

# AWES

Advanced Well Equipments  
Standardization Group

## **AWES Recommended Practice For the Qualification of Tubing Encased Conductor (TEC)**

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## Abstract

This recommended practice has been developed by users and suppliers/manufacturers of Tubing Encased Conductor (TEC). The TEC is intended for use downhole by the petroleum and natural gas industries. Outlined within this document are the qualification tests and acceptance testing regimes for each of the individual TEC components from the core to encapsulation. The tests are divided into type tests (qualification) and routine tests/factory acceptance tests (FAT) (production).

The document should be used as a guide. This recommended practice has been organised so that the recommended individual tests for each component are outlined in a coherent way. The supplier and customer must agree beforehand on what the acceptance criteria for given tests should be. This enables suppliers and customers alike to be able to easily understand the testing regime that will be undertaken.

There are 5 sections covering test regimes for components. Sections 4, 5, and 6 cover the tests required for the individual components that make up the TEC. Section 4 details the mechanical and electrical tests on the core. Section 5 explains the five tests that the tube is subjected to. Section 6 explains the encapsulation test of the protective armour layer. Additional quality and testing requirements are specified when required.

Section 7 states the range of qualification tests that should be conducted on a completed cable. Section 8 then goes on to outline the recommended minimum requirements and the routine testing of the final product. For completed cable qualifications (7) and recommended factory acceptance testing (8), there is a general structure for each sub-test. The general structure follows the titles: object, sample, apparatus, procedure and requirements. The structure is broken down further as per the specific qualification and testing requirements of each stage.

Users of this recommended practice should be aware that requirements above those outlined in this recommended practice may be needed for individual applications. This recommended practice is not intended to inhibit a supplier/manufacture from offering, or the user/purchaser from accepting, alternative equipment or engineering solutions. This may be particularly applicable where there is innovative or developing technology.

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