Norma Española

# UNE-EN IEC 62282-8-101:2020

Idioma: Inglés

## Tecnología de pilas de combustible. Parte 8-101: Sistemas de almacenamiento de energía que utilizan módulos de pilas de combustible en modo inverso. Procedimientos de ensayo para el rendimiento de pilas individuales y pilas de óxido sólido incluida la operación reversible (Ratificada por la Asociación Española de Normalización en agosto de 2020.)

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UNE-EN IEC 62282-8-101:2020

Tecnología de pilas de combustible. Parte 8-101: Sistemas de almacenamiento de energía que utilizan módulos de pilas de combustible en modo inverso. Procedimientos de ensayo para el rendimiento de pilas individuales y pilas de óxido sólido incluida la operación reversible (Ratificada por la Asociación Española de Normalización en agosto de 2020.)

*Fuel cell technologies - Part 8-101: Energy storage systems using fuel cell modules in reverse mode - Test procedures for the performance of solid oxide single cells and stacks, including reversible operation (Endorsed by Asociación Española de Normalización in August of 2020.)*

*Technologies des piles à combustible - Partie 8-101: Système de stockage de l'énergie utilisant des modules à piles à combustible en mode inversé - Procédures d'essai pour la performance des cellules élémentaires et des piles à oxyde solide, comprenant le fonctionnement réversible (Entérinée par l'Asociación Española de Normalización en août 2020.)*

En cumplimiento del punto 11.2.5.4 de las Reglas Internas de CEN/CENELEC Parte 2, se ha otorgado el rango de documento normativo español UNE al documento normativo europeo EN IEC 62282-8-101:2020 (Fecha de disponibilidad 2020-04-17)

Este documento está disponible en los idiomas oficiales de CEN/CENELEC/ETSI.

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Las observaciones a este documento han de dirigirse a:

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN IEC 62282-8-101

April 2020

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English Version

# Fuel cell technologies - Part 8-101: Energy storage systems using fuel cell modules in reverse mode - Test procedures for the performance of solid oxide single cells and stacks, including reversible operation (IEC 62282-8-101:2020)

Technologies des piles à combustible - Partie 8-101: Système de stockage de l'énergie utilisant des modules à piles à combustible en mode inversé - Procédures d'essai pour la performance des cellules élémentaires et des piles à oxyde solide, comprenant le fonctionnement réversible (IEC 62282-8-101:2020)

Brennstoffzellentechnologien - Teil 8-101: Energiespeichersysteme mit Brennstoffzellenmodulen im reversiblen Betrieb - Prüfverfahren zum Leistungsverhalten von Festoxid-Einzelzellen und -Stacks einschließlich reversiblem Betrieb (IEC 62282-8-101:2020)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**



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## European foreword

The text of document 105/765/FDIS, future edition 1 of IEC 62282-8-101, prepared by IEC/TC 105 "Fuel cell technologies" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62282-8-101:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-12-24
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-03-24

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The text of the International Standard IEC 62282-8-101:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

| | | |
|---|---|---|
| IEC 62282-8-102 | NOTE | Harmonized as EN IEC 62282-8-102 |
| IEC 62282-8-201 | NOTE | Harmonized as EN IEC 62282-8-201 |

# Annex ZA
(normative)

## Normative references to international publications with their corresponding European publications

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 amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

| Publication | Year | Title | EN/HD | Year |
|---|---|---|---|---|
| IEC 60050-485 | - | International Electrotechnical Vocabulary - Part 485: Fuel cell technologies | - | - |
| IEC 61515 | 2016 | Mineral insulated metal-sheathed thermocouple cables and thermocouples | EN 61515 | 2016 |
| IEC 60584-1 | - | Thermocouples - Part 1: EMF specifications and tolerances | EN 60584-1 | - |
| IEC 60584-3 | - | Thermocouples - Part 3: Extension and compensating cables - Tolerances and identification system | EN 60584-3 | - |
| ISO 5168 | - | Measurement of fluid flow - Procedures for the evaluation of uncertainties | - | - |
| ISO 6141 | - | Gas analysis - Contents of certificates for calibration gas mixtures | EN ISO 6141 | - |
| ISO 6142-1 | - | Gas analysis - Preparation of calibration gas mixtures - Part 1: Gravimetric method for Class I mixtures | EN ISO 6142-1 | - |
| ISO 6143 | - | Gas analysis - Comparison methods for determining and checking the composition of calibration gas mixtures | EN ISO 6143 | - |
| ISO 6145-7 | - | Gas analysis - Preparation of calibration gas mixtures using dynamic volumetric methods - Part 7: Thermal mass-flow controllers | EN ISO 6145-7 | - |
| ISO 6974 | series | Natural gas - Determination of composition and associated uncertainty by gas chromatography | EN ISO 6974 | series |

| | | | | |
|---|---|---|---|---|
| ISO 7066-2 | - | Assessment of uncertainty in the calibration and use of flow measurement devices - Part 2: Non-linear calibration relationships | - | - |
| ISO 8756 | - | Air quality - Handling of temperature, pressure and humidity data | EN ISO 8765 | - |

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# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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## Fuel cell technologies – Part 8-101: Energy storage systems using fuel cell modules in reverse mode – Test procedures for the performance of solid oxide single cells and stacks, including reversible operation

## Technologies des piles à combustible – Partie 8-101: Système de stockage de l'énergie utilisant des modules à piles à combustible en mode inversé – Procédures d'essai pour la performance des cellules élémentaires et des piles à oxyde solide, comprenant le fonctionnement réversible



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