

Working Document ECE/TRANS/WP.29/GRSP/2021/24
(70th GRSP, 06 – 10 December 2021, agenda item 8)
Submitted by the Chair of Ad-hoc Group of Interested
Experts on Accessories for Protective Helmets under UN
Regulation No. 22 (APH-UNREG22)

PROPOSAL OF SUPPLEMENT TO THE 06 SERIES OF AMENDMENT OF REGULATION NO. 22 (PROTECTIVE HELMETS)

ACCESSORIES (INTERCOM SYSTEM)

Status Report *

Meeting AHG of Interested Experts on Accessories for Protective Helmets under UN Regulation No. 22 (APH-UNREG22):

11th June 2021 - First AHG meeting after the GRSP session in May 2021.

28th June 2021

22nd July 2021

2nd September 2021 - At this meeting, the (APH-UNREG22) should consider a consolidated proposal for Supplement 2 to the 06 series of amendments to UN Regulation No. 22 and transmit it to GRSP as an official proposal for its consideration at its December 2021 session.

21st October 2021 – Introduction of new test for characterization of the speakers and simulator.

18th November 2021 – **AHG reach a final consensus as reported in the informal document.**

* Meetings data, reports and all documents were available in the AHG web site:

[Ad-hoc Group of Interested Experts on Accessories for Protective Helmets under UN Regulation No. 22 \(APH-UNREG22\)](#)

SCOPE: Communication System - Technical performance consequences related to Regulation ECE 22

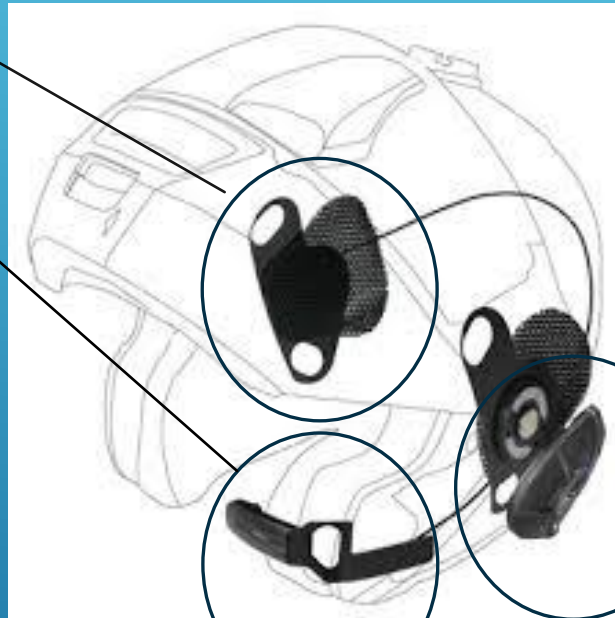
7.3. Linear Impact
Energy absorption tests X point

7.3. Linear Impact
Energy absorption tests S point

General

Helmet mass and distribution / inertia for rotational

7.13. Oblique impact test method of measuring rotational acceleration



7.4 Test for projections and surface friction

Other aspect

Installation, partial disassembly of helmet if not predisposed.
Installation made by the final user

All the prescriptions in the paragraphs 7.3, 7.4 and 7.13 are verified in type approval process, the modification have affect on the performance of the helmet

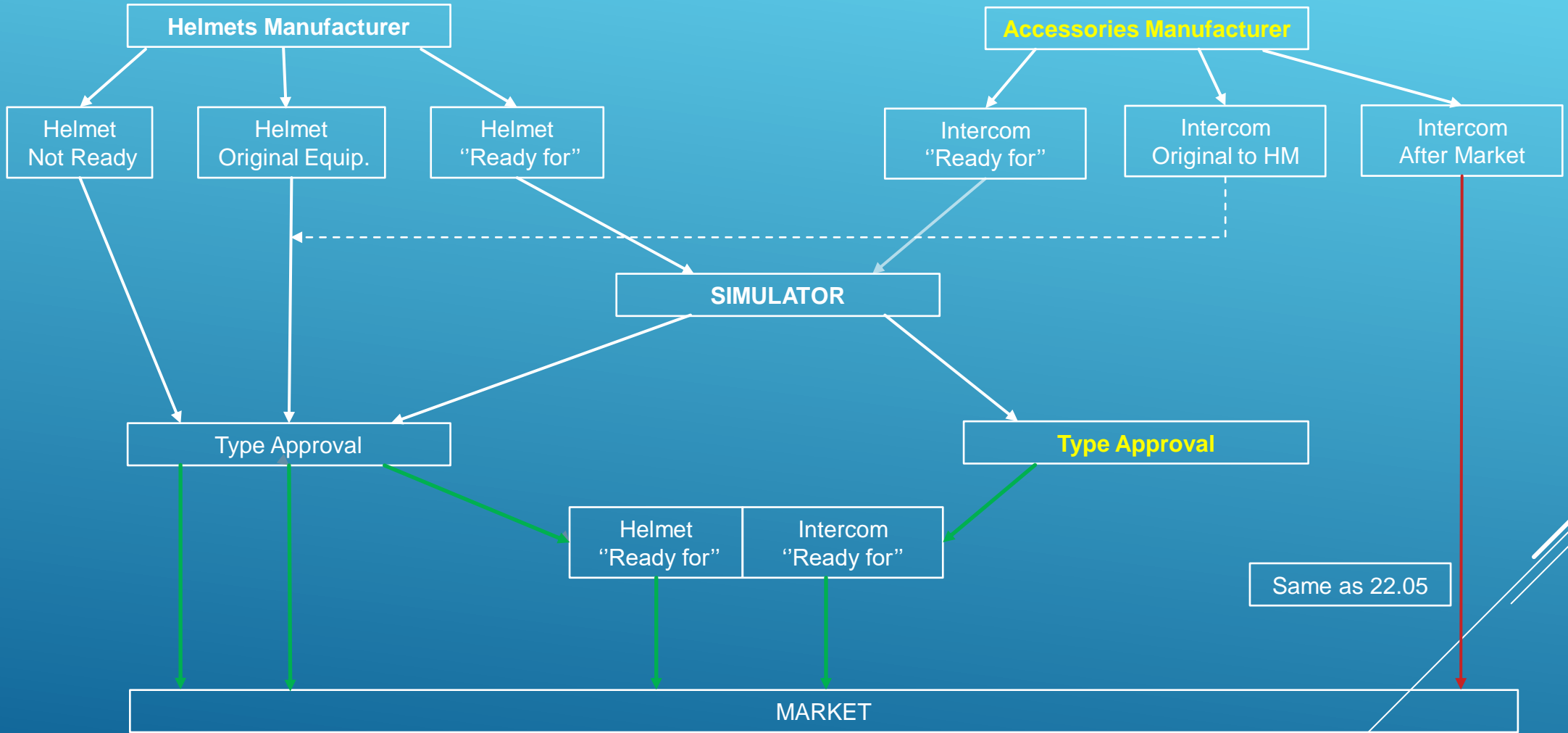
PHASE 1

ON A INTEGRATED SOLUTION ALL THIS ASPECT ARE VERIFIED AND CHECKED DURING A TYPE APPROVAL PROCESS

On helmets with and without accessories, independently of the type of the accessories.



PHASE 2 "READY FOR" The concept (open to accessories approval) (*)



Base considerations for phase 2:

The helmet is the main safety and head protection element of the motorcycle driver and accessories can contribute but the helmet shall perform its main function with and without accessories and for this reason the legislation is constantly evolving.

As declared by the accessories Manufacturers (Doc GRSP-67-09), the market of “unverified” accessories has generated "Annual revenue turnover estimated at 150 millions of Euros" without any safety check and homologation costs in accordance with the Regulations 22 since there was not any specific applicable requirement for those systems.

In the same document They complain that "Our industry will be at the mercy of helmet manufacturers' willingness to incorporate (or not) communication products depending purely on **their commercial interests**", after the wording released by the R-22.06.

To tackle this problem, a new type approval and test procedure for accessory – so called PHASE 2 - in addition to the current procedure is needed.

In PHASE 1 the accessories are within the homologation of the helmet, the helmets are verified in terms of safety with and without accessories, and above all that the Helmet Manufacturer, IN THIS CASE, is also liable in civil and criminal matters for any non-compliance of the helmet itself.

In document GRSP-67-09, the proposal of the Accessory Manufacturer Consortium is described:

"Redefine the regulation text to overcome the trade barrier and to allow a safe way for the motorcycle rider to communicate while riding

- Particular tests for accessories
- Particular tests for "helmets ready for accessories"
- Set compatibility conditions to make sure the rider safety is ensured "

In document GRSP 68-15 the Accessory Manufacturer Consortium proposes:

- “
- Work with the IWG on defining an agreed test procedure for approving communication accessories.
 - Approval of the communication accessories independently and separately from the helmet test procedure. ”

The above inputs are take in count by the work done in the ad-hoc group of interested experts established by GRSP during its 69th session.

ADVANTAGES from phase 2 approach:

For HELMETS Manufacturer:

The possibility of approving and placing on the market both version of helmets, with dedicated systems and designed to host "UNIVERSAL" intercom.

Maintaining control on particular products which, due to size or shape, may not meet the requirements if equipped with devices, and maintaining the possibility to approve them without declaring any compatibility.

Use only the SIMULATOR to check compatibility with multiple intercom devices, reduction of tests and type approval samples

For ACCESSORIES (as. Intercom) Manufacturer:

The possibility of separated homologation and sales "UNIVERSAL" (Ready for ..) systems that can be installed on all helmets designed to host "UNIVERSAL" intercoms.

The use of the ONLY proof of compliance with SIMULATOR for type approval will grant the compatibility of the intercom system with multiple helmet models, test reduction and type approval samples. **One time cost approval (*)**

(*) As considered in Informal document GRSP 67-09.

For USER:

The opportunity to choose if buying:

- A an helmet with original intercom kit
- B an helmet approved as “ready for” and then to combine any intercom device which has been approved as “UNIVERSAL” and with the evidence that both product are tested and safe.
- C an helmet and then to combine any intercom device not homologated as in the habit of ECE22/05

Note:

**ONLY A and B solutions are checked to “ not cause injury and that, when it is fitted to or incorporated in the protective helmet, the helmet still complies with the requirements of this Regulation” (according § 6.3).
Only A and B shall grant the conformity of the helmet to the type approved.**

With C solution, any other modification which has not been verified in order to grant the absence of adverse SHALL NOT complies with the requirements of this Regulation.

The document ECE/TRANS/WP.29/GRSP/2021/24 was developed on the basis of the document ECE/TRANS/WP.29/GRSP/69 and the document submitted by the Consortium of Accessory Manufacturers to Ad Hoc group. To complete the document, various checks and tests were carried out and information had been collected.

The paragraphs and values that remain suspended in the overall text are taken into consideration to prepare the informal document GRSP-70-XX.

In order to identify the procedure and the most proper values to be considered in the document, significant work including tests was done to determine the best approach for the compatibility between helmets and accessories.

Thanks for your attention .

