



**Aarti Industries Ltd
Quality Requirement From
Contractors
(Annexure to GCC)**

Doc No :
AIL/QMS/SOP/03
Rev : R0



Quality Requirements from Contractors

Annexure to GCC

Rev	Prepared by	Validated by	Authorized by	Effective Date
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1. GENERAL

1.1 This document describes COMPANY's minimum requirements for CONTRACTOR's Quality Management System as set forth in Paragraph 2.

1.2 The term "COMPANY" shall mean Aarti Industries Ltd. CONTRACTOR shall mean the organisation with whom contract agreement has been signed by the COMPANY for providing services as per scope of work.

1.3 CONTRACTOR shall be totally responsible for the quality of WORK required by the Contract document between the company and the contractor.

1.4 CONTRACTOR shall inspect, test and accept all parts of the WORK as defined in Contract work order, including its subcontractors' work, in conformance with all drawings, specifications and standards applicable to the WORK.

1.5 COMPANY shall be entitled to have the Company Representative or their nominee present at all locations where CONTRACTOR or its subcontractors and suppliers are engaged in the performance of the WORK, at any and all times, to review all aspects of CONTRACTOR's Quality activities and to witness whatever inspection and testing is required by this Contract. COMPANY retains the right to conduct whatever additional tests or inspections it deems necessary to assure that the materials and personnel performing the activities meet the requirements of the Contract. CONTRACTOR shall not refuse access to technical or other data which CONTRACTOR considers proprietary or confidential, but is reasonably required to inspect CONTRACTOR's performance of the WORK.

1.6 COMPANY will complete its review of CONTRACTOR's Quality documents (Quality Plan and Inspection & Test Plans) and personnel qualifications submitted to the company. Following its initial review, COMPANY will approve or provisionally approve the submitted document or personnel qualification, or it will reject the document with comments.

1.7 For any inspection or any test required to be witnessed by COMPANY standards, applicable specifications, ITPs etc., CONTRACTOR shall provide notice of the said inspection or test as specified in the approved Inspection and Test Plans (ITPs) to enable the Company Representative to attend. If any part of the WORK or the FACILITIES is closed or covered before the required inspection or witnessing has been performed or



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without agreement by COMPANY, it must, if required by COMPANY, be opened or uncovered for inspection or witnessing and re-closed or re-covered at CONTRACTOR's expense.

1.8 If any inspection or test directed or performed by COMPANY, or by another party at the direction of COMPANY, reveals any defect in CONTRACTOR-supplied materials or in the WORK, CONTRACTOR shall promptly correct such defect at CONTRACTOR's expense to meet the company specification requirements and no significant delays in work execution. If material is rejected and beyond rectification, Contractor shall bear the cost of such materials, inspection and testing.

2. QUALITY MANAGEMENT SYSTEM REQUIREMENTS

CONTRACTOR shall implement for this Contract a Quality Management System in accordance with the latest version of ISO 9001 (*Quality Management Systems-Requirements*).

3. DOCUMENTATION REQUIREMENTS

3.1 CONTRACTOR shall plan, organize, control and execute all WORK in accordance with CONTRACTOR's Quality Plan(s), Inspection and Test Plans (ITPs) and documented procedures reviewed and approved by the COMPANY. The Quality Plan(s) shall ensure that quality personnel and processes, including those of subcontractors are effective and that the WORK is completed in strict compliance with all provisions of this Contract and the Scope of Work as per work order.

3.2 CONTRACTOR shall prepare a narrative project specific Quality Plan, Construction Inspection & Test Plans (ITPs) and procedures, covering as applicable, design, procurement, construction and pre-commissioning activities in accordance with the latest version of ISO 10005 (Quality Management Systems - Guidelines for Quality Plans) and submit it to the Company Representative for review and approval no later than twenty one (21) calendar days after the effective date of this Contract.

With approval of the company, CONTRACTOR may adopt any pre-approved Typical Inspection and Test Plan of the company and associated Inspection Checklists in lieu of its own Inspection and Test Plans and Procedures. CONTRACTOR shall customize the company provided Typical ITP and checklist to suit the scope of WORK, with the approval of Company Representative.



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3.3 CONTRACTOR shall not sublet their scope of work. In exceptional cases any subletting of the work shall be done with written approval of the COMPANY. CONTRACTOR shall submit its subcontractors', if any, Inspection and Test Plans for COMPANY review and approval. Pending COMPANY approval of the Inspection and Test Plans, CONTRACTOR shall not permit fabrication to begin on any item required to have ITPs. CONTRACTOR shall be solely responsible for quality of work produced by their subcontractors.

3.4 CONTRACTOR shall modify its Quality Plan(s) and ITPs or company typical ITPs, when applicable, to reflect any significant changes identified by CONTRACTOR or COMPANY. CONTRACTOR's revised Quality Plan(s) or company typical ITPs shall then be resubmitted for COMPANY's approval.

3.5 The latest revision of CONTRACTOR's Quality Manual and applicable Quality Plans and all referenced documentation shall be available for COMPANY's use at the CONTRACTOR's design, procurement, fabrication and installation or construction locations. Reference documents include all those contained in drawings, specifications and procedures for the inspection of equipment and materials to be fabricated or constructed at the applicable site.

3.6 Submission of All Quality Inspection documents to company - Contractor shall submit all quality documents as per agreed schedule during the execution of contract scope of work..

4.MANAGEMENT RESPONSIBILITY

4.1 CONTRACTOR's Senior Management shall review the project specific Quality System annually to ensure that the system is suitable, adequate and effective.

4.2 CONTRACTOR shall advise the Company Representative in writing of the results and recommended actions of such reviews. Changes to the Quality System that result from CONTRACTOR's Senior Management reviews shall be incorporated in the Project

5. RESOURCE MANAGEMENT

5.1 CONTRACTOR shall provide resources to implement the Quality System as set forth in this Contract. For all procurement, construction, and pre- commissioning activities,



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sufficient COMPANY approved Quality personnel identified shall be on-site prior to the start of the applicable WORK.

5.2 CONTRACTOR shall designate the Quality Assurance/Quality Control Manager for this Contract within twenty (21) calendar days of the effective date of this Contract. The Quality Assurance/Quality Control Manager shall be assigned to the WORK through Project Completion..

5.3 Quality personnel of CONTRACTOR, subcontractors and third party agencies, if engaged by the contractor and assigned to the WORK, shall meet the minimum qualification requirements and must be technically competent to perform their duties.

5.4 CONTRACTOR shall verify and provide resumes and all associated certifications in legible format of all CONTRACTOR's and subcontractor's Quality personnel to COMPANY for review and approval prior to the start of work for each individual. COMPANY shall have the right to interview and/or test assigned inspectors. COMPANY has the right to reject proposed candidates if they do not comply with the requirements.

6. Construction Phase Quality Control Activities

CONTRACTOR shall comply with the Construction quality requirements of Quality Plan & ITPs prepared by CONTRACTOR and approved by the COMPANY, applicable technical specifications and approved drawings.

7. Pre-Commissioning Phase Quality Control Activities

7.1 Where applicable, CONTRACTOR shall comply with the Pre-commissioning quality requirements of approved Quality Plan. CONTRACTOR shall assist COMPANY in pre commissioning activities in strict compliance to COMPANY's ITQs.

7.2 Prior to completion of the WORK, CONTRACTOR shall perform the inspections required as per contract to complete pre- commissioning activities and document as well as correct any non- conformances. A copy of the inspection results and status of the correction of non-conformances shall be submitted to the Company Representative each week until the acceptance of the applicable system.

8. MEASUREMENT, ANALYSIS AND IMPROVEMENT

8.1 General

CONTRACTOR shall include as part of his plan for measuring, monitoring, analysis and improvement of his processes, how the plan-do-check-act cycle is driven without end on this project. As a minimum, the plan shall address the interaction of the following:

- Customer satisfaction
- Internal and external audits
- Internal and external Non-conformities
- Repeat violations
- Process performance measures
- Data analysis
- Management reviews
- Preventive action
- Corrective action

All measuring, inspection and testing equipment used for the work shall be duly calibrated and calibration log of such equipment shall be maintained.

8.2 Customer Satisfaction

CONTRACTOR shall determine and evaluate the degree of COMPANY's satisfaction through quarterly evaluation of COMPANY assessments, Non-conformance Reports (NCR) and Inspection Log entries.

8.3 Internal Audits

CONTRACTOR shall conduct internal audits covering Contracts with duration of six months or longer. This shall include audits of the CONTRACTOR's quality function and obligations as described in the COMPANY approved quality plans, this Contract, and quality system in line with ISO 9001. This program shall also include scheduled Quality System audits for all subcontractors with work scheduled to exceed six months in duration. CONTRACTOR shall investigate root causes and initiate corrective actions for



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nonconformities identified in each audit. CONTRACTOR shall verify implementation and closeout of corrective actions prior to the next scheduled audit.

8.4 Audit by Company

COMPANY shall be entitled to have the Company Representative or his nominee(s) to schedule and conduct an audit of the CONTRACTOR's work. The audit schedule will be communicated to the CONTRACTOR at least two weeks prior to the schedule quality audit. Contractor's key personnel shall participate and facilitate the audit conducted by the company.

9. Monitoring and Measuring of Processes

CONTRACTOR shall continuously monitor and measure CONTRACTOR and subcontractor's critical processes throughout the WORK. The quality plan shall include suitable measurement methods to evaluate the ability of the process to achieve planned results. As a minimum, CONTRACTOR shall evaluate the following as appropriate per the Scope of Work:

- Lessons Learned from previous projects
- Concrete operations
- Welding operations
- Coatings
- Hydrostatic & Gravity Testing operations

10. Control of Non-Conformance

10.1 CONTRACTOR shall include in the quality Plans procedures to prevent inadvertent use of design documents, materials, parts, components, services or workmanship not conforming to requirements of the Contract. Quality Plan shall require the identification and documentation of all -nonconformities and corrective actions.

10.2 CONTRACTOR shall ensure control of CONTRACTOR's and subcontractor's supplied materials and fabricated assemblies that do not conform to requirements. Controls to restrict further processing or installation of nonconforming or defective items, pending decisions on disposition shall be established and maintained. When



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practical, CONTRACTOR shall segregate all non-conforming materials and assemblies to a clearly designated rejection site.

10.3 CONTRACTOR as well as their subcontractors shall document all non-conformities to Contract requirements, approved CONTRACTOR quality plan(s), inspection & test plans, specifications and work procedures. CONTRACTOR shall forward to COMPANY records of all recorded non-conformities within forty eight (48) hours of issue.

10.4 CONTRACTOR shall investigate the root cause of non- conformities and initiate Corrective Actions to prevent recurrence of nonconformities maximum seven (7) days of the issue date.

10.5 CONTRACTOR shall maintain a summary of the open non- conformities (NCRs, Discrepancy Reports, COMPANY Logbook entries, etc.) and submit it at the regular project progress meetings.

10.6 CONTRACTOR shall respond to all non-conformities (NCRs, Discrepancy Reports, COMPANY Logbook entries, etc.) issued by COMPANY in writing within 48 hours of receiving notification of non-conformance, including his proposed corrective actions.

10.7 CONTRACTOR shall rework or repair and re-inspect items in accordance with COMPANY approved procedures. CONTRACTOR shall notify the Company Representative prior to final closure of any nonconformity for inspection and testing as applicable.

11.Deviation/Waivers

11.1 CONTRACTOR shall not deviate/waive off the requirements of any engineering specifications, Quality Plan, Inspection and Test Plan previously accepted by the Company Representative without the express written consent of the Company Representative. Deviation/Waivers shall be requested in advance for the company approval prior to taking up work with deviation.

11.2 The CONTRACTOR shall also maintain a log detailing all deviations/waivers to COMPANY standards obtained during all phases, including those initiated by COMPANY (during or prior to the start of WORK) or CONTRACTOR. This log must indicate the status of the waiver, a brief description and details of the applicable purchase order and equipment or construction process.

12. Analysis of Data

12.1 CONTRACTOR shall prepare and submit a monthly Quality Management Report in a format acceptable to COMPANY to demonstrate effective implementation of the CONTRACTOR's Quality System. The report shall include the following items as a minimum:

12.1.1 Listing of quality audits completed (internal and subcontractor), in progress, and planned for the next month.

12.1.2 Status of open corrective actions for non-conformities (NCRs, Discrepancy Reports, COMPANY Logbook entries, etc.), audits and management reviews.

12.1.3 Quality Personnel Listing by Discipline.

12.1.4 Listing and status of engineering deviations/waivers requested

12.1.5 Design and Procurement Phase Items ,if applicable.

12.1.6. Listing of supplier surveys performed and results , if applicable

12.1.7 Listing of Pre-inspection Meetings conducted and planned for the next month

12.1.8 Listing of supplier inspections, if applicable, performed and those planned for the next month

12.1.9. Listing and disposition of all defective or rejected material or equipment received at jobsite by CONTRACTOR and subcontractor(s)

12.1.10 Welding rejection rate reported. A chart showing the historical performance during the project shall be included.

13. Document Control & Records Control

CONTRACTOR shall establish , implement and maintain document control and records control system throughout the project execution period. Contractor shall maintain a document control register and ensure inadvertent use of obsolete documents by its employees engaged at the work site.

14. Improvement



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CONTRACTOR's procedure(s) for Preventive Actions (where "Preventive Action" is defined as an action to eliminate the cause of a potential nonconformity or other undesirable potential situation) shall describe the requirements for evaluating the need for actions to prevent occurrence of non-conformities and the implementation of applicable Lessons Learned (where "Lessons Learned" is defined as knowledge gained from experience successful or otherwise, for the purpose of improving future performance) on previous projects.

15. Contractor and subcontractor quality personnel qualification requirement.

Quality personnel employed by CONTRACTOR and its subcontractors to perform the WORK described in this Contract shall meet, as a minimum, the following qualification and experience requirements. COMPANY shall be the final authority for the determination of equivalency for all qualifications, certifications, or minimum number of years of experience as specified in this document upon successful completion of review or required examinations and/ or interviews.

- 15.1 QA/QC Manager shall have experience in auditing as per ISO-9001 or equivalent QMS and shall be able to exercise judgment against the criteria of the standards. He shall have a minimum of Seven (7) years of direct experience in Quality Assurance system activities of which three (3) years must be in managing quality systems relating to the Contract Scope of WORK (e.g.; chemical, oil, gas and petrochemical projects, Infrastructure, communication etc.).
- 15.2 Welding and NDT: Inspector shall have a demonstrated background and thorough knowledge of codes such as ANSI B 31.3, 31.4 and 31.8, ASME Section V and IX, API 620 and 650, AWS D1.1, required for the execution of the WORK. Where Nondestructive Testing (NDT) forms part of the WORK, and the Inspector is required to review or ensure NDT programs and results, he shall have been previously qualified and certified to a minimum ASNT Level II in the relevant method(s). When performing, reviewing or ensuring Nondestructive Testing in VT, MT, PT, RT or UT, he shall be certified in the specific method(s).
- 15.3 Heat Treatment: Inspector shall have direct knowledge of all aspects of heat treatment and with the types of equipment to be used for the WORK, such as electrical resistance



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heating elements, induction coils, or gas fired heaters. He shall be able to verify the heat treatment parameters to approved heat treatment procedures. If applicable, Inspector shall be thoroughly familiar with the heat-treating requirements of ASME B31.3 and ASME Section VIII Division 1.

- 15.4 Positive Materials Identification (PMI): Inspector shall have knowledge about all aspects of PMI test methods and the operation of PMI test equipment used on the job
- 15.5 Coating: Inspector shall demonstrate a thorough working knowledge and proven ability of all phases and types of coating applications and methods and recognized industry standards. For critical coating, Inspector shall be additionally qualified to NACE Level II Critical Coatings Certification, or equivalent.