INTERNATIONAL STANDARD

ISO 6945

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Rubber hoses — Determination of abrasion resistance of the outer cover

Tuyaux en caoutchouc — Détermination de la résistance à l'abrasion du revêtement extérieur

Reference number
ISO 6945:1991(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 voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 6945 was prepared by Technical Committee ISO/TC 45, *Rubber and rubber products*, Sub-Committee SC 1, *Hoses (rubber and plastics)*.

This second edition cancels and replaces the first edition (ISO 6945:1983), of which it constitutes a technical revision.

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Rubber hoses — Determination of abrasion resistance of the outer cover

1 Scope

This International Standard specifies a method for the determination of the abrasion resistance of the outer cover of rubber hoses.

This method is intended primarily for testing hydraulic hoses having textile or wire reinforcement and a nominally smooth and parallel cover, and other hoses of a similar type.

The method is not intended for predicting product abrasion life, but is suitable for the comparison of quality levels.

This International Standard does not specify the number of cycles which should be completed in each test; this number will be specified in the appropriate product specification.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 471:1983, *Rubber — Standard temperatures, humidities and times for the conditioning and testing of test pieces.*

ISO 4957:1980, *Tool steels.*

3 Apparatus

3.1 Wheel and crank arrangement, capable of moving the abrading tool 100 mm back and forth along the test piece with sinusoidal motion at a rate of 1,25 Hz (one cycle equals 200 mm of travel). A typical arrangement is shown in figure 1.

The traversing arrangement shall be designed to ensure that:

a) the mid-point of the traversed length is coincident with the mid-point of the assembled hose and mandrel;

b) the axes of the abrading tool and hose are mutually perpendicular at the mid-point;

c) the plane of travel is parallel to the longitudinal axis of the test piece.

3.2 Recording device, to record the number of cycles completed, and capable of being pre-set to terminate the test after completion of the specified number of cycles.

3.3 Abrading tool, manufactured from tool steel S 9 in accordance with ISO 4957, heat-treated to give a minimum hardness of HV 890.

The principal dimensions shall be as shown in figure 2. It is essential that the specified profile and surface finish are maintained, and that any extraneous material on the surface of the abrading tool is cleaned off before testing is started.

3.4 Means of applying a vertical force F, as specified in the relevant product standard, to the abrading tool at the point of contact with the test piece.