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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 Japan Bicycle Promotion Institute (JBPI)/ 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Consequently, **JIS K 6302:2008** is replaced with this Standard, and **JIS D 9112:1991** has been withdrawn and replaced with this Standard.

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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 or utility model right. 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 or the utility model right.

Cycles — Tyres

Introduction

This Japanese Industrial Standard has been prepared based on the fifth edition of ISO 5775-1 published in 1997 by modifying some of the technical contents in order to reflect the actual situation in Japan.

The portions given sidelines or dotted underlines are the matters in which the contents of the corresponding International Standard have been modified. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies the pneumatic tyres for bicycles specified in JIS D 9111 (hereafter referred to as “bicycle tyres”) and pneumatic tyres for delivery bicycles (hereafter referred to as “delivery bicycle tyres”). It does not apply to tubular tyres (round tyres) or tubeless tyres.

Bicycle tyres and delivery bicycle tyres are generically referred to as “tyres”.

NOTE : The International Standard corresponding to this Standard and the symbol of degree of correspondence is as follows.

ISO 5775-1 : 1997 *Bicycle tyres and rims — Part 1 : Tyre designations and dimensions* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and JIS are IDT (identical), MOD (modified), and NEQ (not equivalent) according to ISO/IEC Guide 21-1.

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 B 7721 Tension/compression testing machines — Verification and calibration of the force-measuring system

JIS D 9111 Cycles — Classification and essential characteristics

JIS D 9421 Bicycles — Rims

NOTE : Corresponding International Standard : ISO 5775-2 : 1996 *Bicycle tyres and rims — Part 2 : Rims* and Amendment 1 : 2001 (MOD)

JIS K 6250 Rubber — General procedures for preparing and conditioning test pieces for physical test methods

JIS K 6251 Rubber, vulcanized or thermoplastics — Determination of tensile

*stress-strain properties**JIS K 6259 Rubber, vulcanized or thermoplastics — Determination of ozone resistance**JIS L 1017 Test methods for chemical fibre tire cords**JIS Z 2241 Metallic materials — Tensile testing — Method of test at room temperature**JIS Z 8401 Guide to the rounding of numbers***3 Terms and definitions**

For the purpose of this Standard, the following terms and definitions apply.

3.1 tyre size designation

designation of the tyre size indicated as “(nominal tyre overall diameter) × (nominal tyre width)” or “(nominal tyre width) — (nominal rim diameter)”

3.2 applicable rim

a rim suitable for a particular tyre, capable of effectively fulfilling the tyre performance

JIS D 9421 shall be referred to for classification, types and nominal size of applicable rims.

3.3 design dimensions

basic dimensions in the design of a tyre

It generically refers to the tyre overall width and tyre overall diameter (see table 1 to table 3).

3.4 tyre overall width

the maximum width of a tyre mounted on an applicable rim, inflated to the standard inflation pressure, and under no-load condition¹⁾ (see figure 1 to figure 4)

NOTE : The tyre width is defined as the linear distance between the sidewalls of the tyre excluding the moulded patterns and letters that are included in the tyre overall width.

Note ¹⁾ In this condition, the tyre is not resting on the ground.

3.5 tyre overall diameter

the overall diameter of a tyre mounted on an applicable rim, inflated to the standard inflation air pressure, and under no-load condition¹⁾ (see figure 1 to figure 4)

3.6 marked inflation pressure

the marking of the inflation pressure given on the tyre at which the tyre performance can be effectively fulfilled

3.7 standard inflation pressure

the inflation pressure at which the tyre performance can be effectively fulfilled

3.8 maximum inflation pressure

the maximum value of inflation pressure at which the tyre performance can be effectively fulfilled

3.9 recommended inflation pressure range

the range of inflation pressure in which the tyre performance can be effectively fulfilled (maximum value and minimum value)

3.10 maximum load

the maximum load, with the tyre inflated to the standard inflation pressure, at which the endurance of the tyre can be effectively fulfilled

3.11 PR (ply rating)

reference rating for tyre strength, the lowest class of which is 2 PR

In the case of 2 PR, the marking may be omitted.

3.12 delivery bicycle tyres

BE or WO tyres with a nominal width of 1 ³/₄ or over to and excluding 4, used for delivery bicycles moved by human power such as two-wheeled carts or monocytes

3.13 tread

rubber layer of the tyre to be in contact with the ground (figure 1 to figure 4)

3.14 bead

the part of the tyre that secures the tyre to the rim (see figure 1 to figure 4)

3.15 sidewall

the rubber section of the tyre between the tread and the beads (see figure 1 to figure 4)

3.16 carcass cloth

fibres (cords) forming a ply inside the tyre

3.17 ply

layer formed by cords, expressed with the number of carcass cloths

4 Classification

Tyres are classified according to the application and the type of bead as follows.

- a) **Classification according to application** Tyres are classified into those for bicycles and those for delivery bicycles.
- b) **Classification according to type of bead** Tyres are classified as follows according to the type of bead.
 - 1) WO ²⁾ tyres (see figure 1)
 - 2) HE ³⁾ tyres (see figure 2)
 - 3) BE ⁴⁾ tyres (see figure 3)

- Notes 2) Abbreviation for “Wired On”. In the corresponding International Standard, it is defined as the “wired edge” tyre mounted on straight side rims (SS rims), or crotchet type rims (CT rims).
- 3) Abbreviation for “Hooked Edge”. In the corresponding International Standard, it is defined as the “beaded edge” tyre mounted on hooked bead rims (HB rims).
- 4) Abbreviation for “Beaded Edge”.

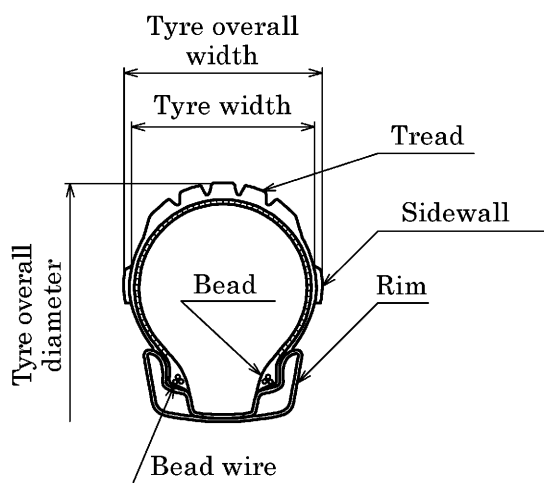


Figure 1 WO tyre

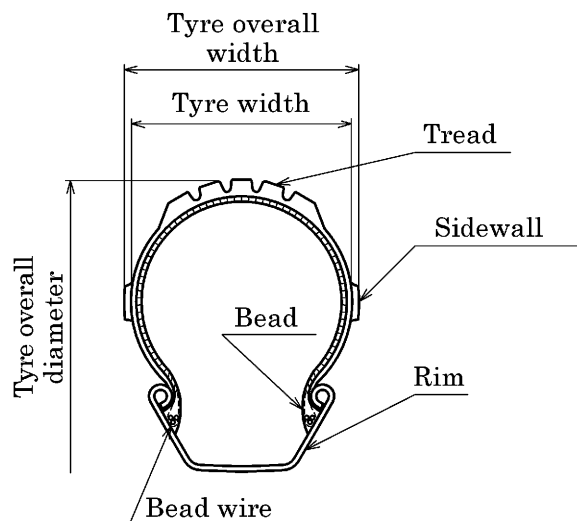


Figure 2 HE tyre

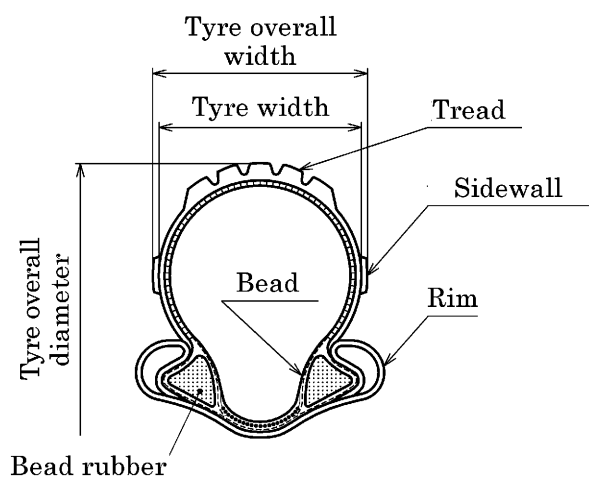


Figure 3 BE tyre

5 Dimensions

Tyre dimensions are classified according to the type of tyre as shown in table 1 to table 3. The classification of tyre, tyre size designation, applicable rim and standard inflation pressure other than those specified in table 1 to table 3 may be used upon agreement between the parties concerned with delivery.