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PROPOSAL FOR DRAFT SUPPLEMENT 1 TO THE 05 SERIES OF AMENDMENTS
TO REGULATION No. 22

(Protective helmets)

Transmitted by the Experts from Germany, Italy and the United Kingdom

Note: This document was prepared by the experts from Germany, Italy and the United Kingdom in view of the need to modify the provisions for projections and surface friction, and to clarify or correct other provisions regarding the visor tests and the calibration of the equipment used in method B of paragraph 7.4.2. Such need had been identified by the informal group working on the development of Regulation No. 22. The proposed modifications of the text are marked by underlining and crossed-out text, as appropriate.

Note: This text is distributed to the Experts on Passive Safety only.

A. PROPOSAL

Paragraph 6.7., amend to read:

"6.7. All external projections shall be radiused so as to avoid sharp edges, and any external projections other than press-fasteners shall be smooth and adequately faired."

Paragraph 6.15.3.3., amend to read:

" the helmet fitted with the visor being tested shall be placed on a test headform of suitable size in accordance with the provisions of paragraph 7.3.1.3.1., with the helmet tipped towards the rear as specified in paragraph 7.3.1.3.1. and the visor ~~then being~~ placed in ~~a~~ the closed position."

Paragraph 6.15.3.5., amend to read:

" If different results arise when this is assessed, the requirements on scattered light ~~and optical power~~ shall be measured and assessed over an area 5 mm in diameter which includes the presumed error. In addition, the regular transmittance shall not deviate by more than ± 5 per cent from the reference value, measured in one of two sight points specified in paragraph 6.15.3.8., at any point within the field of vision of the visor."

Paragraph 7.1., amend to read:

"7.1. Each helmet type, fitted with its visor if placed on the market with a visor, shall be conditioned as shown below.
....."

Insert a new paragraph 7.3.1.3.3., to read:

"7.3.1.3.3. Helmets placed on the market with a visor shall be tested with the visor in the closed position."

Paragraph 7.4.1.2.4., amend to read:

" be such that any point ~~in the area above the line ACDEF~~ on the helmet can be positioned"

Paragraph 7.4.1.3., amend to read:

"7.4.1.3. Selection of impact points
Any point ~~above the line ACDEF~~ on the helmet ~~shell~~ may be selected. The impact point should be selected"

Paragraph 7.4.2.2.6., amend to read:

"7.4.2.2.6. Headform support
The system supporting the headform shall be such that any point ~~above the line ACDEF~~ on the helmet can be positioned"

Paragraph 7.4.2.2.9., amend to read:

"7.4.2.2.9. Verification of the test apparatus

With the unloaded carriage and a drop height of ~~400~~ up to 450 mm the velocity of the carriage after 250 mm of travel
....."

Paragraph 7.4.2.3., amend to read:

"7.4.2.3. Selection of test points

Any point ~~above the line ACDEF~~ on the helmet may be selected for friction and/or shear assessment. A helmet shall be tested"

Paragraph 7.8.3.1.3.2., amend to read:

"7.8.3.1.3.2. Immediately after drying and before abrasion, the luminous transmittance shall be measured using the method given in paragraph 7.8.3.2.1.1. and the light diffusion ~~before abrasion are~~ shall be measured according to one of the methods specified in annex 11."

Paragraph 7.8.3.2.1., amend to read:

"7.8.3.2.1. Three similar test pieces, each from a different visor and taken from the area specified in paragraph 6.15.3.2. of the visor, shall meet the requirements of paragraphs 7.8.3.2.1.1. and 7.8.3.2.1.2."

Annex 12, footnotes 0) and 1), amend to read (the rest of the footnotes unchanged):

"0) or an equivalent standard, i.e. one that delivers the same or better levels of quality.

1) to be carried out at the same technical service or the same accredited independent laboratory."

* * *

B JUSTIFICATION

Ref. paragraph 6.7.

The minimum radii for projections as specified in the former paragraph 6.7. are considered to be unnecessarily prescriptive.

Ref. paragraph 6.15.3.3.

The positioning of the helmet to determine the field of vision of the visor is clarified.

Ref. paragraph 6.15.3.5.

The possibility of measuring optical powers over a small area should be removed because the small test area can be achieved by using a diaphragm which can sharpen the image of the target and thus result in an erroneous approval of a defective visor.

Ref. paragraph 7.3.1.3.3.

To clarify the need to condition and test helmets with their visors fitted if so placed on the market.

Ref. paragraph 7.4.2.2.6.

It is considered necessary to remove the reference to the line ACDEF to allow for the testing of any notable feature on the surface of the helmet that may fall below the line ACDEF.

Ref. paragraph 7.4.2.2.9.

Due to slightly higher than expected friction losses in the test apparatus, the current drop height of 400 mm is not sufficient for the carriage to achieve the required velocity.

Ref. paragraph 7.4.2.3.

It is considered necessary to remove the reference to the line ACDEF to allow for the testing of any notable feature on the surface of the helmet that may fall below the line ACDEF.

Ref. paragraph 7.8.3.1.3.2.

To clarify the method to be used when measuring luminous transmittance.

Ref. paragraph 7.8.3.2.1.

To clarify the need to take only one test piece (as opposed to three) from each of the three visors to be tested for optical quality and scratch resistance.

Ref. Annex 12, footnotes 1 and 2

To clarify the footnotes.
