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Tyres – Regulation No. 75

Proposal for amendments to Regulation No. 75 (Pneumatic Tyres for Motorcycles/Mopeds)

Submitted by the experts from the European Tyre and Rim Technical Organisation*

The text reproduced below was prepared by the experts from the European Tyre and Rim Technical Organisation (ETRTO) amending the tyre dimensional requirements of UN Regulation No. 75. The modifications to the existing text of the Regulation are marked in bold for new or strikethrough for deleted characters.

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* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

I. Proposal

Paragraph 6.1.1.1., amend to read:

6.1.1.1.   The section width shall be calculated by the following formula:

$$S = S_1 + K (A-A_1),$$

where:

S   is the "section width" ~~expressed in millimetres~~ **rounded to the nearest millimetre** and measured on the measuring rim;

S_1 is the "nominal section width" (in mm) as shown on the side wall of the tyre in the designation of the tyre as prescribed;

A   is the width (expressed in mm) of the measuring rim, as shown by the manufacturer in the descriptive note;

A_1 is the width (expressed in mm) of the theoretical rim;

A_1 shall be taken to equal S_1 multiplied by the factor X specified by the manufacturer;

K   shall be taken to equal 0.4."

Paragraph 6.1.2.1., amend to read:

"6.1.2.1.   The outer diameter of a tyre shall be obtained by means of the following formula:

$$D = d + 2H$$

Where:

D   is the outer diameter expressed in millimetres;

d   is the ~~conventional number~~ **nominal rim diameter** defined in paragraph 2.16.3. above, expressed in millimetres;

H   is the nominal section height **rounded to the nearest millimetre** ~~in millimetres~~ and is equal to

$H = S_1$ x 0.01 Ra, where

S_1 is the nominal section width in millimetres;

Ra   is the nominal aspect ratio;

all as shown on the sidewall of the tyre in the tyre-size designation in conformity with the requirements of paragraph 3.4. above."

Amend paragraph 6.1.4.

"6.1.4.   Tyre section-width specifications"

to read:

"6.1.4.   Tyre section width specification"

Paragraph 6.1.4.2., amend to read:

"6.1.4.2.   It may exceed that value up to the value shown in annex 5 or for sizes not included in annex 5 by the following percentages, **whereby the limits shall be rounded to the nearest millimetre**:"

Paragraph 6.1.5., amend to read:

"6.1.5.	Tyre ~~outer diameter~~ **outer diameter** specifications

6.1.5.1.	The outer diameter of a tyre must not be outside the values D_{min} and D_{max} specified in annex 5.

6.1.5.2.	For sizes not listed in annex 5 the outer diameter of a tyre must not be outside the values D_{min} and D_{max} obtained from the following formulae:

$D_{min} = d + 2 \cdot H_{min}$ ~~(2H x a)~~

$D_{max} = d + 2 \cdot H_{max}$ ~~(2H x b)~~

Where:

$H_{min} = H \cdot a$	**rounded to the nearest mm**

$H_{max} = H \cdot b$	**rounded to the nearest mm**

and

H and d are as defined in paragraph 6.1.2.1. and a and b are as specified in paragraphs 6.1.5.2.1. and 6.1.5.2.2. respectively."

## II.	Justification

1.	The current rules for calculating the dimensional limits are not consistent among the UN Regulations for tyres and within the Regulations themselves. Hence they lead to uncertainty about the correct calculation. For example, the design section widths in Annex 5 are calculated according to the rules of ISO 4000-1, whereas rounding is not defined in section 6.

2.	The current proposal aims at unifying the calculation rules to those used in ISO 4000-1 and all major tyre standards, e.g. ETRTO, Tyre & Rim Association (T&RA), Japan Automobile Tyre Manufacturers Association (JATMA). This will also facilitate the work of the type approval authorities that still often refer to these standards.

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