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(CMIJ/JSA)

**Hermetically sealed metal cans for food
and drink**

ICS 55.120

Reference number : JIS Z 1571 : 2005 (E)

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Can Manufacturing Institute of Japan (CMIJ)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently JIS Z 1571 : 1999 is replaced with this Standard.

This revision has been made based ISO 90-1 : 1997 *Light gauge metal containers—Definitions and determination of dimensions and capacities—Part 1 : Open-top cans*, ISO 1361 : 1997 *Light-gauge metal containers—Round open-top cans—Internal diameters*, ISO 10653 : 1993 *Light-gauge metal containers—Round open-top cans—Cans defined by their nominal gross lidded capacities* and ISO 10654 : 1993 *Light-gauge metal containers—Round open-top cans—Cans for liquid products with added gas, defined by their nominal filling volumes* on for the purposes of making it easier to compare this Standard with International Standards ; to prepare Japanese Industrial Standard conforming with International Standards ; and to propose drafts of International Standards which are based on Japanese Industrial Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Hermetically sealed metal cans for food and drink

Introduction This Japanese Industrial Standard has been prepared based on the first edition of ISO 90-1 *Light-gauge metal containers—Definitions and dimensions—Part 1 : Open-top cans* and ISO 1361 *Light-gauge metal containers—Round open-top cans—Internal diameters* published in 1997, and on the first edition of ISO 10653 *Light-gauge metal containers—Round open-top cans—Cans defined by their nominal gross lidded capacities* and ISO 10654 *Light-gauge metal containers—Round open-top cans—Cans for liquid products with added gas, defined by their nominal filling volumes* published in 1993 with some modifications of the technical contents.

The portions sidelined are the matters in which the contents of original International Standards have been modified. A list of modifications with the explanations is given in Annex (informative).

1 Scope This Standard specifies the filling volume, inside diameter (or opening diameter), height of can, quality and employed materials of round open-top cans of two-piece and three-piece to be used as containers of canned foods (including drinks) (hereinafter referred to as the "cans").

This Standard, however, does not apply to cans which are double seamed at both ends after filled with contents.

Remarks : The International Standards corresponding to this Standard are as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standards and JIS are IDT (identical), MOD (modified), and NEQ (not equivalent) according to ISO/ IEC Guide 21.

ISO 90-1 : 1997 *Light gauge metal containers—Definitions and determination of dimensions and capacities—Part 1 : Open-top cans* (MOD)

ISO 1361 : 1997 *Light-gauge metal containers—Round open-top cans—Internal diameters* (MOD)

ISO 10653 : 1993 *Light-gauge metal containers—Round open-top cans—Cans defined by their nominal gross lidded capacities* (MOD)

ISO 10654 : 1993 *Light-gauge metal containers—Round open-top cans—Cans for liquid products with added gas, defined by their nominal filling volumes* (MOD)

2 Normative references The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS G 3303 *Tinplate and blackplate*

JIS G 3315 *Chromium plated tin free steel*

JIS H 2108 *Tin metal*

JIS H 4000 *Aluminium and aluminium alloy sheets and plates, strips and coiled sheets*

3 Terms and definitions For the purposes of JIS Z 1571, the following definitions apply.

3.1 can a small container made of metallic plates

3.2 open-top can a can of which one end is double-seamed after filling

3.3 can shell that is consist of shell and bottom lid, and may be called as empty can

3.4 shell that which metallic material is formed to cylindrically

3.5 bottom lid that which metallic material is punched, formed, after being applied with hermetical sealing material for seaming and is rolled to shell in the can manufacturing process, and may be called a bottom lid

3.6 lid that which metallic material is punched, formed, after being applied with hermetical sealing material for seaming and, after filling content, is rolled to can shell in the can manufacturing process, and may be called a top lid

3.7 three-piece can a can made from three main components : body, top end and bottom end

3.8 two-piece can a can made from two main components : body and bottom, which form one piece, and a top end

3.9 necked-in the work to reduce the bore diameter of one end or both ends of a can by drawing compound

There are multi stage necked-in such as double necked-in, triple necked-in, and smooth necked-in according to the shape.

3.10 step-sided can the shape of can whose body is increased in cross-section at one extremity

3.11 bead the shape of concave and convex concentrically formed on the can shell

3.12 easy-open method easily to open a can without using a can opening utensil.

3.13 taper shape whose cross-section enlarges continuously to the top of shell (top lid side) from the bottom (bottom lid side)

3.14 bulge the shape that a part of shell is bulged (see figure 1)

3.15 opening diameter the inside diameter of can shell where top lid is seamed (see figure 2)

4 Quality The quality shall be as follows :

4.1 The inside and outside surfaces of can shall be free from defects harmful to use.

Remarks : The cans, according to their uses, shall conform to the Food Sanitation Law formulating the standards of foods, additives and others (Notification No. 370 of the Ministry of Health and Welfare, 1959) or to the Ministerial Ordinance related to the ingredient standards of milk and dairy products (Ministerial Ordinance No. 52 of the Ministry of Health and Welfare, 1951).

5 Construction

5.1 Three-piece can

5.1.1 Shell The shell shall be formed into a cylindrical shape from a sheet of plate specified in 8.1, and the side seams shall be joined with the bonding agent specified in 8.2 or be welded together, and necked-in, bead or bulging process are performed to flange forming if necessary (see figure 1).

5.1.2 Lid or bottom lid The bottom shall be punch-formed from a sheet of plate specified in 8.1 and after being applied the hermetically sealing material for seaming specified in 8.3, and easy-open characteristic is allowed if necessary (see figures 3 and 4).

5.2 Two-piece can

5.2.1 Shell The shell shall be punch-formed from a sheet of plate specified in 8.1, and necked-in, step-side processes are performed to flange forming if necessary

5.2.2 Lid or bottom The lid shall be punch-formed from specified in 8.1, and be applied with the hermetical sealing material specified in 8.3, and easy-open characteristic is allowed if necessary (see figures 3 and 4).

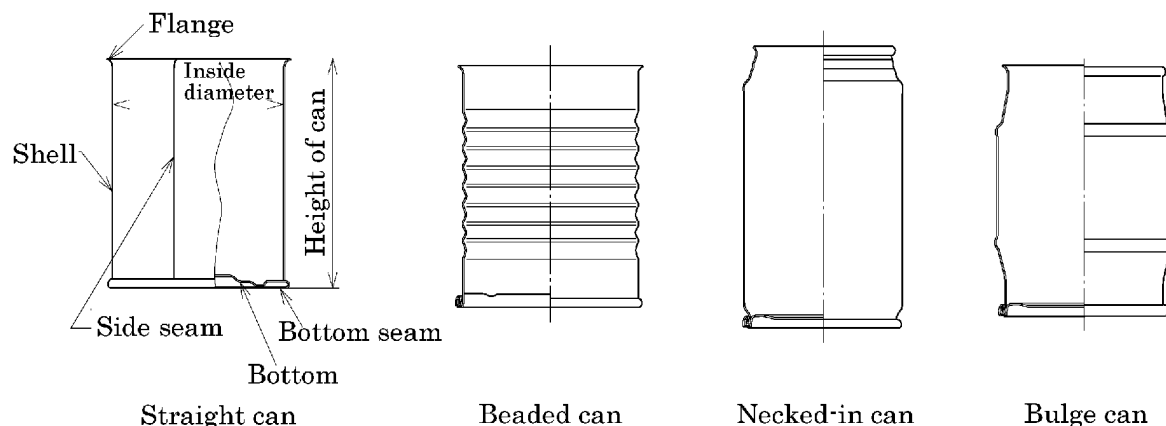


Figure 1 Example for three-piece cans

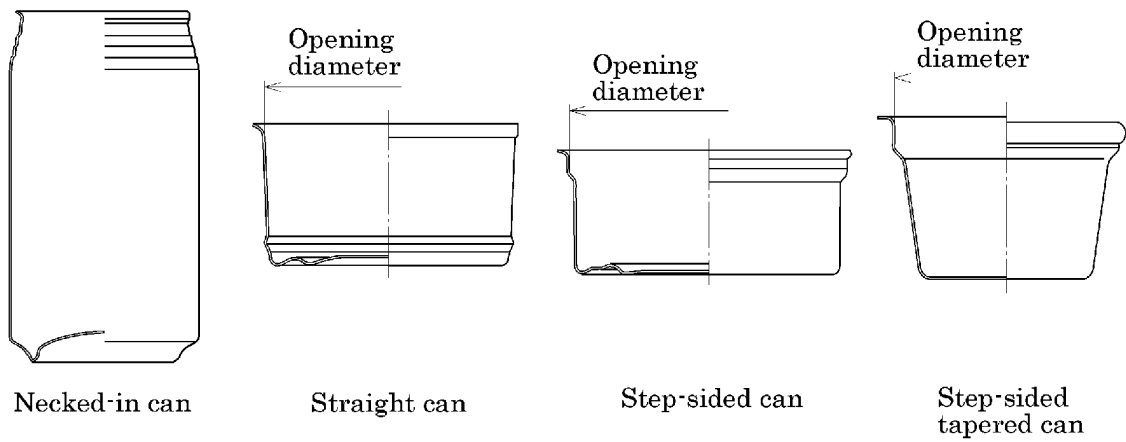


Figure 2 Example for two-piece cans

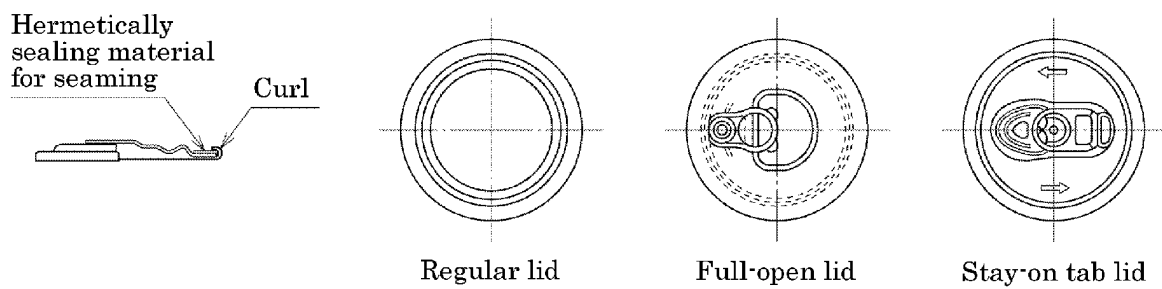


Figure 3 Example for lids

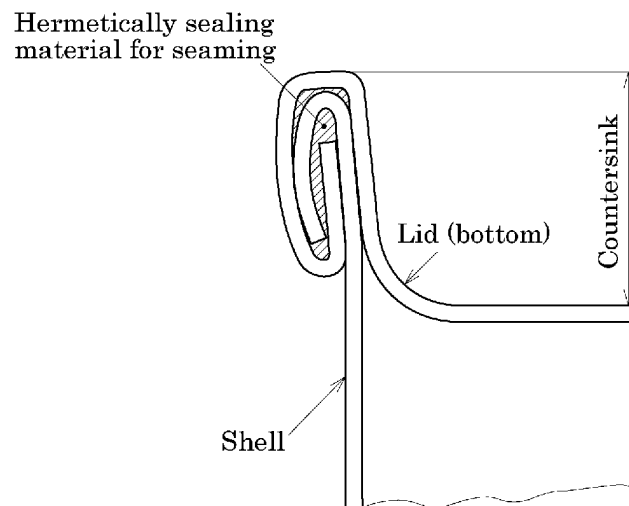


Figure 4 Enlarged figure of double seam section