

Live working — Insulating hoses with fittings for use with hydraulic tools and equipment

The European Standard EN 62237:2005 has the status of a
British Standard

ICS 13.260; 29.240.99; 29.260.99

National foreword

This British Standard is the official English language version of EN 62237:2005. It was derived by CENELEC from IEC 62237:2003.

The CENELEC common modifications have been implemented at the appropriate places in the text. The start and finish of each common modification is indicated in the text by tags [C] [C]. Where a common modification has been introduced by amendment, the tags carry the number of the amendment. For example, the common modifications introduced by CENELEC amendment A11 are indicated by [C11] [C11].

The UK participation in its preparation was entrusted to Technical Committee PEL/78, Tools for live working, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

The UK technical committee, PEL/78, actively participated in the development of EN 62237 but consistently opposed some of its provisions. In particular, the committee is concerned that the electrical test severely restricts the availability of non-conductive hoses used for live working. It is expected that the tests will be reviewed as part of the maintenance process for EN 62237.

The view of the committee is that this standard imposes more onerous test requirements than have previously been necessary for these applications, e.g. in SAE J343 and SAE J517, with the consequence that users will have a more limited choice of non-conductive hoses without any real increase in safety and those that meet the requirements attract an increase in cost.

A list of organizations represented on this committee can be obtained on request to its secretary.

Summary of pages

This document comprises a front cover, an inside front cover, page i, a blank page, the EN title page, pages 2 to 31 and a back cover.

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**Live working –
Insulating hoses with fittings for use
with hydraulic tools and equipment
(IEC 62237:2003, modified)**

Travaux sous tension –
Conduits flexibles isolants avec raccords
utilisés avec les outils et matériels
hydrauliques
(CEI 62237:2003, modifiée)

Arbeiten unter Spannung –
Isolierende Schlauchleitungen zur
Verwendung für hydraulische Geräte
und Ausrüstungen
(IEC 62237:2003, modifiziert)

This European Standard was approved by CENELEC on 2005-03-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

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Foreword

The text of the International Standard IEC 62237:2003, prepared by IEC TC 78, Live working, together with the common modifications prepared by the Technical Committee CENELEC TC 78, Equipment and tools for live working, was submitted to the formal vote and was approved by CENELEC as EN 62237 on 2005-03-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2006-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2008-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62237:2003 was approved by CENELEC as a European Standard with agreed common modifications.

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INTRODUCTION

This International Standard has been prepared in accordance with the requirements of IEC 61477.

☐ *Text deleted* ☐

LIVE WORKING – INSULATING HOSES WITH FITTINGS FOR USE WITH HYDRAULIC TOOLS AND EQUIPMENT

1 Scope

This International Standard is applicable to mobile insulating hoses with fittings used with hydraulic tools and equipment for live working at nominal voltages exceeding 1 kV r.m.s. at power frequency.

The use under D.C. conditions is not covered by this standard.

Insulating hoses with fittings are used to provide a connection between the hydraulic tool and the pump which are at different potentials. They are not considered as a fixed component of a live working device (e.g. aerial device). They can be connected and disconnected under negligible pressure. They can be directly handled by the user.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 60060-1:1989, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60060-2, *High-voltage test techniques – Part 2: Measuring systems*

IEC 60212:1971, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 60417-DB:2002¹⁾, *Graphical symbols for use on equipment*

☐ Text deleted ☐

IEC 61477:2001, *Live working – Minimum requirements for the utilization of tools, devices and equipment*
Amendment 1:2002²⁾

1) "DB" refers to the IEC on-line database.

2) There exists a consolidated edition 1.1 (2002) that includes edition 1 (2001) and its Amendment 1 (2002).

3 Terms and definitions

☞ For the purpose of this document, the following terms and definitions apply. ☞

3.1

insulating hose with fittings

insulating and pressure resistant hose and fittings which are used to provide a connection between parts of hydraulic equipment at different electric potentials

[Definition 12.1.4 of IEC 60743]

3.2

insulating hose

insulating and pressure resistant hose without fittings

3.3

maximum operating pressure

pressure specified by the manufacturer which shall not be exceeded during the use of the insulating hose

3.4

insulating liquid (for hydraulic equipment)

insulating liquid which is used for the transmission of hydraulic energy between parts at different electric potentials

[IEV 651-11-02]

4 Requirements

4.1 Protection against corrosion

Metal parts shall be resistant to corrosion either by their own composition or by being suitably treated.

NOTE When two metallic materials are used, they should be selected in such a way as to avoid electrolytic action.

4.2 Finishing and mechanical protection

The various components shall be designed so that they do not create the potential for injury.

4.3 Insulating parts

Insulation is achieved by using a proper length of insulating hose. End fittings shall not impair the dielectric properties of the tool.

The insulating parts shall be characterized by a special colour that shows their insulating property.

NOTE Orange is a preferred colour to indicate insulating parts.