

Recommended Practice on Subsea Equipment Qualification

API RECOMMENDED PRACTICE
17Q SECOND EDITION, MAY 2018

REAFFIRMED, APRIL 2023



AMERICAN PETROLEUM INSTITUTE

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Contents

	Page
1 Scope	1
2 Normative References	1
3 Terms, Definitions, Acronyms, and Abbreviations	1
3.1 Terms and Definitions	1
3.2 Acronyms and Abbreviations	4
4 Document Outline and Application	4
4.1 Process Application	4
4.2 Equipment Applicability	5
4.3 Supplier and End User Role in Qualification Programs	5
5 Qualification Program	6
5.1 General	6
5.2 Overall Qualification Program Process	6
5.3 Requirements Planning (STEP 1)	9
5.4 Technology Maturity Assessment (STEP 2)	10
5.5 Qualification Program Selection (STEP 3)	11
5.6 Qualification Failure Modes, Effects, and Criticality Analysis (Q-FMECA)(STEP 4)	14
5.7 Qualification Plan (STEP 5)	16
5.8 Qualification Execution (STEP 6)	17
5.9 Results Evaluation and Residual Risk/Uncertainty (STEP 7)	21
5.10 Implement Improvements and Modifications (STEP 8)	21
5.11 Qualification Assurance (STEP 9)	22
5.12 End User Qualification Process (TRL 5–7) (STEP 10)	23
6 Assessing Technology Readiness	25
6.1 Technology Readiness Levels (TRL)	25
6.2 Performing the Technology Readiness Level (TRL) Assessment	25
6.3 Risks in Advancement of Technology Readiness Level (TRL)	29
Annex A (informative) Statistical Analysis of Test Data	31
Annex B (informative) Example Technology Maturity Assessment	41
Bibliography	45
Figures	
1 Example of Technology Development Link to End User Application/Project Development	6
2 Overall Process for Qualification Programs	7
3 TRC/TRL Correlation Matrix	12
4 Top Down System Hierarchy and Bottom Up TRL Assessment	29
5 TRC Assessment Question Sequence	30
A.1 Weibull Probability Plot with 2-sided 90 % Confidence Interval (Data from Table A.1)	33
A.2 Results of Example at 50 % Confidence	37
B.1 Diagram of a Vertical Xmas Tree with Key	41
B.2 System Breakdown Example for 15K 350F VXT	42
B.3 Component Breakdown Example for 5" Gate Valve	44
Tables	
1 TRL Definition, Descriptions, Supporting Information, and Achieved Level	26

Contents

	Page
A.1 Example of Sorted Failure Data	31
A.2 Confidence Levels vs Chi-Square Values	32
B.1 Technology Maturity Assessment for a Gate Valve	37
B.2 Technology Maturity Assessment for a Connector Gasket	43

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Recommended Practice on Subsea Equipment Qualification

1 Scope

This recommended practice (RP) provides suppliers, contractors, and operators with process-level guidance to qualify equipment intended for use in subsea applications. This document is intended to provide high-level guidance only, so that the industry will have a common set of principles to follow for equipment qualification. It is not intended to replace existing company processes or procedures. The application of this recommended practice is dependent on the stakeholder companies (qualifier and end user) accepting its use. Although developed for application to subsea equipment, the process described by the RP can be applied to non-subsea equipment as well.

2 Normative References

The following referenced documents are required for the application of this recommended practice. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

API RP 17N, *Recommended Practice on Subsea Production System Reliability, Technical Risk, and Integrity Management*, 2nd Edition (2017)

3 Terms, Definitions, Acronyms, and Abbreviations

3.1 Terms and Definitions

For the purposes of this recommended practice, the following terms and definitions apply:

3.1.1

component

Collection of subcomponents which when brought together function as a unit. (e.g. connector, gate valve, pressure transducers).

3.1.2

cut set

Unique combination of component failures that can cause a system failure.

NOTE A system can have multiple, different cut sets.

3.1.3

environment

Internal, external, and operational conditions to which equipment is exposed.

NOTE This includes physical, chemical, biological, and usage conditions (i.e. seawater environment, water depth, seabed conditions, reservoir conditions, pressure, temperature, etc.).

3.1.4

failure mode

Effect by which a failure is observed on the failed item (i.e. the loss of a required functionality; e.g. the loss of containment).

3.1.5

field proven

Technology or equipment that has been through the entire qualification process and is classified as TRL 7.

NOTE See Table 1 for the definition of TRL 7.