

ASME B31Q-2018
(Revision of ASME B31Q-2016)

Pipeline Personnel Qualification

ASME Code for Pressure Piping, B31

AN INTERNATIONAL PIPING CODE®



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Mechanical Engineers**

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Two Park Avenue • New York, NY • 10016 USA

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CONTENTS

Foreword	iii
Committee Roster	iii
Correspondence With the B31 Committee	x
Summary of Changes	xi
1 Introduction	1
2 Definitions	1
3 References	2
4 Qualification Program	2
5 Determining Covered Tasks	3
6 Abnormal Operating Conditions (AOCs)	7
7 Training	8
8 Evaluation	8
9 Qualifications	11
10 Portability	14
11 Program Effectiveness	15
12 Communicating the Qualification Program and Managing Program Changes	15
13 Documentation Requirements	17
14 Bibliography	18
Nonmandatory Appendices	
A Integrated Task List	19
B Covered Tasks and Status History by Categories	86
C Task List Development Process	91
D Example of Evaluation Criteria	92
E Abnormal Operating Conditions (AOCs)	93
F Evaluation Method Selection	94
G DIF Analysis and Subsequent Qualification Intervals	96
H Implementation of ASME B31Q	102
I Program Implementation and Effectiveness Appraisals	122
Figures	
5.1-1 Fault Tree Example	5
C-5.1-1 DIF Analysis Decision Tree	100
H-5-1 Creation of a Compatible Task List in Accordance With ASME B31Q	115
H-5-2 Implementation of a Compatible Task List in Accordance With ASME B31Q	116
Tables	
B-1 Covered Tasks and Status History by Categories	86

C-1	Task List Development Process	91
D-1	Task 0001, Measure Structure-to-Electrolyte Potential	92
F-3-1	Knowledge, Skills, and Abilities (KSAs)	95
F-4-1	Appropriate Evaluation Methods	95
G-3.2-1	Sample Size Needed to Respond to DIF Survey	97
G-3.2-2	Example: Population Size and Corresponding Sample Size for Responding to DIF Survey for ABC Energy Co.	97
G-4-1	Summary of Difficulty Rating Scale	98
G-4-2	Summary of Importance Rating Scale	98
H-2-1	OQ Program Comparison to ASME B31Q Standard	105
H-2-2	Example of OQ Program Comparison to ASME B31Q Standard	114
H-3-1	One-Year ASME B31Q-Compatible Task List Implementation Plan	117

FOREWORD

This Standard provides general and specific requirements for the qualification of pipeline personnel. The implementation of this Standard is intended to minimize the impact on safety and integrity of the pipeline due to human error that may result from an individual's lack of knowledge, skills, or abilities during the performance of certain activities.

This Standard does not impose a requirement to perform specific tasks that affect the safety or integrity of the pipeline. It does, however, set the requirements for qualification of individuals in the event these types of tasks are performed.

This Standard establishes the requirements for identifying covered tasks that impact the safety or integrity of pipelines performed during operation, maintenance, or construction, properly qualifying individuals to perform those tasks, and for managing the qualifications of pipeline personnel. Design and engineering tasks are excluded because assurance of their quality is provided by the fact that appropriately educated or experienced individuals perform these tasks using guidelines and procedures for the conduct of their work. In addition, the quality of the work product is generally confirmed procedurally through review and ultimately by field inspection and testing of the design that are required by the applicable ASME Standard (B31.4 and B31.8 for hazardous liquid pipelines and gas transmission and distribution pipelines, respectively) and jurisdictional authority. Design and engineering tasks involving analysis and integration of data associated with integrity management are excluded from this Standard.

It is recognized that this Standard is being issued at a time when numerous entities have previously developed and implemented qualification programs. Therefore, as part of implementation of this Standard, the implementer should determine what changes to provisions of its existing program (e.g., span of control and subsequent qualification intervals, and evaluation methods) are required to meet this Standard. An individual qualified to perform a covered task under the existing program could be considered to be qualified under the program described by this Standard. Individuals currently qualified under an existing program can maintain their qualification by meeting the subsequent qualification requirements established in this Standard. A documented performance evaluation, if not previously performed for a task that requires performance evaluation for initial qualification under this Standard, should be performed either during the implementation period or at the time of subsequent qualification. The following is a summary of the revisions incorporated into previous editions and this edition of ASME B31Q:

(a) The 2010 edition of the Standard was a revision of the first edition, published in 2006, and included the following improvements:

(1) addition of four new tasks in the task list

(2) editorial refinements

(3) clarification on handling new technology, long-term degradation of physical abilities, qualification exemptions, and new construction

(b) The 2014 edition of the Standard enhanced the qualification standards to provide more in-depth evaluation criteria for 145 of the 165 tasks in the task list.

(c) The 2016 edition of the Standard included the following improvements:

(1) refinement of the task list, including

(-a) enhancement of the qualification standards to provide more in-depth evaluation criteria for the balance of the task list

(-b) addition of seven new tasks to the task list

(-c) removal of nine tasks specific to diving that were covered sufficiently by nondestructive testing (NDT), welding, and other land-based tasks

(-d) removal of one task that had been combined with a similar task

(2) addition of a Nonmandatory Appendix that provided guidance for implementing ASME B31Q and the nonmandatory task list

(3) editorial clarification and refinements, including

(-a) construction documentation clarified in the definition of documentation in the nonmandatory task list

(-b) redesignation of sections and appendices to follow ASME guidelines

(d) The 2018 edition of the Standard includes the following improvements:

(1) editorial clarification and refinements, including

(-a) consistency in language used for task titles and reference to other tasks

(-b) addition of a definition of interval to [Nonmandatory Appendix A](#)

- (-c) update of language for a few requalification intervals to match current regulatory requirements
- (-d) update of example Evaluation Criteria in [Nonmandatory Appendix D](#) to match the enhanced task standards
- (2) refinement of the task list, including
 - (-a) addition of [Task 1020](#), Perform Electrical Inspection of Pipe Coating (Holiday Detection or Jeeping)
 - (-b) removal of an unnecessary step in [Task 0091](#), Troubleshoot Active Cathodic Protection System
 - (-c) clarification of the scope of tasks where portions of the work are covered by other tasks
 - (-d) clarification of what is covered by [Task 0801](#), Perform Welding
- (3) replacement of [Nonmandatory Appendix B](#) with a new table of tasks sorted by category and providing the latest version status of each task

This Standard was approved as an American National Standard on August 30, 2018.

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Standard for Pressure Piping

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The Committee welcomes proposals for revisions to this Standard. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent documentation.

Proposing a Case. Cases may be issued to provide alternative rules when justified, to permit early implementation of an approved revision when the need is urgent, or to provide rules not covered by existing provisions. Cases are effective immediately upon ASME approval and shall be posted on the ASME Committee web page.

Requests for Cases shall provide a Statement of Need and Background Information. The request should identify the Standard and the paragraph, figure, or table number(s), and be written as a Question and Reply in the same format as existing Cases. Requests for Cases should also indicate the applicable edition(s) of the Standard to which the proposed Case applies.

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If the Inquirer is unable to use the online form, he/she may mail the request to the Secretary of the B31 Standards Committee at the above address. The request for an interpretation should be clear and unambiguous. It is further recommended that the Inquirer submit his/her request in the following format:

Subject:	Cite the applicable paragraph number(s) and the topic of the inquiry in one or two words.
Edition:	Cite the applicable edition of the Standard for which the interpretation is being requested.
Question:	Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. Please provide a condensed and precise question, composed in such a way that a "yes" or "no" reply is acceptable.
Proposed Reply(ies):	Provide a proposed reply(ies) in the form of "Yes" or "No," with explanation as needed. If entering replies to more than one question, please number the questions and replies.
Background Information:	Provide the Committee with any background information that will assist the Committee in understanding the inquiry. The Inquirer may also include any plans or drawings that are necessary to explain the question; however, they should not contain proprietary names or information.

Requests that are not in the format described above may be rewritten in the appropriate format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

Moreover, ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Standard requirements. If, based on the inquiry information submitted, it is the opinion of the Committee that the Inquirer should seek assistance, the inquiry will be returned with the recommendation that such assistance be obtained.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME Committee or Subcommittee. ASME does not “approve,” “certify,” “rate,” or “endorse” any item, construction, proprietary device, or activity.

Attending Committee Meetings. The B31 Standards Committee regularly holds meetings and/or telephone conferences that are open to the public. Persons wishing to attend any meeting and/or telephone conference should contact the Secretary of the B31 Standards Committee.

ASME B31Q-2018

SUMMARY OF CHANGES

Following approval by the ASME B31 Committee and ASME, and after public review, ASME B31Q-2018 was approved by the American National Standards Institute on August 30, 2018.

ASME B31Q-2018 includes the following changes identified by a margin note, **(18)**.

<i>Page</i>	<i>Location</i>	<i>Change</i>
19	A-1	Definition of interval added
19	A-2	Task titles revised throughout
22	Task 0081	Subparagraph (a) revised
22	Task 0091	Subparagraph (a)(4)(-c) deleted and following subparagraph redesignated
30	Task 0301	Subparagraph (a) revised
30	Task 0311	Subparagraph (a) revised
31	Task 0321	Subparagraph (a) revised
31	Task 0331	Subparagraph (a) revised
31	Task 0341	Subparagraph (a) revised
33	Task 0381	Subparagraph (a) revised
34	Task 0391	Subparagraph (a) revised
35	Task 0411	Subparagraph (a) revised
36	Task 0421	Subparagraph (a) revised
36	Task 0431	Subparagraph (a) revised
44	Task 0601	Subparagraph (a) revised
44	Task 0611	Subparagraph (a) revised
45	Task 0621	Subparagraph (a) revised
45	Task 0631	Subparagraph (a) revised
46	Task 0661	Subparagraph (a) revised
46	Task 0671	Subparagraph (e) revised
47	Task 0681	Subparagraph (e) revised
47	Task 0691	Subparagraph (e) revised
47	Task 0701	Subparagraph (e) revised
48	Task 0711	Subparagraph (e) revised
48	Task 0721	Subparagraph (a) revised
48	Task 0731	Subparagraph (a) revised
49	Task 0741	Subparagraph (a) revised
49	Task 0751	Subparagraph (e) revised
50	Task 0761	Subparagraph (e) revised
50	Task 0771	Subparagraph (e) revised
51	Task 0781	Subparagraph (e) revised
51	Task 0791	Subparagraph (e) revised

52	Task 0801	Subparagraph (a) revised
52	Task 0811	Subparagraph (a) revised
52	Task 0821	Subparagraph (a) revised
56	Task 0901	Subparagraph (a) revised
56	Task 0911	Subparagraph (a) revised
56	Task 0921	Subparagraph (a) revised
57	Task 0931	Subparagraph (a) revised
57	Task 0941	Subparagraph (a) revised
60	Task 1020	Added
61	Task 1051	Subparagraph (a) revised
61	Task 1081	Subparagraph (a) revised
62	Task 1091	Subparagraph (a) revised
62	Task 1101	Subparagraph (a) revised
63	Task 1111	Subparagraph (a) revised
65	Task 1161	Subparagraph (a) revised
65	Task 1171	Subparagraph (a) revised
69	Task 1285	Subparagraph (a) revised
72	Task 1351	Subparagraph (a) revised
75	Task 1411	Subparagraph (a) revised
75	Task 1431	Subparagraph (a) revised
76	Task 1471	Subparagraph (a) revised
80	Task 1551	Subparagraph (a) revised
81	Task 1631	Subparagraph (a) revised
81	Task 1641	Subparagraph (a) revised
82	Task 1651	Subparagraph (a) revised
82	Task 1661	Subparagraph (a) revised
83	Task 1671	Subparagraph (a) revised
86	Nonmandatory Appendix B	Revised in its entirety
92	Nonmandatory Appendix D	Revised in its entirety

PIPELINE PERSONNEL QUALIFICATION

1 INTRODUCTION

1.1 Scope

This Standard establishes the requirements for developing and implementing an effective Pipeline Personnel Qualification Program (qualification program) utilizing a combination of technically based data, accepted industry practices, and consensus-based decisions. The Standard also offers guidance and examples of a variety of methods that may be used to meet selected requirements. The Standard specifies the requirements for identifying covered tasks that impact the safety or integrity of pipelines, for qualifying individuals to perform those tasks, and for managing the qualifications of pipeline personnel.

With the following exceptions, this Standard applies to tasks that impact the safety or integrity of pipelines:

- (a) design or engineering tasks
- (b) tasks that are primarily intended to ensure personnel safety

1.2 Purpose and Objectives

The purpose of this Standard is to establish requirements for the qualification and management of qualifications for pipeline personnel. The objective of this Standard is to minimize the impact on safety and integrity of the pipeline due to human error that may result from an individual's lack of knowledge, skills, or abilities during the performance of certain activities.

Individuals who perform covered tasks and those individuals responsible for ensuring a qualified workforce shall meet the applicable requirements of this Standard.

2 DEFINITIONS

ability: the mental and physical capacity to perform a task.

abnormal operating condition (AOC): a condition that may indicate a malfunction of a component or deviation from normal operations that may

- (a) indicate a condition exceeding design limits or
- (b) result in a hazard(s) to persons, property, or the environment

affected individual: an individual who performs a covered task(s) or who has qualification program implementation responsibility.

covered task: a task that can affect the safety or integrity of the pipeline.

DI analysis: an analysis that explores the difficulty (D) and importance (I) of each task.

DIF analysis: an analysis that explores the difficulty (D), importance (I), and frequency of performance (F) of each task.

direct and observe: the process by which a qualified individual oversees the work activities of a nonqualified individual(s) and is able to take immediate corrective action when necessary.

distinctive physical ability: clearly defined perceptual or physical functioning required to perform a task (e.g., color vision, visual acuity, hearing, smell).

entity: any individual or organization utilizing any portion of this Standard to develop or implement a qualification program or portion thereof, including pipeline operators, contractors, subcontractors, service providers, etc.

evaluation: a process established to determine an individual's ability to perform a covered task. The term can be used to refer to the process, instrument(s), or both. The process may entail one or more evaluation methods or one or more distinct evaluation instruments.

evaluation criteria: the specific knowledge and skill an individual must possess and demonstrate to be qualified to perform a covered task.

evaluation instrument: the materials that are used to conduct an evaluation, including but not limited to written, oral interview, and performance evaluation materials.

evaluator: an individual selected or credentialed to conduct performance or oral interview evaluations to determine if the individual is qualified.

knowledge: a body of information applied directly to the performance of a task.

mutual aid: pipeline operator personnel assistance (aid) provided to another pipeline operator in the performance of covered tasks.

on-the-job training: instruction at or near the work setting.

performance: demonstration of the knowledge, skills, and abilities (KSAs) required to complete a task.

performance monitoring: a means of confirming that an individual performs covered tasks in accordance with applicable standards or procedures.

personnel: individuals who perform covered tasks.

personnel qualification: the results of the process under which individuals become qualified in accordance with this Standard.