

**AWES Recommended Practice  
For Qualification of  
Permanently Installed In-Well  
Drymate Connectors (PIIWDC)**

AWES 3362 PR PIIWDC

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**OTM Consulting Ltd**

# AWES

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Advanced Well Equipment  
Standards Group

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## **1. Foreword**

AWES (Advanced Well Equipment Standards) is a global industry workgroup formed under the guidance of OTM Consulting. Invitation to this group has been extended to members of various branches of the oil and gas industry including oil and gas exploration and production companies, service companies and equipment vendors.

The main task of this technical committee is to prepare an international Recommended Practice (RP) for Permanently Installed In-Well Drymate Connectors (PIIWD). This committee and the resultant RP will not be designed to hamper innovation of equipment developed by suppliers/manufacturers. Instead the focus has been dedicated to standardizing the qualification testing criteria of said equipment as per mutually agreeable conditions.

This document is only valid if it has been verified to be the latest revision.

## **2. Introduction**

This RP has been developed by users/purchasers and suppliers/manufacturers of PIWDC that are intended for use in the petroleum and natural gas industry worldwide. This RP is intended to provide requirements and information to both parties regarding qualification testing performed on the device to validate the functional specification.

Users of this RP should be aware that requirements above those outlined in this RP may be needed for individual applications. Industry standards supersede this document.

This RP 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. Where an alternative is offered, the supplier/manufacture should identify any variations from this RP.

## 3. Scope

This document provides requirements and guidelines for qualification testing of PIIWDCs as defined herein for use in advanced wells in the petroleum and natural gas industry.

An advanced well is a well with enhanced technologies such as, but not limited to, one or more of the following:

- More than one permanent downhole pressure or temperature gauge
- Multilateral (MLT) well with inflow control in one or more of the laterals
- Inflow control devices (ICDs)
- Minimum one remotely operated adjustable downhole choke (interval control valve (ICV))
- Permanent downhole flow measurements

PIIWDC that are intended to be covered by this RP are drymate connections which are threaded, swaged or welded to Hydraulic/TEC/TEF control lines.

The following is a non-exhaustive list of systems for PIIWDC:

- Electrical monitoring and control
- Optical monitoring
- Hydraulic control and injection

These systems contain drymate connections including but not limited to splices, feedthroughs and tubing hangers.

Applications and testing not covered by this RP are:

- Factory acceptance testing
- Operations/in-field testing procedures
- In well wetmate connectors
- ESP power cable connectors
- Wellhead outlets
- Splicing acceptance criteria

## **4. Normative References**

Refer to latest version of the reference below:

ISO 14998, Petroleum and Natural Gas Industries – Downhole Equipment – Completion Accessories

ISO 17025, General Requirements for the Competence of Testing and Calibration Laboratories

AWES RP 3362, Recommended Practice for the Qualification of Downhole Instrumentation / Sensors