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Wide-mouth glass containers — Deviation from flatness of top sealing surface — Test methods

Récipients en verre à col large — Déviation de planéité de la surface d'étanchéité supérieure — Méthodes d'essai

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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.

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Wide-mouth glass containers — Deviation from flatness of top sealing surface — Test methods

1 Scope

This International Standard specifies two complementary test methods for the determination of the deviation from flatness of the top sealing surface of wide-mouth glass containers.

It applies to wide-mouth glass containers, designated for sterilization and other purposes, where a hermetic seal is required.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was 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 edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7348:1991, *Glass containers — Manufacture — Vocabulary*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 7348 and the following definition apply.

3.1 deviation from flatness of top sealing surface: Quantitative measure of a saddled finish.

NOTES

1 A saddled finish usually occurs after the container has been properly formed and before it leaves the annealing lehr.

2 The deviation from flatness of the top sealing surface should not be confused with the "non-parallelism of finish with reference to container base" which is dealt with in ISO 9009:1991, *Glass containers — Height and non-parallelism of finish with reference to container base — Test methods*.

4 Principle

4.1 Quick check to determine whether the top sealing surface meets predetermined flatness requirements.

4.2 Measurement of the distance between the top sealing surface and a flat plate pressed onto this surface.

5 Apparatus

5.1 Horizontal flat baseplate

5.2 Feeler gauges, in steps of 0,05 mm, i.e. 0,05 mm, 0,1 mm, etc.

NOTE 3 For rapid inspection, and especially for automatic checking, other apparatus exist. An example of such an apparatus works by measuring how good is the vacuum produced when the container is inverted on a standard rubber base and exhausted.

6 Sampling

Sampling shall form the subject of agreement between the parties concerned.

7 Procedure

7.1 General

Invert the container on the horizontal flat baseplate (5.1). If the container rocks, allow it to stabilize before continuing with the determination.

7.2 Quick check to determine whether the top sealing surface meets predetermined flatness requirements

7.2.1 Select a feeler gauge (5.2) of the same thickness as the out-of-flatness deviation permitted.

7.2.2 Try to insert the feeler gauge in the gap, if present, between the baseplate and the top sealing surface throughout the circumference of the finish. During this operation the gauge shall lie flat on the baseplate and shall be moved smoothly on it. The feeler gauge is considered to be inserted when its head reaches over the inside edge of the finish, provided that during this operation the container under test does not rock or exhibit any other motion.

7.2.3 If the gauge cannot be inserted from any direction, the container is considered to meet the flatness requirement.

7.2.4 If the gauge can be inserted, repeat the procedure described in 7.2.2 using the next thicker gauge. If this second gauge cannot be inserted, the container is considered to meet the flatness requirement. If this second gauge can be inserted, the container is considered as not meeting the flatness requirement.

7.3 Determination of deviation from flatness of top sealing surface

7.3.1 According to the case, select a feeler gauge of the same thickness as the out-of-flatness deviation permitted, or select the smallest gauge or the second smallest gauge (i.e. 0,1 mm).

7.3.2 Try to insert the feeler gauge selected, using the same procedure as described in 7.2.2.

7.3.3 Continue the determination using smaller or larger gauges as necessary. The determination is terminated when two gauges are identified which differ in thickness by not more than one step (i.e. 0,05 mm), the smaller one of which can be inserted and the larger one of which cannot.

8 Expression of results

8.1 Quick check (7.2)

If results by attributes are required, take as the result the number of containers which meet the flatness requirement.

8.2 Determination (7.3)

For each container tested, take as the result the thickness, in millimetres, of the smaller of the two gauges identified in 7.3.3.

9 Test report

The test report shall specify the following information:

a) reference to this International Standard;

b) reference to the test method(s) used (i.e. 7.2 and/or 7.3);

c) the size of the sample and the type of container tested;

d) manufacturing details;

e) the type of apparatus used;

f) the results obtained;

g) the tester's name and signature, and date of test.

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