SRI LANKA STANDARD 1082 : Part 4.2 : 2009
IEC 60264-4-2: 1992+ A 1: 2003

SPECIFICATION FOR PACKAGING OF WINDING WIRES

PART 4.2: METHODS OF TEST – CONTAINERS MADE FROM PLASTIC MATERIAL FOR TAPER DELIVERY SPOOLS

(First Revision)

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard

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SLS 1082 Part 4.2: 2009
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SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This standard does not purport to include all the necessary provisions of a contract.

Sri Lanka Standard
SPECIFICATION FOR PACKAGING OF WINDING WIRES PART 4-2: METHODS OF TEST-CONTAINERS MADE FROM THERMOPLASTIC MATERIAL FOR TAPER BARRELLED DELIVERY SPOOLS
(First Revision)

NATIONAL FOREWORD

This standard was approved by the Sectoral Committee on Electric Cables and Conductors and was authorized for adoption and publication as a Sri Lanka Standard by the Council of Sri Lanka Standards Institution on 2009-10-28.

This is the first revision of **SLS 1082 Part 4.2: 1995** and identical with **IEC 60264-4-2:** Packaging of winding wires, Part 4-1: Methods of test – Containers made from thermoplastic material for taper barrelled delivery spools Edition 1.0 1992-07 and Amd No 1: 2003, published by the International Electrotechnical Commission (IEC).

Terminology and conventions

The text of the International Standard has been accepted as suitable for publication, with out deviation, as a Sri Lanka Standard. However, certain terminology and conventions are not identical with those used in Sri Lanka Standards; attention is therefore drawn to the following:

a) Wherever the words “International Standard” appear referring to this standard they should be interpreted as “Sri Lanka Standard”.

b) Wherever the page numbers are quoted they are the page numbers of IEC standard.

c) The comma has been used as a decimal marker. In Sri Lanka Standards it is the current practices to use a full point on the base line as a decimal marker.

CROSS REFERENCES

International Standards	Corresponding Sri Lanka Standards
IEC 60264 : Packaging of winding wires – Part 3-4 : Taper barrelled delivery spools - Basic dimensions of containers for taper barrelled delivery spools	SLS 1082 : Packaging of winding wires – Part 3.4 : Taper barrelled delivery spools - Basic dimensions of containers for taper barrelled delivery spools

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NORME INTERNATIONALE
INTERNATIONAL STANDARD

CEI
IEC
264-4-2

Première édition
First edition
1992-07

Conditionnement des fils de bobinage

Partie 4:
Méthodes d'essai
Section 2: Conteneurs faits de matériau thermoplastique pour bobines de livraison à fût de forme conique

Packaging of winding wires

Part 4:
Methods of test
Section 2: Containers made from thermoplastic material for taper barrelled delivery spools

Numéro de référence
Reference number
CEI/IEC 264-4-2: 1992

Numéros des publications

Depuis le 1er janvier 1997, les publications de la CEI sont numérotées à partir de 60000.

Publications consolidées

Les versions consolidées de certaines publications de la CEI incorporant les amendements sont disponibles. Par exemple, les numéros d'édition 1.0, 1.1 et 1.2 indiquent respectivement la publication de base, la publication de base incorporant l'amendement 1, et la publication de base incorporant les amendements 1 et 2.

Validité de la présente publication

Le contenu technique des publications de la CEI est constamment revu par la CEI afin qu'il reflète l'état actuel de la technique.

Des renseignements relatifs à la date de reconfirmation de la publication sont disponibles dans le Catalogue de la CEI.

Les renseignements relatifs à des questions à l'étude et des travaux en cours entrepris par le comité technique qui a établi cette publication, ainsi que la liste des publications établies, se trouvent dans les documents ci-dessous:

- **«Site web» de la CEI***
- **Catalogue des publications de la CEI**
  Publié annuellement et mis à jour régulièrement (Catalogue en ligne)*
- **Bulletin de la CEI**
  Disponible à la fois au «site web» de la CEI* et comme périodique imprimé

Terminologie, symboles graphiques et littéraux

En ce qui concerne la terminologie générale, le lecteur se reportera à la CEI 60050: *Vocabulaire Electrotechnique International* (VEI).

Pour les symboles graphiques, les symboles littéraux et les signes d'usage général approuvés par la CEI, le lecteur consultera la CEI 60027: *Symboles littéraux à utiliser en électrotechnique,* la CEI 60417: *Symboles graphiques utilisables sur le matériel. Index, relevé et compilation des feuilles individuelles,* et la CEI 60617: *Symboles graphiques pour schémas.*

* Voir adresse «site web» sur la page de titre.

Numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series.

Consolidated publications

Consolidated versions of some IEC publications including amendments are available. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

Validity of this publication

The technical content of IEC publications is kept under constant review by the IEC, thus ensuring that the content reflects current technology.

Information relating to the date of the reconfirmation of the publication is available in the IEC catalogue.

Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is to be found at the following IEC sources:

- **IEC web site***
- **Catalogue of IEC publications**
  Published yearly with regular updates (On-line catalogue)*
- **IEC Bulletin**
  Available both at the IEC web site* and as a printed periodical

Terminology, graphical and letter symbols

For general terminology, readers are referred to IEC 60050: *International Electrotechnical Vocabulary* (IEV).

For graphical symbols, and letter symbols and signs approved by the IEC for general use, readers are referred to publications IEC 60027: *Letter symbols to be used in electrical technology*, IEC 60417: *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets* and IEC 60617: *Graphical symbols for diagrams.*

* See web site address on title page.

NORME INTERNATIONALE
INTERNATIONAL STANDARD

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264-4-2

Première édition
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Conditionnement des fils de bobinage

Partie 4:
Méthodes d'essai
Section 2: Conteneurs faits de matériau thermoplastique pour bobines de livraison à fût de forme conique

Packaging of winding wires

Part 4:
Methods of test
Section 2: Containers made from thermoplastic material for taper barrelled delivery spools

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PACKAGING OF WINDING WIRES

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FOREWORD

1) The formal decisions or agreements of the IEC on technical matters, prepared by Technical Committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.

2) They have the form of recommendations for international use and they are accepted by the National Committees in that sense.

3) In order to promote international unification, the IEC expresses the wish that all National Committees should adopt the text of the IEC recommendation for their national rules in so far as national conditions will permit. Any divergence between the IEC recommendation and the corresponding national rules should, as far as possible, be clearly indicated in the latter.

This section of International Standard IEC 264-4 has been prepared by IEC Technical Committee No. 55: Winding wires.

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

DIS	Report on Voting
55(CO)416	55(CO)433

Full information on the voting for the approval of this section can be found in the Voting Report indicated in the above table.

INTRODUCTION

This section of IEC 264-4 is one of a series which deals with insulated wires used for windings in electrical equipment. The series comprises three groups describing:

1) methods of test (IEC 851);
2) specifications (IEC 317);
3) packaging (IEC 264).

PACKAGING OF WINDING WIRES

Part 4: Methods of test

Section 2: Containers made from thermoplastic material for taper barrelled delivery spools

1 Scope

This section of IEC 264-4 describes the methods of test for containers made from thermoplastic material to be used for taper barrelled delivery spools for winding wires.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this section of IEC 264-4. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this section of IEC 264-4 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 264-3-4: 1990, *Packaging of winding wires – Part 3: Taper barrelled delivery spools. Section 4: Basic dimensions of containers for taper barrelled delivery spools.*

3 General notes on methods of test

Unless otherwise specified, all tests shall be carried out within a range from 15 °C to 35 °C and a relative humidity from 45 % to 75 %.

In case of dispute, the containers shall be pre-conditioned at a temperature of (23 ± 2) °C for 24 h.

4 Container irregularities

The surface, colour and construction shall be visually inspected.

5 Container marking

The container marking shall be visually inspected.

6 Container mass

The mass of the container shall be controlled by an apparatus having a scale which can indicate the specified weight and tolerance.

7 Container dimensions

The container dimensions shall be checked using suitable measuring instruments.

8 High temperature test

The container shall be conditioned for a period of 2 h in an oven with forced air circulation at a temperature specified in the relevant specification. The container shall be allowed to cool to room temperature before the dimensional checks as specified in clause 7 are carried out.

9 Moisture test

The container shall be conditioned for a period of 24 h in water of a temperature of (30 ± 3) °C. After removal from the water the dimensional checks as specified in clause 7 shall be carried out.

10 Load resistance test

10.1 *At room temperature*

After conditioning for a minimum of 24 h at a temperature of (20 ± 5) °C, the container shall be loaded for 72 h as shown in figure 1. The load shall be specified in the relevant specification.

The load shall have a smooth surface and shall have a minimum diameter as given for the relevant size d_1 in IEC 264-3-4.

After the load has been removed, the dimensional checks as specified in clause 7 shall be carried out.

10.2 *At elevated temperature*

The container shall be loaded according to 10.1 and then heated as illustrated in figure 1. The maximum surface temperature within the angle α and the distance "a" shall be specified in the relevant specification.

After the specified surface temperature has been reached, the container shall be maintained at this temperature for 8 h. Then the lamps shall be switched off and the container shall be cooled down under load to room temperature.

After the load has been removed the container shall be checked for deformation.

11 Impact test

11.1 *At room temperature*

After conditioning the container for 24 h at a temperature of (20 ± 5) °C, the hammer shall be released to strike against the wall of the container as illustrated in figure 2.

The mass of the hammer and the sizes h_1, h_2 and h_3 shall be specified in the relevant specification.

11.2 *At low temperature*

After conditioning for 24 h at a temperature specified in the relevant specification, the container shall immediately be tested as illustrated in figure 2.

The mass of the hammer and the size h_1, h_2 and h_3 shall be specified in the relevant specification.

12 Lifting device test

A mass (6) shall be placed in the centre of the bottom of the container (see figure 3). The weight of this mass shall be specified in the relevant specification. The container bottom shall then be locked (5).

NOTE - The locking device shown in figure 3 is an example and is not intended to show any particular construction.

The container lifting device (4) shall be suspended on a suitable apparatus (1) by means of a rope (2). The container lifting device and the lifting apparatus shall be connected. The container shall then be raised to a height greater than specified to allow the container to fall unobstructed.

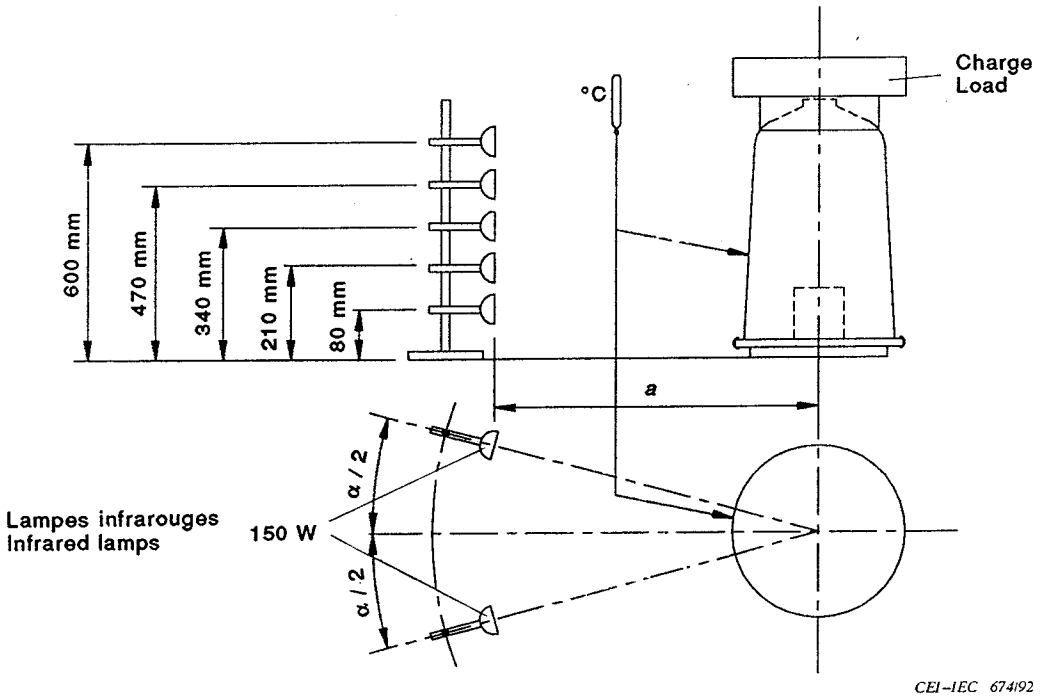

Figure 1 – Appareil d'essai pour la mesure de la résistance sous charge à température élevée

Load resistance test apparatus at elevated temperature

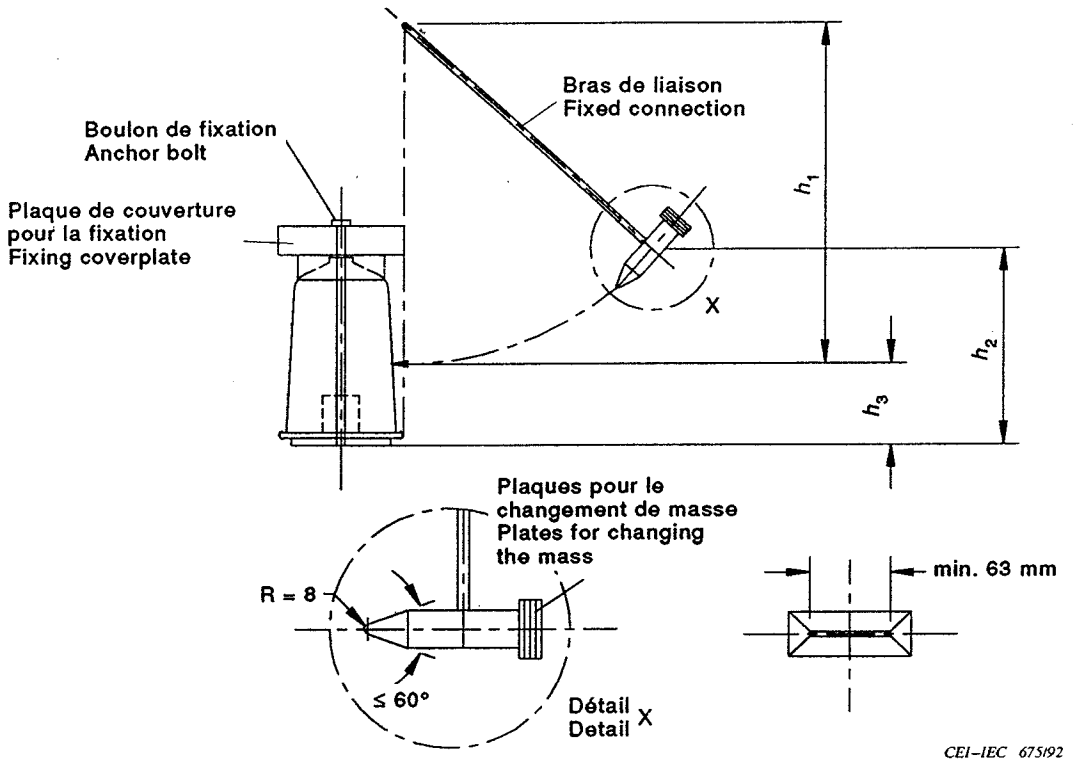

Figure 2 – Appareil d'essai de choc

Impact test apparatus

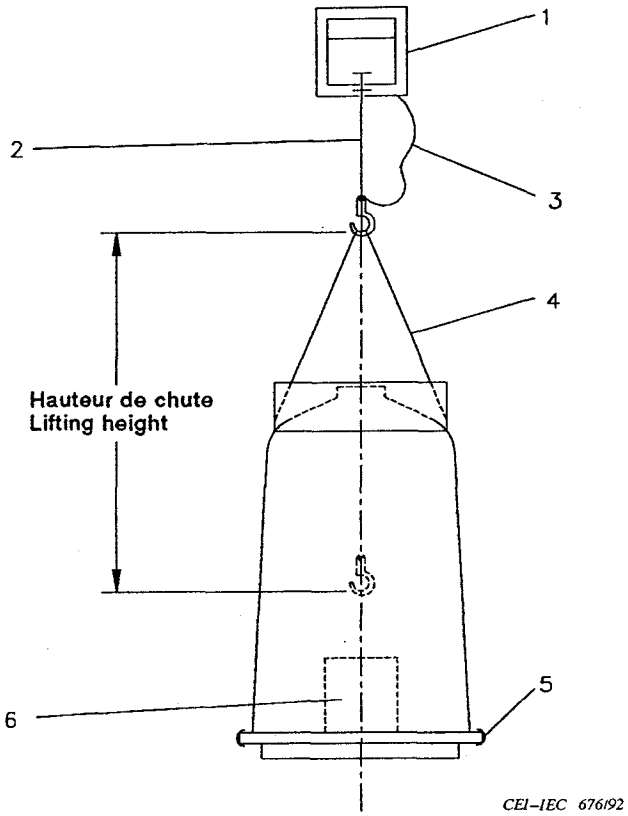

Figure 3 – Dispositif de levage

Lifting device apparatus

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AMENDEMENT 1
AMENDMENT 1
2003-12

Amendement 1

Conditionnement des fils de bobinage –

Partie 4-2:
Méthodes d'essai –
Conteneurs faits de matériau thermoplastique pour bobines de livraison à fût de forme conique

Amendment 1

Packaging of winding wires –

Part 4-2:
Methods of test –
Containers made from thermoplastic material for taper barrelled delivery spools

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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FOREWORD

This amendment has been prepared by IEC technical committee 55: Winding wires.

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

FDIS	Report on voting
55/872/FDIS	55/889/RVD

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

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2009. At this date, the publication will be

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

Throughout the text, add 60000 to all the numbers of the standards cited. For example, change “IEC 264-4” to “IEC 60264-4”.

Page 7

INTRODUCTION

Replace the existing text with the following:

This standard is one of a series that deals with insulated wires used for windings in electrical equipment. The series comprises three groups:

1) winding wires – Test methods (IEC 60851);
2) specifications for particular types of winding wire (IEC 60317);
3) packaging of winding wires (IEC 60264).

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SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science & Technology.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in turn are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of standardization as are of special interest to Sri Lanka.

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