persons designated by him shall have free access to all relevant sections of the place or places where work to fulfil the requirements of the CONTRACT is performed for the purpose of conducting / witnessing any audits, inspections or tests.

5.3 QUALITY RECORDS

The CONTRACTOR shall provide and maintain a quality record system for the recording, organising and reporting on maintenance information obtained from:

- Job cards;
- History records; and
- Stock control records.

The management information outputs condensed from this information shall include at least:

- Mean repair items;
- Turn-around items;
- Failure statistics (in cases where sensible quantities of the same equipment are



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maintained);

- Repair cost breakdowns; and
- Material / spares consumption analysis.

Quality records shall be maintained to demonstrate conformance to specified requirements and the effective operation of the quality system. Pertinent quality records of sub-contractors shall be an element of this data.

The CONTRACTOR shall maintain adequate records of all inspections and tests for the duration of the CONTRACT or any such period as contractually required.

5.3.1 Inspection and Testing Documentation

Inspection and testing shall be performed in accordance with unambiguous, complete and current instructions.

Final acceptance tests shall be as described in the CONTRACT or contracted documents. Criteria for approval and rejection of supplies will be specified in the CONTRACT or contracted documents.

5.4 QUALITY PLAN

The CONTRACTOR shall have a Quality Plan which shall address the following maintenance aspects:

- The flow diagram of the repair sequence for each product;
- The work instructions required to perform the tasks;
- The required test and inspection record sheets, as well as receipt and despatch control documents;
- The control of documents, technical handbooks and spares lists including the updating of the revision status when necessary;
- The control of calibration and repair test equipment and gauges;
- The control of parts, spares and documentation during purchasing, inspection and storage;
- The testing and inspection of maintained equipment;
- The indication of inspection status;
- The packaging and preservation of maintained equipment including handling, storage and transportation;
- The training of personnel and especially repair personnel;
- The acceptance test procedures; and
- The updating of modification strike labels.

The CONTRACTOR shall ensure that his sub-contractors and/or outside test houses operate under conditions of control, suitable to meet the requirements of the CONTRACT.



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5.5 CORRECTIVE AND PREVENTIVE ACTION SYSTEM

The CONTRACTOR shall provide and maintain a corrective and preventive action system.

ARMSCOR shall have the right to request corrective action on any process, system or control, which if not corrected, could cause defects or non-conformance of the equipment. Such requests shall be by means of a written Corrective Action Request / Advice Note (form K229).

The CONTRACTOR shall take prompt action to correct conditions which have resulted or could result in the submission to ARMSCOR of equipment and services which do not conform to the requirements of the CONTRACT.

5.6 QUARANTINE SYSTEM

The CONTRACTOR shall provide and maintain a quarantine system.

Any MATERIEL or maintained item which is found to deviate from the specified requirements, shall be marked or labelled and placed in quarantine until a decision to use as is, rework or scrap has been made.

Items placed in quarantine, shall only be released for use when a concession (waiver) has been authorized in terms of the CONTRACT.

Items for which application for a concession (waiver) has been refused, shall be released from quarantine for disposal or rework purposes only.

5.7 CONTROL OF INSPECTION, MEASURING AND TEST EQUIPMENT

The adequacy of inspection, measuring and test equipment used by the CONTRACTOR to demonstrate conformance to the specified requirements, shall be ensured and demonstrated. Inspection, measuring and test equipment shall be calibrated and used in a manner which ensures that the measurement uncertainty is known and is consistent with the required measurement capability. Traceability to national calibration standards shall be maintained and on request, be demonstrated.

As a minimum, the CONTRACTOR shall maintain throughout the CONTRACT a set of reference instruments for checking and calibrating all measuring and test equipment as applicable and:

- All instruments shall be calibrated against in-house reference instruments at least at six (6) monthly intervals (Depending on the circumstances, the QAR may require certain instruments to be checked at shorter intervals);
- Calibration dates shall appear on all instruments. No instrument shall be used after its calibration validity has expired; and
- The inspection organisation shall take steps as approved by the QAR, for the checking and calibration of reference instruments. Results of these tests shall be made available to the QAR on request.



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6 ACCEPTANCE AND RELEASE

6.1 ACCEPTANCE / FORMAL TEST AND EVALUATION

Acceptance / Formal test and Evaluation shall be undertaken at a venue agreed upon with ARMSCOR's programme manager. The CONTRACTOR shall notify ARMSCOR of such acceptance / formal test and evaluation dates at least five (5) working days or such periods agreed prior to the date of such acceptance / formal test and/or evaluation.

The CONTRACTOR shall submit acceptance standards and procedures to ARMSCOR's programme manager for approval, prior to CONTRACT placement. Before submitting an item or a batch of items to the QAR, the CONTRACTOR shall have complied with the requirements of the CONTRACT and the following:

- i. Each and every item shall have passed a complete specification test;
- ii. If part of a larger system, the subsystem;
 - shall have successfully passed its relevant ATP; and
 - shall have operated, successfully in the system.
- iii. The job card complete with labour and maintenance hours, spares used and if applicable, calibration hours shall be presented to the QAR; and
- iv. The test results of the complete specification test shall also be available for QAR scrutiny.

The QAR shall have the right to request the CONTRACTOR to repeat selected tests on all or selected items and perform such additional tests by himself as are deemed necessary to satisfy himself of the status of the item(s).

6.2 ACCEPTANCE

The CONTRACTOR shall ensure that all services or repaired equipment offered to ARMSCOR for release and payment, conform to the requirements of the CONTRACT. The CONTRACTOR shall demonstrate this to ARMSCOR or his delegated representative by means of objective evidence, documentation and/or demonstration.

MATERIEL shall be accepted by ARMSCOR's programme manager or his representative by means of an Inspection Release Certificate (form K225) or an agreed upon alternative, once the following conditions have been met:

- Certificate of Conformance / Analysis has been issued, providing objective evidence that the MATERIEL conforms to the requirements of the CONTRACT and has been controlled in terms of the quality and maintenance plans. The certificates shall be issued and signed by an authorized representative of the CONTRACTOR, and shall include all concessions (waivers) and deviations from the CONTRACT; and
- ARMSCOR's programme manager or his representative has satisfied himself that the MATERIEL conforms to the CONTRACT.

In the case of equipment which has undergone maintenance, being defective in material, workmanship or performance, ARMSCOR shall have the right to reject this equipment and to require its correction, free-of-charge.



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MATERIEL which is found not to conform to specified requirements shall be rejected by means of an Inspection Rejection Note (form K226). The reasons for rejection and the requirements necessary for re-submission will be stated on the Inspection Rejection Note.

If the CONTRACTOR persists in submitting defective equipment to the QAR for acceptance or neglects to perform preventive maintenance tasks to the requirements of the CONTRACT, ARMSCOR shall have the right to:

- Refuse to scrutinise equipment submitted until the defect(s) and cause(s) of the defective maintenance have been identified and corrective action which shall prevent future non-conformance has been taken; and/or
- Terminate the CONTRACT for default.

The payment and/or release of the equipment by ARMSCOR shall not relieve the CONTRACTOR of his responsibility for any service, part, material or workmanship, rendered and/or replaced during maintenance.

6.3 DISPUTES AND ARBITRATION

Disputes relating to quality matters or related contractual requirements, which cannot be resolved between the QAR and the CONTRACTOR, shall be referred to the Programme Manager and ARMSCOR's Quality Manager, for arbitration.



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ANNEXURE A: REFERENCES

A-STD-0020

Armcor's General Conditions of Contract



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ANNEXURE B: ADDITIONAL DEFINITIONS

1. ACCEPTANCE TEST PROCEDURE (ATP)

The ATP is that procedure or plan which details the method(s) the CONTRACTOR must employ to demonstrate that the item, product or system conforms to the User requirement and/or the contractual specification.

2. BEYOND ECONOMICAL REPAIR (BER)

Describes the situation where corrected maintenance/repair to an item is considered to be too expensive with respect to the value of such equipment.

3. CERTIFICATE OF CONFORMANCE

A CONTRACTOR's written statement, certifying that the product or services comply with CONTRACT requirements.

4. CONCESSION (WAIVER)

A written authorization (on form K227) to accept an item or certain items which during manufacture / maintenance or after having been submitted for inspection, is found to depart from specified requirements but nevertheless is considered suitable for use.

5. CONFIGURATION CONTROL

Configuration Control involves the systematic evaluation, coordination and approval or rejection of proposed variations to a configuration item and its associated documentation.

6. CORRECTIVE ACTION REQUEST / ADVISE NOTE (form K229)

This is a form identifying and highlighting a non-conformance which requires corrective action within a given period.

7. DEVIATION

A written authorization (on form K228), granted prior to manufacture / maintenance of an item to depart from a particular performance or design requirement of an CONTRACT, specification or reference document, for a specified number of units or specified period of time.

8. INSPECTION

The examination and testing of supplies and services including raw materials, components, intermediate assemblies, test equipment, gauges, software and documentation to determine whether these conform to specified requirements.

9. INSPECTION REJECTION NOTE (form K226)

An Inspection Rejection Note is a form completed by an authorised ARMSCOR's representative rejecting the item, product, system or service and cancelling the Certificate of Conformance.



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10. INSPECTION RELEASE CERTIFICATE (form K225)

A form issued by the QAR certifying that contractual items and/or services conform to the technical and quality requirements of a CONTRACT, and authorising despatch or delivery.

11. MAINTENANCE

All actions necessary for retaining an item in or restoring it to a specified condition (preventive and corrective).

- Preventive Maintenance: All actions performed in an attempt to retain an item in specified conditions by providing systematic inspection, detection, and prevention of incipient failures.
- Corrective Maintenance / Repair: All actions performed as a result of failure, to restore an item to a specified condition. Corrective maintenance can include any or all of the following steps: localization, isolation, disassembly, interchange, re-assembly, alignment and checkout.

12. MODIFICATION

A modification is a design change to an item which necessitates a specification and/or drawing change and affects User logistics. The item identification number may or may not be changed as a result of the modification.

13. NON-CONFORMANCE

Product performance, material, components, workmanship, manufacturing process and quality systems which are not according to contractual requirements and agreed instructions, procedures and standards, are classified as non-conformances.

14. PROGRAMME MANAGER

The person designated by ARMSCOR to accept overall project responsibility on his behalf.

15. QUALITY ASSURANCE REPRESENTATIVE (QAR)

QAR shall mean any official appointed by ARMSCOR to act on its behalf for a specific CONTRACT in all matters pertaining to conformance to the CONTRACT.

16. SURVEILLANCE

Surveillance is the inspections, tests and assessments of the CONTRACTOR's and his sub-contractors control of the configuration, tests, inspections, processes and quality systems which are required to effectively fulfill the requirements of the CONTRACT.

17. TECHNICAL COMMITTEE

A body constituted by ARMSCOR, during the contract negotiation stage or as soon as possible thereafter to advise him on all technical aspects of the programme. The committee shall normally be constituted as follows:

- The programme manager;



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- The quality assurance representative of ARMSCOR:
- The user representative/s; and
- The CONTRACTOR's representative.



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APPENDIX 2: ABBREVIATIONS

ABL	Allocated Baseline
ATP	Acceptance Test Procedure
BER	Beyond Economic Repair
CCB	Configuration Control Board
CFE	Client-furnished equipment
CI	Configuration Item
COC	Certificate of Conformance
COTS	Commercial Off-the-shelf
CSCI	Computer Software Configuration Item
CWBS	High level Contract WBS
ECP	Engineering Change Proposals
ESS	Environmental Stress Screening
FBL	Functional Baseline
HWCI	Hardware Configuration Item
MBL	Manufacturing Baseline
MRB	Material Review Board
OSBL	Operational Support Baseline
PBL	Product Baseline
QAR	Quality Assurance Representative
SDF	Software Development File
SRBL	Statement of Requirements Baseline
WBS	Work Breakdown Structure