

**Draft minutest from the 2<sup>nd</sup> meeting IWG STCBC – 30 October 2019**

Place: Applus IDIADA, Tarragona, Spain

**1. Welcome & meeting arrangements**

Marta Angles, on behalf of IDIADA, welcomed all participants, those present in persons, as well as those on line (list of attendees at the end of this document).

**2. Adoption of the agenda (STCBC-02-01)**

The draft agenda was amended with additional items and agreed by the participants (**STCBC-02-02**).

**3. Review of the minutes from last meeting (STCBC-01-08)**

The Chair reviewed the minutes from last meeting; these were approved with no changes.

**4. Actions from last meeting**

- a. Key requirements matrix for M2 and M3 (Joint document by Luis Martinez (INSIA) and Rudolf Gerlach (TÜV))

Rudolf presented document **STCBC-02-03** summarizing the R16 requirements of seat-belts for these vehicles. In general M2 vehicles are equipped with 3pts belt system while M3 vehicles do have 2 pts or 3 pts belt system. The document also discusses the energy absorption tests that are performed on the seats as well as the 3 deceleration pulses used for dynamic tests as defined in R100. Rudolf stressed that the energy absorption tests are aimed at reducing the risk of injury for an unrestrained occupant hitting the front seat. In case the IWG has to choose one pulse for a dynamic test for both M2 and M3, Rudolf and Louis would recommend the M2 pulse as this will seat resistance in both types of vehicles.

Marta indicated that an M2 pulse could be demanding for M3 seats when tested according to R80.

Rudolf and Luis clarified that when the R-80 test is performed, the inertia of the rear occupants without belt through the front seats together with the pulse itself, ensures that the seats will resist the M2 pulse defined in R-100.

Thomas Gold (Daimler) suggested that the IWG confirms for M2 and M3 vehicles that we are dealing with Class II, Class III and Class B.

A discussion took place on what type of CRSs should be used for these vehicles. We may face problems if a CRS - that is tested with a 3 pts belt- when tested with a 2 pts belt in M3 environment. Also there could be a risk of confusion for parents on where they should use the CRSs if we consider 2 pulses for testing. Germany (Rudolf) stressed that we should use existing CRSs not new ones.

The group do not want to have 2 different categories of CRS, so it was agreed to use the existing CRS already approved in the market, so the final costumer will not mix different products for different vehicles.

**Decision: Go for R129 products, but need to justify why R44 products should be excluded (see also item 8 of this report)**

**Action: Clarify types and classes of buses & coaches (Victor Calzadilla)**

**Action: establish a summary matrix combining seat belt type as a function of vehicle category, including the corresponding tests that vehicle seats are subjected to (Farid Bendjellal (Britax/CLEPA))**

b. Deceleration pulses in R100

Not discussed as these pulses were covered in Louis and Rudolf presentation.

**5. Accident data**

a. Spain

Marta presented document **STCBC-02-04** on accidents with buses or coaches that took place in 2016 and 2017 and involving adult passenger as well as children. These data originate from the Spanish general direction of traffic. Another set of data reported by the media was discussed. It contains the date of the accident, the number of killed and injured for both adults and children and the type of impact. Frontal and rollover impacts were dominant in these cases. A study from 2016 on the use of the safety belt in buses and coaches showed that the main behavior of the occupants in short and long trips is not to wear the safety belt in these vehicles.

b. France

Philippe Lesire (PSA) presented document **STBC-02-05** that contains 3 types of data: GIDAS, Voiesur France, and CEESAR. In summary:

- GIDAS: 27 accidents, 1 coach and 26 buses

Seated children – Majority of injuries were minor head injuries (AIS1), caused by contact with front seat; Not seated children – Majority of injuries were minor (Head & arms)

- Voiesur: Police reports from 2011; 84 buses and coaches; majority of impacts frontal and side. Few rollovers; 73 children involved (total occupants 391)
  - o Children mostly uninjured; when injured then majority of injuries were minor head injuries
- CEESAR: A study based on 20 accidents involving 663 children and 90 adults. Majority of vehicles were coaches. Age distribution: 4-8 y (4%); 9-12 y (28%); 13-15 y (41%)
  - o Amongst the 663 children 338 were uninjured, 223 slightly injured and 62 severely or fatally injured.
  - o Type of impacts: 65 % frontal, 20% tip over, 10% rollover, 5% rear
  - o Frontal impact : Mechanism of severe injuries were Intrusion or complete ejection; body regions the most injured : head and lower limbs
  - o Potential benefit of a 2 pts belt restraint: would reduce injuries due to projection or complete ejection in frontal impacts and tip over/rollover (2/3 of injured children)

c. Korea Transportation Safety Authority - Accident Survey **STCBC-02-06**

- o 3 types of vehicles carrying children: small, medium and large depending on number of passengers. Medium size (11-34 persons) representing 64 to 78% resp in 2013 and 2014.
- o Weight of accidents involving vehicles with children vs total number of accidents with children: 2014 – 31 (0,1%); 2018 – 84 (0,83%). Deaths resp. 2 (3,8%) and 1 (2,94%); Injury resp. 55 (0,37%) and 124 (0,98%). Most of fatal accidents were related to a “no safe” driving.

- Accident impact types: Rollover, sliding & rollover, rear-end collision

**Action: To present the requirements applied to these types of vehicles for next meeting (Jongsoon)**

**Action: To prepare a list of key elements to collect the accident data for future accident investigations (Marta, Farid)**

## 6. Japan Presentation

Mr Yoshinori Tanaka presented document **STCBC-02-07**. He highlighted 2 subjects: the frequency and duration of the meetings of the IWG as indicated in the ToR (**STCBC-01-06**); and the need to draft a roadmap for the activity of the IWG. A duration of a one day meeting will pose problems to Japanese experts. Yoshinori also suggested to the IWG to define necessary information for accident investigation.

**Agreed: to held 3 meetings per year with a duration of one day and a half.**

## 7. Roadmap for the IWG activity and confirmation of ToR

The IWG agreed to follow up on the suggestion of Japan.

**Action: Establish a roadmap identifying 3 phases and include it into a progress report for the 66<sup>th</sup> GRSP session (Marta, Farid)**

Year 1: Learning phase

Year 2: Execution phase

Year 3: Drafting & submission to GRSP

## 8. Definition of key elements of the regulation

Marta: aim is not to discuss these elements at this meeting but to ensure nothing is missing in this list.

Discussion on R44 or R129 approved CRSs for this regulation:

- Some members of IWG thought that the R129 products would be an appropriate choice as belted universal CRSs is the way forward, they have volumetric constraints and Consumer International are pushing towards stopping new R44 approvals . One member insisted on the need to justify why R44 products should be excluded.

**Action: IWG to decide if the use of R-44 should be allowed in buses and coaches.**

## 9. AOB

Informing GRSG: Rudolf has informed GRSG who asked to be kept informed.

Next meeting at CLEPA January 16<sup>th</sup> & 17<sup>th</sup> 2020.

Thomas Gold presentation on ISOFIX will be discussed at next meeting

For a good track record of decisions taken by the IWG Marta volunteered to establish a document that will be updated as we move forward.

**List of attendees**

In person

- Marta Angles, Ronald Vroman, Yoshinori Tanaka, Shingo Morita, Costandinos Visvikis, Victor Calzadilla, Gonzalo Casa, Rudolf Gerlach, Farid Bendjellal

On line

- Luis Martinez, Thomas Gold, Philippe Lesire, Marianne Hynd, Robert Stahl, Salim Abdennadher, Jongsoon LIM

**Annex – List of documents discussed at this session**

STCBC – 02 – 01	Draft agenda
STCBC – 02 – 02	Amended agenda
STCBC – 02 – 03	M2-M3 Seats Review
STCBC – 02 – 04	Accident data Spain
STCBC – 02 – 05	Children in buses and coaches P. Lesire
STCBC – 02 – 06	Status of vehicles for carrying children in Korea
STCBC – 02 – 07	Japan Opinion of the ToR of the IWG STCBC