



# SLOVENSKI STANDARD SIST EN ISO 7662:2000

01-december-2000

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## Gumene in polimerne cevi - Ugotavljanje obrabe podloge (ISO 7662:1988)

Rubber and plastics hoses - Determination of abrasion of lining (ISO 7662:1988)

Gummi- und Kunststoffschläuche - Bestimmung des Abriebs der Innenschicht (ISO 7662:1988)

Tuyaux en caoutchouc et en plastique - Détermination de l'abrasion du tube du tuyau (ISO 7662:1988)

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Ta slovenski standard je istoveten z: **EN ISO 7662:1996**

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### **ICS:**

23.040.70      Gumene cevi in armature      Hoses and hose assemblies

**SIST EN ISO 7662:2000**

**en**

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EUROPEAN STANDARD

EN ISO 7662

NORME EUROPÉENNE

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English version

**Rubber and plastics hoses - Determination of  
abrasion of lining (ISO 7662:1988)**

Tuyaux en caoutchouc et en plastique -  
Détermination de l'abrasion du tube du tuyau  
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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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CEN**

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

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

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### Foreword

The text of the International Standard from Technical Committee ISO/TC 45 "Rubber and rubber products" of the International Organization for Standardization (ISO) has been taken over as an European Standard by 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 January 1997, and conflicting national standards shall be withdrawn at the latest by January 1997.

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

### Endorsement notice

The text of the International Standard ISO 7662:1988 has been approved by CEN as a European Standard without any modification.

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# INTERNATIONAL STANDARD

ISO  
7662

First edition  
1988-04-15



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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION  
ORGANISATION INTERNATIONALE DE NORMALISATION  
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

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## Rubber and plastics hoses — Determination of abrasion of lining

*Tuyaux en caoutchouc et en plastique — Détermination de l'abrasion du tube du tuyau*

**(standards.iteh.ai)**

SIST EN ISO 7662:2000

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## ISO 7662 : 1988 (E)

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7662 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*.

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# Rubber and plastics hoses — Determination of abrasion of lining

## 1 Scope

This International Standard specifies a method for determining the abrasion of a hose lining when a certain amount of specified grit is passed through the hose. The method is applicable to rubber and plastics hoses with an internal bore of 20 to 50 mm used for grit blasting, shot blasting and similar operations.

The method may be used for comparison of the abrasion resistance of different types of hose, but not for specification of maximum abrasion in a hose standard. Comparison should be made on the same type and size of hose. Results from tests carried out with different types of grit should not be compared.

## 2 Apparatus

**2.1 Grit blasting cabinet**, constructed according to the basic principles shown in figure 1. The cabinet shall contain 25 kg of grit which is continually circulated during the test. The dimensions of the feed hose and air inlet of the grit container shall allow a grit flow rate of  $42 \text{ g/s} \pm 2 \text{ g/s}$ .

**2.2 Ejector**, with a blasting nozzle manufactured from hard metal, having an internal diameter of  $10 \text{ mm} \pm 1 \text{ mm}$ , the length of the cylindrical part being between 50 and 100 mm. A typical arrangement is shown in figure 2.

**2.3 Filter**, for drying the compressed air.

**2.4 Pressure regulator**, capable of controlling the air pressure.

**2.5 Fixture**, for mounting the hose in the specified position and for obtaining parallelism between the nozzle and the hose.

## 3 Grit

The grit used shall be a cast iron grit with a particle size of 0,7 to 0,9 mm and a Rockwell hardness of 58 to 60 HRC. Other types of grit may be used if a description is given in the test report.

## 4 Test piece

The test piece shall consist of a piece of hose with a length of  $1\ 000 \text{ mm} \pm 50 \text{ mm}$ .

## 5 Procedure

**5.1** Weigh the test piece (clause 4) to the nearest 0,1 g.

**5.2** Check the flow rate of the grit (clause 3), which shall be  $42 \text{ g/s} \pm 2 \text{ g/s}$  at an air pressure of 250 kPa, by collecting and weighing the amount of grit passing in a given period.

**5.3** Mount the test piece in the vertical position in the cabinet (2.1), using the fixture (2.5) to obtain the correct position in accordance with figure 3. The bend radius  $r$  shall be six times the nominal bore size of the hose.

**5.4** Connect the blasting nozzle to the test piece and check that the centreline of the nozzle and that of the test piece do not deviate more than  $1^\circ$ . The nozzle shall be inserted in the test piece for a length of 25 to 50 mm.

**5.5** Fill the grit container in the cabinet with 25 kg of new, not previously used, grit.

**5.6** Set the air pressure at  $250 \text{ kPa} \pm 25 \text{ kPa}$  (see 2.4).

**5.7** Start the blasting and continue for  $400 \text{ min} \pm 1 \text{ min}$ .

**5.8** Remove the test piece from the cabinet and clear it of residual grit by blowing air through the hose bore and brushing the cover of the hose.

**5.9** Weigh the test piece to the nearest 0,1 g.

## 6 Expression of results

Determine the loss in volume,  $\Delta V$ , in cubic centimetres, using the formula

$$\frac{m_1 - m_2}{\rho}$$

where

$m_1$  is the mass, in grams, of the test piece before testing (5.1);

$m_2$  is the mass, in grams, of the test piece after testing (5.9);

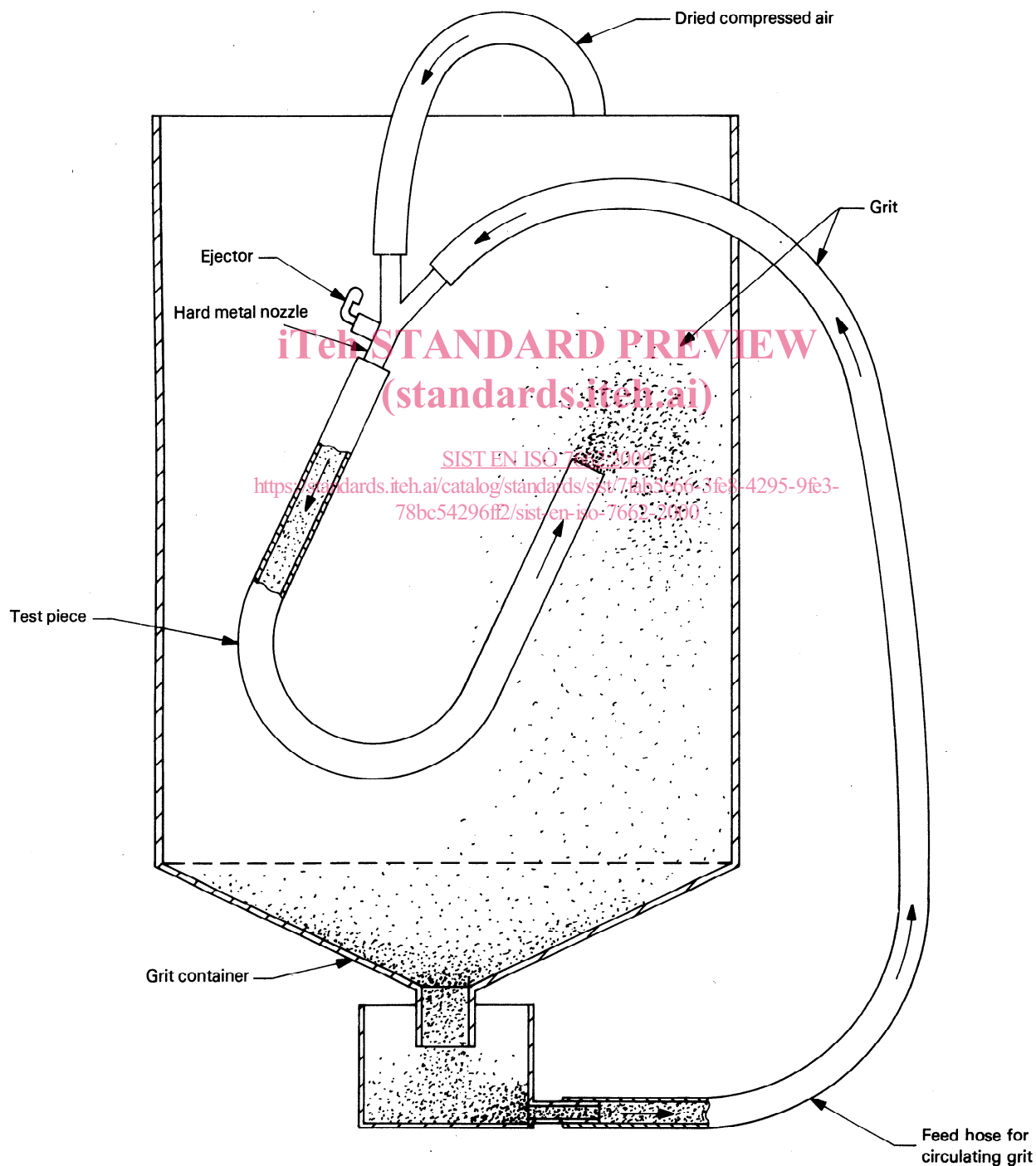
$\rho$  is the density, in grams per cubic centimetre, of the lining material.

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## 7 Test report

The test report shall include the following information:

- |                                                                                                                                                                                            |                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>a) a full description of the hose tested, including the density of the lining material;</p> <p>b) a reference to this International Standard;</p> <p>c) details of test conditions:</p> | <p>— type of grit,</p> <p>— flow rate of grit,</p> <p>— test time;</p> <p>d) the loss of volume, given in cubic centimetres;</p> <p>e) any other observation made during the test;</p> <p>f) the date of the test.</p> |
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**Figure 1 — Basic principle of blasting cabinet with test piece inserted**  
(A suitable cabinet can measure about 1 m × 1 m × 1 m.)