Plastics piping systems - End-load-bearing and non-end-load-bearing assemblies and joints for thermoplastics pressure piping - Test method for long-term leaktightness under internal water pressure

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN ISO 13846:2001 sisaldab Euroopa standardi EN ISO 13846:2000 ingliskeelset teksti. Käesolev dokument on jõustatud 09.03.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 13846:2001 consists of the English text of the European standard EN ISO 13846:2000. This document is endorsed on 09.03.2001 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 standard specifies a method of test for the long-term leaktightness of end-load-bearing and non-end-load-bearing mechanically jointed assemblies and joints between fittings, ancillaries, valves and thermoplastics pressure pipes, including integral pipe joints.	**Scope:** This standard specifies a method of test for the long-term leaktightness of end-load-bearing and non-end-load-bearing mechanically jointed assemblies and joints between fittings, ancillaries, valves and thermoplastics pressure pipes, including integral pipe joints.

ICS 23.040.60

Võtmesõnad: determination, jointing, pipe couplings, pipes, plastic pipes, plastics, pressure pipes, testing, thermoplastic, thermoplastic polymers, tightness, tubes

EUROPEAN STANDARD
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English version

Plastics piping systems

End-load-bearing and non-end-load-bearing assemblies and joints for thermoplastics pressure piping

Test method for long-term leaktightness under internal water pressure
(ISO 13846 : 2000)

Systèmes de canalisations en plastiques – Assemblages et jonctions avec et sans effet de fond pour canalisations thermoplastiques avec pression – Méthode d'essai pour vérifier l'étanchéité à long terme sous une pression d'eau interne (ISO 13846 : 2000)

Kunststoff-Rohrleitungssysteme – Zugfeste und nicht-zugfeste Rohrverbindungen und Bauteilkombinationen für thermoplastische Druckrohrleitungen – Prüfverfahren für die Langzeitdichtheit unter Wasserinnendruck (ISO 13846 : 2000)

This European Standard was approved by CEN on 1999-04-24.

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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

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

CEN

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

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Ref. No. EN ISO 13846 : 2000 E

Contents

Foreword

The text of EN ISO 13846:2000 has been prepared by Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems", the secretariat of which is held by NNI, in collaboration with Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids".

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 April 2001, and conflicting national standards shall be withdrawn at the latest by April 2001.

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, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

The material-dependent parameters and/or performance requirements are incorporated in the System Standard(s) concerned.

This standard is one of a series of standards on test methods which support System Standards for plastics piping systems and ducting systems.

1 Scope

This standard specifies a test method for the long-term leaktightness of end-load-bearing and non-end-load-bearing mechanically jointed assemblies and joints between fittings, ancillaries, valves and thermoplastics pressure pipes, including integral pipe joints.

This method is applicable to joints where similar or different materials are connected, where sealing mechanisms include elastomeric sealing rings or adhesives.

This method is applicable in addition to the hydrostatic pressure tests for materials and components.

2 Principle

The test simulates expansion of the joint area due to creep. This is related to the permissible working conditions for 50 years and based on the properties of the components assembled.

The leaktightness of the joint(s) is tested as an assembly comprising either:

a) at least one fitting joined to pipes; or

b) an ancillary component or a valve joined to pipes; or

c) a pipe-to-pipe joint.

The test is carried out for at least 1000 h at ambient temperature and at the maximum allowed working temperature for the piping system for which the assembly or joint is intended to be used.

The test piece and its joint(s) are subjected to a specified internal hydrostatic water pressure at a specified temperature for the period of time (1000 h or more) specified in the referring standard. Additional reinforcement of the joint area is not permitted for this test.

NOTE It is assumed that the following test parameters are set by the standard making reference to this standard:

a) the minimum test period under pressure, i.e. 1000 h or more (see clause 2 and 5.4);

b) the free length, *L*, of the pipe sections under test (see 4.1);

c) the number of test pieces (see 4.2);

d) the test temperature (e.g. ambient or maximum allowed working temperature) (see 5.2);

e) the test pressure (see 5.3).

3 Apparatus

3.1 Ambient temperatures

For tests at ambient temperatures (see 5.2), a test room or water bath, capable of being maintained at a temperature to within ± 2°C.

3.2 Elevated temperatures

For tests at elevated temperatures, an air chamber or water bath, capable of being maintained at the specified test temperature to within $\binom{+3}{-1}$ °C.