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IEC 61427-1:2013

DRAFT TANZANIA STANDARD

(Draft for Stakeholders' comments only)

Secondary cells and batteries for renewable energy storage - General requirements and methods of test –

Part 1: Photovoltaic off-grid application

Draft for Stakeholders' comments only

TANZANIA BUREAU OF STANDARDS

NATIONAL FOREWORD

1 Introduction

This draft Tanzania Standard is being prepared by the Solar Power System Technical Committee (EEDC 5), under the supervision of the Electrical Engineering Divisional Standards Committee (EEDC)

This draft Tanzania Standard is the identical adoption of IEC 61427-1:2013 (Ed.1.0) Secondary cells and batteries for renewable energy storage - General requirements and methods of test – Part 1: Photovoltaic off-grid application published by the International Electrotechnical Commission.

2 Preamble

This draft Tanzania Standard gives general information relating to the requirements for the secondary batteries used in photovoltaic energy systems (PVES) and to the typical methods of test used for the verification of battery performances. This part deals with cells and batteries used in photovoltaic off-grid applications. This standard is applicable to all types of secondary batteries.

In reporting the result of a test made in accordance with this Tanzania standard, if the final value observed or calculated, is to be rounded off, it shall be done in accordance with TZS 4:1999

3 Terminology and convention

Some terminologies and certain conventions are not identical with those used in Tanzania standards; attention is drawn especially to the following: -

- 1) The comma has been used as a decimal marker for metric dimensions. In Tanzania Standards, it is current practice to use “full point” on the baseline as the decimal marker.
- 2) Where the words “International Standard(s)” appear, referring to this standard they should read “Tanzania Standard(s)”.

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IEC 61427-1

Edition 1.0 2013-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Secondary cells and batteries for renewable energy storage – General requirements and methods of test –
Part 1: Photovoltaic off-grid application**

**Accumulateurs pour le stockage de l'énergie renouvelable – Exigences générales et méthodes d'essais –
Partie 1: Applications photovoltaïques hors réseaux**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SECONDARY CELLS AND BATTERIES FOR RENEWABLE ENERGY STORAGE – GENERAL REQUIREMENTS AND METHODS OF TEST –

Part 1: Photovoltaic off-grid application

FOREWORD

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- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61427-1 has been prepared by IEC technical committee 21: Secondary cells and batteries.

This first edition cancels and replaces the second edition of IEC 61427 published in 2005. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) a restructuration of the previous edition of the document;
- b) a clarification of the different clauses with regard to conditions of use, general requirements, functional characteristics, general tests conditions, test method and recommended use of tests, the aim being to ensure a better understanding by the end user;
- c) a clear distinction between on-grid and off-grid applications for future markets needs.

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The text of this standard is based on the following documents:

FDIS	Report on voting
21/793/FDIS	21/802/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61427 series, published under the general title *Secondary cells and batteries for renewable energy storage – General requirements and methods of test*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

SECONDARY CELLS AND BATTERIES FOR RENEWABLE ENERGY STORAGE – GENERAL REQUIREMENTS AND METHODS OF TEST –

Part 1: Photovoltaic off-grid application

1 Scope

This part of the IEC 61427 series gives general information relating to the requirements for the secondary batteries used in photovoltaic energy systems (PVES) and to the typical methods of test used for the verification of battery performances. This part deals with cells and batteries used in photovoltaic off-grid applications.

NOTE The part 2 of this series will cover cells and batteries used in "renewable energy storage in on-grid applications".

This International Standard does not include specific information relating to battery sizing, method of charge or PVES design.

This standard is applicable to all types of secondary batteries.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050 (all parts), *International Electrotechnical Vocabulary (IEV)* (available at <www.electropedia.org>)

IEC 60622, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Sealed nickel-cadmium prismatic rechargeable single cells*

IEC 60623, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Vented nickel-cadmium prismatic rechargeable single cells*

IEC 60896-11, *Stationary lead-acid batteries – Part 11: Vented types – General requirements and methods of test*

IEC 60896-21, *Stationary lead-acid batteries – Part 21: Valve regulated types – Methods of test*

IEC 61056-1, *General purpose lead-acid batteries (valve-regulated types) – Part 1: General requirements, functional characteristics – Methods of test*

IEC 61836, *Solar photovoltaic energy systems – Terms, definitions and symbols*

IEC 61951-1, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Portable sealed rechargeable single cells – Part 1: Nickel-cadmium*

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IEC 61951-2, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Portable sealed rechargeable single cells – Part 2: Nickel-metal hydride*

IEC 61960, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for portable applications*

IEC 62259, *Secondary cells and batteries containing alkaline or other non-acid electrolytes – Nickel-cadmium prismatic secondary single cells with partial gas recombination*