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CODES & STANDARDS  
CONFORMITY ASSESSMENT

**ASME  
REINFORCED THERMOSET PLASTICS  
CORROSION RESISTANT EQUIPMENT**

**GUIDE  
FOR  
ASME RTP SURVEY TEAMS  
FOR  
SURVEY OF APPLICANTS  
FOR  
ASME CERTIFICATES OF AUTHORIZATION**

**The American Society of Mechanical Engineers  
Conformity Assessment Department  
Three Park Avenue  
New York, NY 10016**

## INTRODUCTION

This Guide is prepared for the use of ASME survey team leaders and members. It is not intended to replace or interpret the requirements of the ASME Reinforced Thermoset Plastics Corrosion Resistant Equipment Standard. The checklist does not list all of the detailed requirements, but rather, lists the highlights that the applicant is required to include in their Quality Assurance Program.

In addition, to assist the ASME survey team, this Guide is provided to applicants for ASME Certificates of Authorization for their use in verifying and identifying the paragraph where their Quality Assurance Manual addresses all applicable control requirements of the Standard. The Quality Assurance Manual must contain the controls for implementing the Quality Assurance Program but, it is not required to contain all the detailed programmatic requirements which will be found in the Quality Assurance Program.

This Guide is based on the RTP-1 Standard. The Guide is subject to revision based on changes made in the Standard.

A survey must cover a QA Manual, and Manual implementation will vary from applicant to applicant therefore, only those activities to be performed under the scope of the applicant's Certificate of Authorization are required to be addressed in the Quality Assurance Manual. The ASME survey teams are advised that all aspects of this Guide may not apply and that this Guide may not outline all possible aspects of each survey. The Manual need not follow the format of this Guide.

Questions of possible need for interpretation raised by survey team members or the applicant shall be submitted to the Secretary, RTP Main Committee.

Suggestions for revisions or clarification to this Guide should be directed to the ASME Director of Accreditation and Certification.

## HOW TO USE THIS GUIDE

Review each checklist item in the "Quality Program Survey Checklist" and note the paragraph number in the QA Program which covers the subject addressed in the column labeled "Quality Program References." In the case where an item gives more than one alternative for fulfilling the applicable Code requirement, mark "N/A" in the column labeled "Quality Program References" adjacent to those alternatives that do not apply.

The original of this Guide shall be provided to the Team Leader along with sufficient copies for each member of the survey team (including the Team leader).

QUALITY PROGRAM SURVEY CHECKLIST

Company \_\_\_\_\_

QA Manual Rev. # \_\_\_\_ Date: \_\_\_\_\_

Item No.	Quality Element and Subelements	Quality Program References (To be filled in by Applicant)
1.	<p><u>Organization</u></p> <p>The program includes measures established to:</p> <p>A. Ensure that quality is achieved, verified and documented by persons or organizations not directly responsible for performing the work.</p> <p>B. Provide for documentation by organizations, groups or individuals (by title) performing activities affecting quality including:</p> <ul style="list-style-type: none"> <li>(1) Organizational structure,</li> <li>(2) Functional responsibilities,</li> <li>(3) Levels of authority,</li> <li>(4) Lines of communication,</li> <li>(5) Responsibility and authority of each organization involved,</li> </ul> <p>C. Ensure that persons or organizations performing quality assurance functions have:</p> <ul style="list-style-type: none"> <li>(1) direct access to responsible management at a level where organizational freedom is maintained and appropriate action can be affected,</li> <li>(2) sufficient independence from cost and schedule considerations.</li> </ul>	
2.	<p><u>Quality Assurance Program</u></p> <p>The program includes measures established to:</p> <p>A. Provide a Quality Assurance Manual which documents in detail the Quality Assurance Program required by RTP-1.</p> <p>B. Ensure that the QA Manual, records and procedures necessary to make the QA Program intelligible are available to the ASME.</p> <p>C. Identify the activities and items to which the QA Program applies.</p> <p>D. Ensure that proposed revisions to the QA manual are accepted by ASME before they are put into practice.</p> <p>E. Provide for training and qualification of personnel performing activities affecting quality.</p> <p>F. Ensure that personnel records are maintained.</p> <p>G. Ensure that only the most current revision of latest and/or correct drawings, specifications, purchase orders, and quality control procedures are used for procurement.</p>	

Item No.	Quality Element and Subelements	Quality Program References (To be filled in by Applicant)
3.	<p><u>Demonstration of Capability</u></p> <p>The program includes measures established to ensure the qualification of laminators and secondary bonders. Includes description of the fabrication procedures used to produce.</p>	
4.	<p><u>Material Control</u></p> <p>The program includes measures established to:</p> <p>A. Ensure that procedures for material control exist and to ensure that the material received is properly identified and has documentation, including, as applicable, required material test reports, to satisfy RTP-1 requirements.</p> <p>B. Ensure that only the intended material is used in fabrication.</p> <p>C. Ensure that a procedure exists for handling materials that are found to be nonconforming at receiving inspection.</p>	
5.	<p><u>Inspection</u></p> <p>The program includes measures established to</p> <p>A. Ensure that process sheets or checklist are prepared and include document numbers and revision to which the examination or test is to be performed,</p> <p>B. Ensure examination checklist is filled in and completed by the Certificate Holder.</p> <p>C. Provide for in-process and final examination and test procedures which include or reference acceptance criteria. This includes resin curing, laminate thickness and vessel dimensions.</p> <p>D. Provide for in-process inspection or monitoring, or both, as appropriate for activities affecting quality including:</p> <p>(1) Inspection and distribution of received goods,  (2) Laminate reinforcement sequence,  (3) Component fabrication,  (4) Assembly procedures,  (5) Laminate imperfections are within tolerances,  (6) Control of resin handling and cure</p>	

Item No.	Quality Element and Subelements	Quality Program References (To be filled in by Applicant)
6.	<p>E. Provide for final inspections which include:</p> <ul style="list-style-type: none"> <li>(1) a records review of results and resolution of nonconformances identified by prior inspections,</li> <li>(2) an examination of quality records,</li> <li>(3) a documented acceptance of the item by authorized personnel.</li> </ul> <p>F. Ensure required records are specified, documented and maintained.</p> <p>G. Ensure that the Fabricator shall ensure that the vessel is in suitable condition to permit reasonable and safe access for inspection and that proper safety equipment be provided the inspector to conduct the inspection.</p> <p><u>Corrective Action of Nonconforming Items</u></p> <p>The program includes measures established to:</p> <p>A. Ensure that items that do not conform to specified requirements are controlled.</p> <p>B. Ensure that the written procedure for the control of nonconforming items includes:</p> <ul style="list-style-type: none"> <li>(1) identification,</li> <li>(2) documentation,</li> <li>(3) evaluation,</li> <li>(4) disposition,</li> </ul> <p>C. Ensure repairs are examined in accordance with procedures and acceptance criteria resulting in RTP-1 Standard compliance.</p>	
7.	<p><u>Test Control</u></p> <p>The program includes measures established to ensure:</p> <p>A. Tests are performed in accordance with specified, written test procedures or other appropriate documents approved by the designated organization including:</p> <ul style="list-style-type: none"> <li>(1) Resin cure</li> <li>(2) Dimension and laminate thickness</li> <li>(3) Laminate mechanical properties</li> <li>(4) Reinforcement control</li> <li>(5) Laminate imperfections</li> <li>(6) Pressure tests</li> <li>(7) Acoustic emission tests</li> </ul>	

Item No.	Quality Element and Subelements	Quality Program References (To be filled in by Applicant)
	<ul style="list-style-type: none"> <li>B. Test results are documented.</li> <li>C. Required test records are specified and documented.</li> <li>D. Tools, gauges, instruments and other measuring and test equipment used for activities affecting quality are controlled, calibrated and adjusted prior to use or at specified periods.</li> <li>E. The selection of measuring and test equipment is controlled.</li> <li>F. Measuring and test equipment is properly handled and stored.</li> <li>G. Calibration is against certified equipment having known valid relationships to nationally recognized standards. (If no nationally recognized standards exist, the basis for calibration is documented.)</li> <li>H. The method for calibration for each device is defined.</li> </ul>	