

## Errata to

# IEEE Standard for Requirements for Conduit and Cable Seals for Field Connected Wiring to Equipment in Petroleum and Chemical Industry Exposed to Pressures above Atmospheric (1.5 kPa, 0.22 psi)

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**Petroleum and Chemical Industry Committee**  
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*Correction Sheet*  
**Issued 29 January 2018**

*The following information shall appear in the frontmatter immediately after the introduction:*

## **Acknowledgments**

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*Add the following NOTE after the first paragraph in 1.1 Scope as shown:*

NOTE—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “This document provides specific requirements for process sealing between electrical systems and flammable or combustible process fluids where a failure could allow the migration of process fluids directly into the electrical system.”

*Add the following NOTE after the paragraph in 1.2 Purpose as shown:*

NOTE—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “The purpose of this document is to provide construction and performance requirements for devices that incorporate process seals to eliminate the need for the additional sealing requirements included in ANSI/NFPA 70 : 2002 Sections 501.5(F)(3) and 505.16(E)(3).”

*Add the following NOTE to the definition “dual seal device” as shown:*

NOTE—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “a device which incorporates, along any single potential leakage path, a primary process seal and one or more secondary process seals such that the failure of two or more independent seals is required to allow migration of process fluids from their designed containment into the external electrical system.”

*Add the following NOTE to the definition “primary process seal” as shown:*

NOTE—This text was excerpted from ANSI/ISA-12.27.01 with permission from ISA.

*Add the following NOTE to the definition “process connected equipment” as shown:*

NOTE—This text was excerpted from ANSI/ISA-12.27.01 with permission from ISA.

*Add the following NOTE to the definition “process fluid” as shown:*

NOTE—This text was excerpted from ANSI/ISA-12.27.01 with permission from ISA.

*Add the following NOTE to the definition “process seal” as shown:*

NOTE—This text was excerpted from ANSI/ISA-12.27.01 with permission from ISA.

**Add the following NOTE to the definitions “secondary process seal—containment type” and “secondary process seal—venting type” as shown:**

NOTE—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “a process seal that comes into contact with process fluids only in the case of a primary process seal failure.”

**Add the following NOTE to the definition “single seal device” as shown:**

NOTE—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “a device that incorporates, along any single potential leakage path, a single sealing structure such that a failure of the seal would result in the migration of process fluids from their designed containment into the external electrical system. NOTE Single seal devices in compliance with this document are considered to have a negligible probability of failure when used in accordance with the manufacturer's specification.”

**Change NOTE in 4.1 Basis for requirements to NOTE 1—and NOTE 2 as shown:**

NOTE 1—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “The manufacturer’s process seal specifications shall be determined to comply with the provisions of this document. Manufacturer specifications for process seals shall include but are not limited to the following:

- a) Operational temperature range
- b) Operational pressure range
- c) Materials of construction

NOTE 2—It is assumed for the purposes of this document that installers will follow standard engineering practice and adhere to industry standards for the selection, installation, and operation of devices that contain process seals. For example: the selection of a thermowell for use in a flowing process fluid should adhere to the requirements found in ASME/PTC 19.3.”

**Add the following NOTE after the paragraph in 4.3 Materials as shown:**

NOTE—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “The manufacturer of the process seal shall make available the information necessary to determine if the materials critical to the process sealing of the device are compatible with process fluids.”

**Insert NOTE 1 after the last paragraph in 6.1 Venting pressure determination: secondary process seals as shown:**

NOTE 1—This text was excerpted from ANSI/ISA-12.27.01 with permission from ISA.

**Add the following NOTE after the paragraph in Clause 8 Verification of annunciation effectiveness where provided Materials as shown:**

NOTE—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “The effectiveness of the primary seal failure annunciation shall be verified by failing the primary seal and applying pressure to the device. The verification shall be carried out under conditions deemed to be worst case (least detectable) within the manufacturer’s rating of the device.

Annunciation methods include but are not limited to:

- audible “whistle;”
- visible rupture or leakage;
- electronic detection; and
- rapid, predictable, and detectable failure of the equipment to operate as intended.”

***Add the following NOTE after the dashed list in 9.1 Marking, as shown:***

NOTE—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “The manufacturer shall mark the product with the following:

- “Single Seal” or “Dual Seal” (whichever is applicable)
- Process temperature range
- Working pressure range”

***Add the following NOTE after the dashed list in 9.2 Documentation, as shown:***

NOTE—This text was excerpted and modified from ANSI/ISA-12.27.01 with permission from ISA, with original text: “The manufacturer shall include the following information in the product instructions:

- Information necessary for the determination of chemical compatibility of process wetted materials that form part of a primary seal
- Instructions for installation and use of primary seal failure annunciation (if applicable)
- Instructions necessary for proper maintenance of seals, vents, drains, and annunciators”