Medium Voltage Equipment Used on Subsea Production Systems

API RECOMMENDED PRACTICE 17Z
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1 Scope

This Recommended Practice (RP) is applicable to the design, fabrication, testing, installation, and operation of Subsea Power Systems. The scope includes single phase and three phase systems from 3 kVac to 69 kVac (refer to 3.1.4). It covers subsea installed electrical power equipment and the connections between the equipment.

This RP does not include DC power systems, though they may be included in future revisions.

For any conflicting requirements between this standard and specific component standards listed in Section 2 of this specification with regards to analysis, design test and qualification, the requirements of the specific component standard shall apply.

2 Normative References

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any addenda) applies."

API Specification 17E, *Specification for Subsea Umbilicals*

API Standard 17F, *Standard for Subsea Production and Processing Systems*

API Recommended Practice 17H, *Remotely Operated Tools and Interfaces on Subsea Production Systems*

API Recommended Practice 17N, *Recommended Practice on Subsea Production System Reliability, Technical Risk, and Integrity Management*

API Recommended Practice 17P, *Recommended Practice for Subsea Structures and Manifolds*

API Recommended Practice 17V, *Recommended Practice for Analysis, Design, Installation, and Testing of Safety Systems for Subsea Applications*

API Recommended Practice 17X, *Recommended Practice for Subsea Pump Module Systems*

IEC 60038, *Standard Voltages*

IEC/IEEE 61886.1, *Subsea equipment - Part 1: Power connectors, penetrators and jumper assemblies with rated voltage from 3 kV (Umax = 3.6 kV) to 30 kV (Umax = 36 kV)*

IEC/IEEE 61886.2, *Subsea Equipment – Part 2: Power Transformers*

IEEE 3002.2 – 2018, *Recommended Practice for Conducting Load-Flow Studies and Analysis of Industrial and Commercial Power Systems*

IEEE 3002.3 – 2018, *Recommended Practice for Conducting Short-Circuit Studies and Analysis of Industrial and Commercial Power Systems*

IEEE 3002.7 – 2018, *Recommended Practice for Conducting Motor-Starting Studies and Analysis of Industrial and Commercial Power Systems*

IEEE 3002.8 – 2018, *Recommended Practice for Conducting Harmonic Studies and Analysis of Industrial and Commercial Power Systems*