Pressure Piping Construction Requirements QMS Written Description Checklist

AB-518(b)
2026-07

Company Name: _____

Title of the written description of the management system or manual(s):

_____

Person responsible for the overall management of the pressure piping construction program:

Name: _____ Title: _____

Telephone No.: _____ Fax No.: _____

Cell No.: _____ E-Mail: _____

The "*Pressure Piping Construction Requirements"* document, AB-518 has been issued by the Alberta pressure equipment safety Administrator to specify requirements for the construction of pressure piping systems. In accordance with the requirements of PESR Section 11(1), anyone who wants to construct pressure piping systems in Alberta is required to obtain a Certificate of Authorization Permit from ABSA.

This checklist, AB-518(b), has been developed to assist in ensuring that the Quality Management System (QMS) written description, submitted by the applicant who applies for a Certificate of Authorization permit, is documented in accordance with AB-518.

Organizations who wish to make an application for obtaining a Certificate of Authorization Permit in accordance with the requirements of the Pressure equipment Safety Regulation Section 11, shall submit the following documents to ABSA:

- an Application Form AB-29,
- an AB-29(b) Form if applying for multiple shop locations to be certified under the same AQP number (all shops must operate under the same name),
- an ***electronic*** copy of the duly endorsed AB-518(b) document showing where each requirement of the AB-518 document has been addressed in the company's QMS, and,
- a draft copy of the written description of the QMS describing the pressure piping construction program.

Owner/Users who are also authorized to construct pressure piping are required to review their pressure equipment integrity management system documentation and ensure that pressure piping construction activity meets the requirements of AB-518. Owner/Users are not required to submit an AB-518(b) checklist.

ABSA reviewer's comments:

ABSA Reviewer Initials: _____ Date: _____

Req. Doc. Ref.	Pressure Piping Construction QMS Component/Element	Manual Reference (Indicate Section number and paragraph number for all references)
3.0	**Quality Management Requirements**	
3.3	**Title Page**	
☐	Is there a Title Page? Section 3.3 does not include requirements for the 'Title Page' of the written description of a QMS or a manual because it is not a document organizing guide. AB-518 stipulates requirements that must be addressed in a QMS. Inclusion of a Title Page to any credible document is common knowledge, however guidelines for developing a written description of a QMS including a 'Title Page' are described in ISIO10013:2001 standard.	
	Table of Contents	
☐	Is there a Table of Contents that lists the number and title of each section and its location in the written description of the QMS? Section 3.3 does not include requirements for the 'Table of Contents' of the written description of a QMS or a manual because it is not a document organizing guide. AB-518 stipulates requirements that must be addressed in a QMS.	
3.3.1	**Scope**	
☐	Does this section: • describe the scope of the activities to be undertaken? • list the shop locations (i.e. covered under the same registered name); • describe scope of work undertaken at each shop location, and the address of each shop; • indicate whether activities are undertaken at shop and/or field sites; • state the title of a person designated to perform QC function at each site, and, the title of a person who is overall responsible for maintenance and for assuring effective implementation of the QMS at all locations? *Note: If an organization does not have a shop, and undertakes field activities only, the organization shall indicate that the activities undertaken are at field sites in Alberta controlled from an office address of the organization.*	
3.3.2	**Definitions of Terms and Acronyms**	
☐	Are terms and acronyms used within the Pressure Piping Construction written quality management system defined?	

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3.3.3	**Organization**	
☐	Does this section include a statement that the management will ensure that responsibilities and authorities are defined and are communicated within the organization?	
☐	Does this section describe the organizational structure and identify key positions of personnel who manage and perform work affecting quality?	
3.3.4	**Statement of Authority and Responsibility**	
☐	Are the following statements made? • a statement that the documented QMS meets the requirements of the AB-518 document and accurately describes the pressure piping construction processes implemented by the company?	
☐	• a statement that management will uphold the safety requirements of the SCA & Regulations and resolve any issues regarding quality?	
☐	• a statement that the quality system has the full support of the management who will ensure that adequate resources, including competent personnel, are provided to implement the program;	
☐	• statement providing the title of the person responsible for the development and maintenance of the pressure piping construction program, with an explanation that this person has the defined authority and responsibility for implementation of the program and has direct access to, and support from, top management to resolve any implementation barriers?	
☐	• signature (with date) of the senior management? *Note: A new Statement of Authority document signed by senior management, with the current date, is required at the time of renewal of the certification.*	
3.3.5	**Management's Responsibilities**	
☐	Does this section: • include a statement and evidence that the management is committed to the development and implementation of a successful pressure piping construction program and that it will continually improve its effectiveness?	
☐	• establish that management will review the quality management system at appropriate intervals to ensure its continued suitability and effectiveness, and that records of such reviews will be maintained.	

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☐	• include a statement that the management shall determine and provide adequate competent human resources and the necessary facilities and equipment to effectively implement the pressure piping construction activities; • describe appointment of a member of the organization's management who, irrespective of other responsibilities, shall have responsibility and authority to ensure that QMS processes are established, implemented and maintained, and shall report performance of the QMS to the top management on a periodic basis; • state that management will ensure responsibilities and authorities are defined and communicated within the organization; • state that management will resolve disagreements concerning the implementation of the QMS; • state that management will ensure the QMS remains in compliance with the requirements of this document, SCA, Regulations and applicable codes throughout the term of the certification?	
3.3.6	**Contract Review**	
☐	Are/is the: • responsibilities for contract review and agreement defined?	
☐	• pressure piping construction requirements documented?	
☐	• Code edition defined?	
☐	• scope of work defined?	
☐	• responsibilities for the supply of materials, construction drawings, design, design registration with ABSA, PWHT and pressure test defined in the contract?	
☐	• piping lot sizes for the purpose of NDE specified by the owner and agreed upon between the contracting parties before the start of the construction activities?	
☐	• requirement of a turnover package and contents thereof are defined?	
☐	• responsibilities for certifying the construction, using AB-83 or AB-83 Partial or AB-83F as the case may be, is defined?	
☐	• responsibilities for certifying the installation and readiness for operation using an AB-81 Form is defined?	

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3.3.7	**Document & Data Control**	
☐	Are the controls needed for the development, identification, storage, revision, protection, retrieval, retention time, and disposition of records addressed?	
☐	Has a document revision control process been developed and amendments to the documents are authorized by the Certificate of Authorization Permit holder, and processed in a manner which will ensure timely availability at the appropriate location?	
☐	Is there a statement included that no changes are permitted to the QMS documentation that may render a document to be in non compliance with the requirements of the AB-518 document, SCA, Regulations and applicable codes and standards throughout the certification period?	
☐	Is a current version of the quality manual provided and accepted by ABSA?	
☐	Are all changes to documents managed appropriately including notification to the affected parties?	
☐	Are the current issues of the appropriate documentation available at all relevant locations and to all relevant persons?	
☐	Are superseded documents removed from use throughout the organization or are appropriately identified as superseded documents?	
☐	Is the current revision status of documents identified?	
☐	Are the documents legible, readily identifiable and retrievable?	
☐	Are documents of external origin identified and their distribution controlled?	
3.3.8	**Piping Design**	
☐	**<u>Scenario 1</u>** **If a pressure piping design is undertaken in-house by a manufacturer or by an owner who is also a manufacturer:**	Check N/A ☐ if scenario 1 does not apply to you.
☐	Are design requirements such as the operating conditions, service requirements and other information needed to facilitate the safe design, construction, and inspection of the pressure piping system identified and documented?	
☐	Are the personnel assigned to engineer the piping systems competent, and do they meet the qualification requirements of the company and of the applicable ASME B31 Code(s)?	
☐	Are the design documents stamped by a Professional Engineer when a pressure piping system is required to be registered with ABSA?	

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☐	Are piping design documents prepared, verified and approved by the owner?	
☐	Do the design documents provide information about the code of construction including edition, proper material specifications, design pressure, maximum and minimum design temperatures, ASME B31.3 fluid category for process piping, type and extent of NDE required, hydro test pressure and medium, Pre Heat and PWHT treatment requirements, joint design details, WPS and dimensions?	
☐	Are the design code edition and addenda of the applicable ASME construction codes, standards and other related documents available to design personnel and applied for pressure piping design?	
☐	Do all design documents, including any revisions, have the required approval and are the revised documents made available at the point of use?	
☐	Is an appropriate management of change process utilized to manage changes to the design?	
☐	If the piping system's internal volume exceeds 500 liters, are the design registration requirements with ABSA specified?	
☐	Are the drawings reviewed and approved by engineering prior to release for construction?	
	<u>Scenario 3</u> **If pressure piping design is supplied to the manufacturer by the owner:**	Check N/A ☐ if scenario 3 does not apply to you.
☐	Verification that the construction drawings and/or other engineering documents received from the owner include information about the code of construction including edition, proper material specifications, design pressure, maximum and minimum design temperatures, ASME B31.3 fluid category for process piping, type and extent of NDE required, hydro test pressure and medium, preheat and PWHT treatment requirements, joint design details, WPS and dimensions, or, the information needed for construction of the piping is made available through other appropriate documentation by the owner?	
☐	When spool drawings or cut sheets are prepared by the manufacturer, are the drawings or cut sheets controlled and linked to the owner-supplied construction or design drawings? Or N/A ☐	
☐	Are the drawings reviewed and approved by the manufacturer prior to release for construction?	

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3.3.9	**Purchasing and Material Control**	
☐	**Purchasing:** Has the manufacturer: • specified purchasing responsibilities?	
☐	• specified the process for the purchasing of materials and for ensuring conformance to the material requirements of the engineering design and requirements of the owner?	
☐	• ensured that the fittings ordered are registered with ABSA (have valid CRN for installation in Alberta)?	
☐	• specified the process for controlling purchase documents?	
☐	**Control of Owner supplied materials:** Has the manufacturer established a process for verification, storage and maintenance of owner supplied materials?	
☐	**Receiving of materials:** Has the manufacturer ensured that: • received materials conform to the correct specifications and quantity, and are not damaged?	
☐	• a process is established for identifying and disposing of non-conforming items?	
☐	**Materials Identification and Traceability:** Has the manufacturer established a process for identification of pipes, fittings, bolting, welding consumables and other materials used for piping fabrication while in storage and during construction activities?	
3.3.10	**Construction of Pressure Piping**	
☐	Has the manufacturer ensured that: • a fabrication plan is developed and reviewed with personnel?	
☐	• an ITP (and/or a Construction Travel Sheet) and a project file are initiated prior to the start of the project and maintained?	
☐	• the owner's inspector assigned to the job by the owner is informed prior to the start of the project for the purpose of reviewing the ITP (and/or a Construction Travel Sheet), other construction documents and for assignment of inspection hold points?	

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☐	• up to date and approved (by the QC manager) drawing(s) is/are available for the construction. When no design drawings or spool drawings are supplied by the owner and the spool drawings are prepared by the contractor, documented approval shall be obtained from the owner to ensure that the design, material, fabrication, NDE, PWHT, hydrotest and any other information specified within the prepared drawings is accurate?	
☐	• the materials are available, issued for construction and checked for conformance with the engineering design prior to start of fabrication?	
☐	• welding and other fabrication activities are monitored and documented during production?	
☐	• the WPS specified in the engineering design are suitable for the job. When no WPS and dimensions are specified by the designer, is the process for assigning the WPS and dimensions in coordination with the owner specified?	
☐	• copies of the registered WPS are available to the welders, and are understood and implemented effectively?	
☐	• the welders are qualified for the job and records of the welders qualification are maintained, including evidence the welder has maintained qualification (i.e. continuity records) as applicable?	
☐	• the inspection and examination stages are identified, carried out in accordance with the acceptance standards, documented, verified and records maintained?	
☐	• the process for defining the extent of NDE, identification of spools, supply of NDE instructions to the NDE company, review of radiographs and reports and acceptance is defined and documentation maintained?	
☐	• for ASME B31.1 Boiler External piping, ABSA inspection and certification is achieved? or N/A ☐	
☐	• the PWHT is completed in accordance with the requirements of the engineering design, verified and documented? or N/A ☐	
☐	• the pressure testing is accomplished in accordance with requirements of the engineering design and codes, and documented?	
☐	• the completed job is certified using an AB-83 Form, a copy is supplied to the owner and records maintained. When a job partially meets the requirements of the SCA, Regulations and applicable ASME B31 code(s) a partial AB-83 Form shall be completed and provided to the primary contractor?	

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☐	• when the piping system was originally registered with ABSA, unless specified otherwise by the contract, an AB-81 form is completed prior to the operation and submitted to ABSA?	
3.3.11	**Post Weld Heat Treatment (PWHT)**	
☐	Has the manufacturer: • assigned responsibilities for the implementation and maintenance of the PWHT procedures?	
☐	• verified that the PWHT requirements are defined in the engineering design/drawings or otherwise made available by the owner?	
☐	• ensured that the PWHT activities are executed in accordance with the requirements of the engineering design?	
☐	• ensured that the piping spools designated for PWHT are identified?	
☐	• ensured that the PWHT instructions for the piping are prepared and supplied to the heat treatment contractor?	
☐	• ensured that upon completion of the PWHT of the piping, it is inspected for damage and to confirm identification, and the PWHT documentation is verified?	
☐	• maintained PWHT documentation?	
3.3.12	**Nondestructive Examinations and Testing**	
☐	Has the manufacturer ensured that: • the NDE required for the pressure piping fabrication is determined from the design documents provided by the owner?	
☐	• a lot size is established in agreement with the owner?	
☐	• procedures used for performing NDE are documented and meet requirements of the current Regulations, ASME Section V and the applicable ASME B31 Code of construction?	
☐	• the NDE interpretations are performed by SNT-TC-IA Level II or III technicians?	
☐	• the written instructions for performing NDE are provided to the technicians performing NDE?	
☐	• the process for identifying the welding joints requiring NDE is documented?	
☐	• the NDE is performed to meet the specified NDE for each lot?	

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☐	• the radiographic film and reports are reviewed and accepted by the manufacturer's QC personnel?	
☐	• the NDE documents are kept on file for a specified period of time?	
3.3.13	**Examination -** *(Examination and inspections activities performed by the manufacturer)*	
☐	• Are the responsibilities for the examination activities and qualifications of an examiner defined?	
☐	• Are visual examination procedures and personnel qualifications for visual examination, as required by the applicable code of construction, established and documented?	
☐	• Are the examinations specified for various stages of construction conducted?	
☐	• Are QMS examination requirements and associated procedures available and understood by the personnel responsible for the examination activities?	
☐	• Are the materials received from the owner(s) and supplier(s) examined to assure conformance with the requirements of the engineering design?	
☐	• Are the 'partial' piping systems and documents received from the subcontractors examined prior to release for further processing?	
☐	• Are the partial piping turnover packages received from manufacturers within Alberta accompanied by 'Partial AB-83' forms	
☐	• Are the piping systems and documentation received from pressure piping fabrication contractors located outside of Alberta accompanied by Final/Partial 'AB-83F' or AB-83 forms as the case may be and that the systems and documentation are examined prior to release for further processing?	
☐	• Are completed piping systems and documents received from manufacturers from within Alberta accompanied by 'AB-83' forms and are examined prior to release.	
☐	• Is the final examination carried out in accordance with the documented procedures, to complete the evidence of conformance of the finished product to the specified requirements?	
☐	• Are the examination records maintained?	
☐	• For ASME B31.1 Boiler External Piping, is ABSA's inspection requirement addressed? Or N/A ☐	

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3.3.14	**Pressure Testing**	
☐	Is a documented procedure in place and understood by the personnel responsible for conducting the pressure tests?	
☐	Is over pressure prevented during the pressure test?	
☐	Are the pressure test areas secure and safe for all personnel?	
☐	Is the procedure effective and meets the requirements of the engineering design and the code of construction?	
☐	Is the pressure test procedure being complied with?	
☐	Are the pressure gauges calibrated and of proper range?	
☐	Are the required examinations carried out by qualified personnel?	
☐	Are the pressure test records maintained?	
☐	For ASME B31.1 Boiler External Piping, are prior arrangements made with ABSA to enable a SCO to inspect and witness the pressure test? or N/A ☐	
	Note: *Provision for pneumatic testing of pressure piping systems up to 1677 kJs of stored energy (equivalent to 500 liters internal volume and 2172 kPa internal pressure) may be included as a standard testing procedure in the written description of a QMS provided the description/procedure complies with the requirements of AB-522 document and that ABSA's acceptance is secured. AB-532 provides the minimum requirements for the registration of application-specific pneumatic test procedures that do not fall within the scope of AB-522.*	
	Note: *Piping contractors should also be aware of the requirements (AB-519) for alternative test methods that may be accepted for ASME B31.3 closure welds in lieu of the hydrostatic leak testing specified by the PESR. To be eligible for the alternative test methods, either; i) the owner must have an ABSA accepted AB-519 compliant procedure as part of their certified Pressure Equipment Integrity Management System, or ii) the registered piping design must incorporate alternative test provisions for closure welds?*	
3.3.15	**Control of Monitoring and Measuring Devices**	
☐	Has the manufacturer ensured that: • a process is developed for determining which measurements are required to be taken during the construction, examination and testing of pressure piping and for selecting the appropriate equipment that is capable of providing the necessary accuracy and precision?	

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☐	• inspection, measuring and test equipment is identified, calibrated and adjusted at prescribed intervals, and that the equipment is verified to be in good condition prior to use?	
☐	• the equipment is calibrated against internationally or nationally recognized standards?	
☐	• the process employed for the calibration, and for keeping details of equipment, unique identification, location, frequency of calibrations and checks, calibration method, acceptance criteria and action to be taken when the calibration results are unsatisfactory, is defined?	
☐	• calibration records of the equipment are maintained?	
☐	• the handling, preservation and storage of the equipment is such that the accuracy and fitness for purpose could be assured?	
☐	• a method for safeguarding the equipment from unauthorized adjustments is defined?	
3.3.16	**Competency and Training**	
☐	Has the manufacturer established and is continuing to maintain a documented plan for the training of personnel responsible for the construction of pressure piping?	
☐	Does the training plan include requirement for identifying training needs, providing training, making assessment to assure competency and maintenance of records?	
3.3.17	**Corrective and Preventive Action**	
☐	Has the manufacturer: • ensured that a documented procedure for Corrective and Preventive Action program is in place?	
☐	• ensured that the procedure identifies the Forms and includes steps to identify the non-conformity, immediate action to dispose of the non-conformity, root cause analysis to determine the action in order to prevent it from happening again, and, to verify the effectiveness of the corrective action taken?	
☐	• ensured that training is provided for the implementation of the Corrective and Preventive Action program?	
☐	• reviewed the Corrective Action and Preventive Action Reports/Forms and logs on a periodic basis, evaluated, established trends and initiated improvement measures?	
☐	• controlled the Corrective and Preventive Action documents?	

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☐	• ensured that the records are available for review to the management?	
3.3.18	**Internal Audits**	
☐	Has the manufacturer: • developed an Internal Audit process and/or procedures?	
☐	• prepared a schedule for conducting the Internal Audits?	
☐	• carried out the Internal Audits?	
☐	• documented the audit results?	
☐	• communicated the audit results to the appropriate personnel and management?	
☐	• ensured that timely action is taken as a result of the audit findings?	
☐	• assured that follow-up action to verify the success of the corrective action taken is defined?	
☐	• defined maintenance of the records?	
☐	• conducted a periodic review of the audit system and reported the results to the management?	