Tsiviilkäibes olevad lõhkeained. Detonaatorid ja releed. Osa 3: Löögitundlikkuse määramine

Explosives for civil uses - Detonators and relays - Part 3: Determination of sensitiveness to impact

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13763-3:2002 sisaldab Euroopa standardi EN 13763-3:2002 ingliskeelset teksti. Käesolev dokument on jõustatud 18.10.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 13763-3:2002 consists of the English text of the European standard EN 13763-3:2002. This document is endorsed on 18.10.2002 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies a method for determining the velocity of detonation of detonating cords	**Scope:** This European Standard specifies a method for determining the velocity of detonation of detonating cords

ICS 71.100.30

Võtmesõnad: detonation, detonator, detonators, drop hammers, electric fuse, electrical engineering, explosion proofness, explosives, explosives storage, igniters, ignition devices, impact strength, impact testing, lay, retardants, sensitivity, shock resistance, testing

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13763-3

September 2002

ICS 71.100.30

English version

Explosives for civil uses - Detonators and relays - Part 3: Determination of sensitiveness to impact

Explosifs à usage civil - Détonateurs et relais - Partie 3: Détermination de la sensibilité au choc

Explosivstoffe für zivile Zwecke - Zünder und Verzögerungselemente - Teil 3: Bestimmung der Schlagempfindlichkeit

This European Standard was approved by CEN on 1 August 2002.

CEN 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 Management Centre or to any CEN 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 CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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Ref. No. EN 13763-3:2002 E

Contents

Foreword

This document (EN 13763-3:2002) has been prepared by Technical Committee CEN/TC 321 "Explosives for civil uses", the secretariat of which is held by AENOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2003, and conflicting national standards shall be withdrawn at the latest by March 2003.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s), see informative annex ZA, which is an integral part of this standard.

This European Standard is one of a series of standards with the generic title *Explosives for civil uses – Detonators and relays.* The other parts of this series are listed below:

prEN 13763-1 *Part 1: Requirements.*

EN 13763-2 *Part 2: Determination of thermal stability.*

prEN 13763-4 *Part 4: Determination of resistance to abrasion of leading wires and shock tubes.*

prEN 13763-5 *Part 5: Determination of resistance to cutting damage of leading wires and shock tubes.*

prEN 13763-6 *Part 6: Determination of resistance to cracking in low temperatures of leading wires.*

prEN 13763-7 *Part 7: Determination of the mechanical strength of leading wires, shock tubes, connections, crimps and closures.*

prEN 13763-8 *Part 8: Determination of resistance to vibration of plain detonators.*

prEN 13763-9 *Part 9: Determination of resistance to bending of detonators.*

prEN 13763-10 *Part 10: Determination of resistance to torsion of sealing plugs.*

prEN 13763-11 *Part 11: Determination of drop resistance of detonators and relays.*

prEN 13763-12 *Part 12: Determination of resistance to hydrostatic pressure.*

prEN 13763-13 *Part 13: Determination of resistance of electric detonator to electrostatic discharge.*

prEN 13763-14 *Part 14: Determination of resistance of electric detonator to the influence of radio frequency radiation.*

prEN 13763-15 *Part 15: Determination of equivalent initiating capability.*

prEN 13763-16 *Part 16: Determination of delay accuracy.*

prEN 13763-17 *Part 17: Determination of no-fire current of electric detonators.*

prEN 13763-18 *Part 18: Determination of series firing current of electric detonators.*

prEN 13763-19 *Part 19: Determination of firing pulse of electric detonators.*

prEN 13763-20 *Part 20: Determination of total resistance of electric detonators.*

prEN 13763-21 *Part 21: Determination of flash-over voltage of electric detonators.*

prEN 13763-22 *Part 22: Determination of capacitance, insulation resistance and insulation breakdown of leading wires.*

EN 13763-23 *Part 23: Determination of the shock-wave velocity of shock tube.*

EN 13763-24 *Part 24: Determination of the non-conductivity of shock tube.*

prEN 13763-25 *Part 25: Determination of transfer capacity of relay and coupling accessories.*

prEN 13763-26 *Part 26: Definitions, methods and requirements for devices and accessories for reliable and safe function of detonators and relays.*

prCEN/TS 13763-27 *Part 27: Definitions, methods and requirements for electronic initiation system.*

Annex A is informative and annex B is normative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies methods for checking that plain detonators, electric detonators, non-electric detonators, surface connectors, shock tubes and detonating cord relays will not explode when subjected to an impact under specified conditions.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

prEN 13857-1, *Explosives for civil uses — Part 1: Terminology*.

prEN 13763-1, *Explosives for civil uses. Detonators and relays — Part 1: Requirements.*

EN ISO 4957:1999, *Tool steels (ISO 4957:1999)*.

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:1999).*

ISO 1052:1982, *Steels for general engineering purposes.*

ISO 683-9:1988, *Heat-treatable steels, alloy steels and free-cutting steels — Part 9: Wrought free-cutting steels.*

ISO 683-17:1999, *Heat-treated steels, alloy steels and free-cutting steels — Part 17: Ball and roller bearing steels.*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in prEN 13857-1 and the following apply:

3.1
drop height
distance between the lowest part of the striking head of the drop weight and the uppermost part of the percussion cylinder

3.2
ignition system
electrical resistance heating wire surrounded by an incendiary material

4 Apparatus

4.1 Electric, non-electric and plain detonators

4.1.1 General

The apparatus is a drop hammer (e.g. the BAM fall-hammer), comprising a cast steel block with base, a main anvil and an intermediate anvil, a locating plate, a guide piece, a percussion cylinder, a column, guides and a drop weight with a release mechanism and a striking head.