GUIDE
FOR
ASME REVIEW TEAMS
FOR
REVIEW OF APPLICANTS
FOR
ASME CERTIFICATES OF AUTHORIZATION
(V, HV, UD, UV, UV3, UD3, TD, TV)

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INTRODUCTION

This Guide is prepared for the use of ASME Review Teams. It is not intended to replace or interpret the requirements of the ASME Boiler and Pressure Vessel Code (B&PVC).

In addition, to assist the ASME Review Team Leader, this Guide will be provided to Applicants for ASME Certificates of Authorization for their use in cross referencing the paragraphs in their Quality Control (QC) Manual with the applicable control requirements of the Code, and as a guide as to what is expected for a demonstration of the QC System.

This Guide is based on the applicable requirements contained in Section I, Section IV, Section VIII Divisions 1 and 3, and Section XII of the B&PVC. The Guide is subject to revision based on changes made in the aforementioned Sections in the B&PVC.

A Review must cover a QC Manual and its implementation. It is recognized that the scope of work, QC Manual, and Manual implementation will vary from Applicant to Applicant. Therefore, the ASME Review Team Leaders are advised that all aspects of this Guide may not apply and that this Guide may not outline all possible aspects of each Review. The Manual need not follow the format of this Guide.

Questions of possible need for Code interpretation raised by Review Team Leaders shall be submitted to the ASME Director, Accreditation and Certification. When a request for an interpretation is to be submitted by an Applicant, the Team Leader shall advise the Applicant that all such inquiries must be submitted to the Secretary, Boiler and Pressure Vessel Committee, and that a copy of the inquiry and reply should be provided by the inquirer to the ASME Designated Organization and cognizant Jurisdiction, if appropriate.

Suggestions for revisions or clarification to this Guide should be directed to the ASME Director, Product and Personnel Certification.

PRESSURE RELIEF DEVICE REVIEW DEMONSTRATION

The purpose of the Review Demonstration is to evaluate the Applicant's Quality Control System (QCS) and its implementation. For evaluation of the QCS, the Applicant must demonstrate to current Code rules sufficient administrative and fabrication functions of the QCS to show that they have the knowledge and ability to produce the Code items typical of those covered by the QCS. It is expected that fabrication functions be demonstrated using typical Code work. However they may be demonstrated using current work, a mock-up, or a combination of the two. Any current Code work ongoing at the time of the joint review is subject to the Team Leader's review.

While the Applicant must address each element of the QCS in the Code, the Applicant need only demonstrate those elements within the intended scope of activities that apply to their program.

Demonstration Item[1]: An Applicant for a single Certificate must demonstrate at least one item that will be fabricated for the requested type and scope of Certificate of Authorization. The demonstration must be an implementation of ALL aspects of the QC System and is to include a demonstration of actual welding if welding is included in the scope of Code activities. Also note that the ASME designated organization may require additional samples and may require that those samples be performance and capacity tested at an ASME accepted test laboratory.

For Applicants requesting pressure relief device multiple stamps, it is necessary to have a demonstration item with design calculations for each Code Section. If there are multiple scopes under one Code Section (Sect. VIII, Div. 1 and Section VIII, Div. 3) and the demonstration item is not to the most stringent Code requirements, the Applicant must provide additional calculations or another documentation package that contains Code calculations to the most stringent Code requirements and administrative documentation to sufficiently demonstrate compliance with all aspects of the company's QC System.

For example, an Applicant for UV and UV3 could demonstrate their QCS on a Section VIII, Div. 1 pressure relief valve including design. However, due to the nature of Section VIII, Div. 3 requirements, in addition to the Section VIII Div. 1 demonstration, sample design calculations for a Section VIII, Div. 3 device would be prepared and presented.

If computer calculations are to be used, the Applicant shall demonstrate that the computer program has the capability of producing acceptable calculations.

If the demonstration item is based upon current work that is being fabricated to a previous Code edition, the Applicant shall address changes in the Code that would require different actions in the demonstrations to be in compliance with the current Code.

[1] The demonstration item shall be based on the latest Code Edition in effect at the time a complete Application is received by ASME.

QUALITY SYSTEM REVIEW CHECKLIST

Item No.	Quality Element and Sub-elements	QC Manual References
1.	**GENERAL QUALITY CONTROL SYSTEM REQUIREMENTS**	
	(a) QC System is documented in detail in a QC Manual that addresses all requirements of the applicable Code Section and includes:	
	(1) a cover sheet that contains the company name and physical address as it will appear on the requested Certificate of Authorization;	
	Note: The cover sheet may also contain the effective date of the QC Manual, mailing address, phone number or other information desired by the Certificate Holder or Applicant.	
	(2) a brief description of the products being fabricated and/or work being accomplished under the Code including applicability of QC System to shop activities, field activities or both;	
	(3) control features to demonstrate Code compliance;	
	(4) Manual revision control system;	
	(5) provision for review and approval of QC Manual to maintain it current;	
	(6) provision for submittal of QC Manual revisions to the ASME Designated Organization for V, HV, UD, UV, UV3, UD3, TD and TV for acceptance prior to implementation including timely updating of all copies to reflect accepted revisions; and	
	(7) provision for the custody and control of the Certification Mark (either stamp or accepted facsimile) to prevent loss or unauthorized use.	
	(b) In the case where the QC Manual exists in more than one language, at least one version is in English and identified as the authoritative version.	
	Note: A glossary of terms is desirable from the standpoint of clarity if abbreviated titles of personnel and control documents are used throughout the QC Manual. This, however, is not mandatory.	
2.	**AUTHORITY AND RESPONSIBILITY**	
	(a) The authority and responsibility for QC by management is documented.	
	Note: In practice, a Statement of Policy and Authority must be signed by a senior company official responsible for Code activities (e.g., President, Vice President, Plant Manager, etc.).	

Item No.	Quality Element and Sub-elements	QC Manual References
	(b) The authority and responsibility of those in charge of the QC System are clearly established and documented. (c) Persons performing QC functions have sufficient and well defined responsibility, the authority, and the organizational freedom to identify quality control problems and to initiate, recommend and provide solutions. This shall include the provision to stop work if necessary, until the quality control problem can be resolved.	
3.	**ORGANIZATION** (a) An organization chart showing the relationship between management and engineering, purchasing, manufacturing, production, field assembly and testing, inspection and quality control, as applicable, exists and reflects the actual organization. Note: The purpose of this chart is to identify and associate the various organizational groups with the particular function for which they are responsible. The Code does not intend to encroach on the Certificate Holder's right to establish and, from time to time, alter whatever form of organization the Certificate Holder considers appropriate for their Code work.	
4.	**DRAWING, DESIGN CALCULATIONS, AND SPECIFICATION CONTROL** (a) Procedures exist which assure that the latest applicable drawings, design calculations, specifications and instructions, required by the Code, as well as authorized changes, are used for manufacture, assembly, examination, inspection and testing. Procedures include provision for: (1) review of customer supplied documents for Code compliance; (2) the preparation, review, approval and distribution of drawings, calculations, and specifications; (3) [Applicable to manufacturers only] New capacity certification tests to be conducted when changes in design are made which affect flow path, lift or performance characteristics.	

QUALITY SYSTEM REVIEW CHECKLIST

Item No.	Quality Element and Sub-elements	QC Manual References
5.	**MATERIAL CONTROL** (a) Procedures for material control exist to assure that the material received is properly identified and has documentation, including, as applicable, required material certifications or material test reports, to satisfy Code requirements as ordered. (b) The material control system assures that only the intended material is used in Code construction. For Section XII only, material shall satisfy the applicable modal appendices requirements. (c) If substitution of materials is allowed, the applicable procedures for control of this activity are documented, including designation of the individual authorized to approve substitutions. (d) The title of the individual responsible for identifying the need for material test reports or certificate of compliance is designated. (e) The title of the individual responsible for performing receiving inspection of Code materials is designated. (f) Information to be provided to the receiving inspector concerning the characteristics to be checked is documented. (g) A procedure exists for handling materials that are found to be nonconforming at receiving inspection. (h) If further material testing is required to be performed at receiving inspection or during manufacturing operations, the applicable procedures for control of this activity are documented. (i) Measures are established to assure the proper marking, handling and storage of materials.	

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6.	**EXAMINATION AND INSPECTION PROGRAM** (a) Fabrication operations, including examinations and test procedures are described in sufficient detail to permit the Certificate Holder to determine at what stages specific inspections are to be performed. Specifically: (1) Provisions for the use of checklists, process sheets, travelers, etc., for listing of examinations and tests to be performed and for designation of inspection points. (b) Measures provide for transferring markings to assure traceability is maintained. (1) If a coded marking system is used, the coding system shall be documented. (c) Measures are established to control field activities, when applicable. (d) Provisions exist for testing pressure relief devices as described in PG-73.5, HG-401.4 and UG-136(d), UG-137(d), UG-138(d), KR-340, TR-210.4 and TR-310.5. (e) Certified Individual (C.I) i. Is an employee of the Applicant ii. meets knowledge and training requirements and is qualified and certified by the Manufacturer; and iii. records are available, maintained, certified by the Manufacturer and contain objective evidence of the Certified Individual's qualification. iv. Measures are established to assure that the Certified Individual performs all required duties specified in the applicable Code. v. Provisions for preparation and approval of Certificates of Conformance by the Certified Individual and responsible representative shall be provided.	

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7.	**CORRECTION OF NONCONFORMITIES** (a) A procedure exists for the correction of nonconformities. The procedure provides for: (1) identifying those responsible for the resolution of nonconformities; (2) identifying and controlling further processing of nonconforming items until final disposition; (3) documenting the nonconformance and its disposition. Note: A nonconformity is any condition which does not comply with the applicable rules of the Code, QC Manual or other specified requirements. Nonconformities must be corrected before the completed component can be considered to comply with the Code.	
8.	**WELDING** (a) Welding conforms to requirements of the Code of Construction, and Section IX, as applicable to the scope of work. (b) Those responsible for certifying PQR's and WPQ's are identified. (c) WPS's are available to the welder in the work area. (d) Measures to assure continued welder qualification in accordance with the Code of Construction or Section IX shall be included. (e) Those responsible for assuring that only qualified welders are assigned to perform Code welding are identified. (f) Measures provide for the storage and conditioning, as required, of covered electrodes. (g) Measures are established for the control, issuance and return of welding material to assure proper materials are used. (h) Measures are established for removing or inspecting tack welds. (i) Measures provide for the right at any time, of the ASME Designated Organization to call for and witness tests of the welding/brazing procedures; call for and witness of the ability of welders, welding operators, braziers or brazing operators. (j) Measures provide for a system to identify work completed by each welder.	

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9.	**NONDESTRUCTIVE EXAMINATION** (a) Provisions exist for identifying the appropriate NDE procedures applicable to the scope of Code work. These provisions assure that: (1) NDE personnel are qualified in accordance with the applicable Code Section requirement; (2) When NDE is required [(UT, MT, PT and VT] examinations are performed in accordance with written procedures; (3) A representative from an ASME Designated Organization can require demonstration by NDE personnel of an NDE examination or NDE procedures for cause; (4) UT reports and RT films, as applicable, are retained in accordance with the applicable Code requirement; and (5) NDE equipment is calibrated.	
10.	**HEAT TREATMENT** (a) Controls provided to assure that heat treatment as required by the Code for the scope of Code work is applied. (b) Measures are established to assure proper placement of thermocouples and use of charts. (c) When heat treatment is subcontracted, measures are established to assure that procedures are followed and that heat treatment charts are provided. (d) Means are provided for a quality control representative of the manufacturer to satisfy themselves that Code heat treatment requirements are met, (e.g., review of furnace time-temperature records or other methods as appropriate). Such reviews shall be documented.	

QUALITY SYSTEM REVIEW CHECKLIST

Item No.	Quality Element and Sub-elements	QC Manual References
11.	**CALIBRATION OF MEASUREMENT AND TEST EQUIPMENT** (a) A procedure exists for the calibration of examination, measuring and test equipment used in fulfillment of applicable Code requirements. (b) Measures are established that assure calibration records are maintained and that status indicators are used to indicate the current calibration status of equipment.	
12.	**RECORDS RETENTION** (a) Procedures exist for the maintenance of Certificates of Conformance, radiographs and records as required by the applicable Section of the Code.	
13.	**SAMPLE FORMS** (a) Forms used to control functions relative to quality are included within the QC Manual and their use explained in the text of the QC Manual.	
14.	**ASME DESIGNEE AND ASME DESIGNATED ORGANIZATION** (a) A controlled copy of the QC Manual is available to the ASME Designee or ASME Designated Organization, as applicable. The ASME Designated Organization may require a controlled copy to be filed with them as well. (b) The ASME Designee or representative from an ASME Designated Organization has access to all drawings, calculations, specifications, procedures, process sheets, repair procedures, records, test results, and any other documents as necessary for the ASME Designee to perform the review in accordance with the Code. (c) Provisions exist for the inspection of pressure relief valves as described in PG-73.5, HG-401.3, UG-136(c), UG-137(c), UG-138(c), KR-330, TR-210.3, and TR-310.4.	
15.	**CERTIFICATIONS** (a) Provisions exist for written certifications, authorizations and approval that require written signature and written date. (b) Provisions exists for certification methods other than written (such as stamps and electronic signatures), when used. (c) Describing the controls and safe guards that are employed to ensure the integrity of the certification, authorization or approval.	