Recommended Practice on Subsea Equipment Qualification

API RECOMMENDED PRACTICE
17Q SECOND EDITION, MAY 2018

REAFFIRMED, APRIL 2023

AMERICAN PETROLEUM INSTITUTE

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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.