Irish Standard
I.S. EN ISO 6803:2017

Rubber or plastics hoses and hose assemblies - Hydraulic-pressure impulse test without flexing (ISO 6803:2017)

I.S. EN ISO 6803:2017

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN ISO 6803:2017 is the adopted Irish version of the European Document EN ISO 6803:2017, Rubber or plastics hoses and hose assemblies - Hydraulic-pressure impulse test without flexing (ISO 6803:2017)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 6803

March 2017

ICS 23.040.70; 23.100.40

Supersedes EN ISO 6803:2008

English Version

Rubber or plastics hoses and hose assemblies - Hydraulic-pressure impulse test without flexing (ISO 6803:2017)

Tuyaux et flexibles en caoutchouc ou en plastique - Essai d'impulsions de pression hydraulique sans flexion (ISO 6803:2017)

Gummi- oder Kunststoffschläuche und -schlauchleitungen - Hydraulik-Druck-Impulsprüfung ohne Biegung (ISO 6803:2017)

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European foreword

This document (EN ISO 6803:2017) has been prepared by Technical Committee ISO/TC 45 "Rubber and rubber products" in collaboration with Technical Committee CEN/TC 218 “Rubber and plastics hoses and hose assemblies” the secretariat of which is held by BSI.

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of an identical text or by endorsement, at the latest by September 2017 and conflicting national standards shall be withdrawn at the latest by September 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 6803:2017 has been approved by CEN as EN ISO 6803:2017 without any modification.

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INTERNATIONAL STANDARD

ISO 6803

Fourth edition
2017-03

Rubber or plastics hoses and hose assemblies — Hydraulic-pressure impulse test without flexing

Tuyaux et flexibles en caoutchouc ou en plastique — Essai d'impulsions de pression hydraulique sans flexion

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html

This document was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Subcommittee SC 1, *Rubber and plastics hoses and hose assemblies*.

This fourth edition cancels and replaces the third edition (ISO 6803:2008), which has been technically revised to include cool down testing as specified in 4.1 and 8.2.

Rubber or plastics hoses and hose assemblies — Hydraulic-pressure impulse test without flexing

1 Scope

This document describes hose impulse testing, without flexing, of rubber or plastics hydraulic hose assemblies at both high and low impulse pressures. The high-pressure testing is carried out at pressures greater than 3 MPa and the low-pressure testing at pressures from 1,5 MPa to 3 MPa. The test procedure is applicable to hydraulic hose assemblies that are subject to pulsating pressures in service which are included in the product requirements.

NOTE Impulse test procedures with flexing can be found in ISO 6802.

2 Normative references

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.

ISO 3448, *Industrial liquid lubricants — ISO viscosity classification*

ISO 8330, *Rubber and plastics hoses and hose assemblies — Vocabulary*

ISO/TR 11340, *Rubber and rubber products — Hydraulic hose assemblies — External leakage classification for hydraulic systems*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8330 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Apparatus

4.1 Pressure-application apparatus, capable of applying an internal pulsating pressure to the test piece at a rate specified in 8.2 using a hydraulic fluid circulating through the test hose, while the fluid is maintained at the required test temperature. Each pressure cycle shall be within the tolerances shown in Figure 2 (for high-pressure testing) or Figure 3 (for low-pressure testing). The nominal rate of pressure rise for high-pressure testing is given by Formula (1) in Figure 2. The rate of pressure rise for low-pressure testing shall be such that the pulse remains within the wave form envelope (see Figure 3).

4.2 Graphical recorder, digital-storage facility or **oscilloscope**, capable of measuring the pressure cycle to ensure that the wave form is within the envelope shown in Figure 2 or Figure 3. The recorder shall have a natural frequency of more than 250 Hz and shall be critically damped to give a response which is flat to within 5 % at up to 0,6 times the natural frequency.