

6th Meeting of the IWG GTR No. 7 Draft Status Report of the BioRID TEG

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Chairman

Brussels, 28th February 2011

Meetings

- 22nd January 2010: last official Global BioRID User (WebEX) Meeting (GBUM) chaired by Mike Beebe (Denton)
- 3rd February 2010: joint with IWG GTR No. 7 - Tokyo
- 15th of March 2010: 1st WebEX meeting (hosted by Denton)
- 28th April 2010: 2nd WebEX Meeting (hosted by FTSS)
- 13th July 2010: 3rd WebEX meeting (hosted by Humanetics)
- 7th September 2010: 4th WebEX meeting (hosted by Humanetics)
- 21st-22nd September 2010: joint with IWG GTR No. 7 – Berlin
- 29th November 2010: 5th WebEx – (hosted by Humanetics)
- 6th December 2010: joint with IWG GTR No. 7 – Geneva
- 7th February 2011: 6th WebEx – (hosted by Humanetics)
- 28th February 2011: joint with IWG GTR No. 7 – Brussels

Issues under Discussion / Research

- Improved certification procedure now in use and corridors need to be tightened
- Repeatability and Reproducibility – data collection with new certification procedure
- Spine set-up for different seat back angles (Japan, PBD) – postponed

Progress reached so far (1)

Harmonization of Drawings (Humanetics)

Procedures for Assembly,
Disassembly, and Inspection
(PADI)
of the BioRID II Rear Impact
Crash Test Dummy



November 2010

- ✓ Drawing package available on UNECE website.
- Draft PADI available – expected on UNECE website soon
- Check list included in PADI to check for correct build level
- **Feed back needed** – please provide information/result of built level check to Humanetics

Appendix E – BioRID II Design Checklist

BioRID II Design Checklist		✓
	VERIFY THE SKULL CAP IS FOR BIORID, AND THAT IT HAS THE CORRECT SIZE CABLE CLEARANCE SLOT. <small>REFER TO CTR 0901 GLE.004.004.00</small>	
	VERIFY SKULL AND CAP CONTAINS ERROR PROOFING PIN-HOLE COMBINATION. <small>REFER TO CTR 0901 GLE.004.004.00</small>	
	VERIFY THE CORRECT SIZE HOLES IN THE HEAD TO CLEAR THE FRONT CABLE ADJUSTERS (127 MM). <small>REFER TO CTR 0901 GLE.004.004.00</small>	
	VERIFY THE CORRECT HEAD IS INSTALLED (NON-SKULL CAP/LOAD CELL VERSION). <small>REFER TO CTR 0901 GLE.004.004.00</small>	

Progress reached so far (2)

Improved certification procedure and corridors (Humanetics et al.)

- New certification sled(s) designed, built and tested
- Artificial head restraint added
- Jacket test added
- First ideas of certification corridors proposed by Humanetics on the basis of data from different BioRIDs
- New sleds (without head restraint) are now available
- Group agreed to encourage the use the new procedure (without head restraints) from January 2011 on and collect as much data as possible for the next meeting (with head restraint and jacket, also)
- First experience looks very promising
- Some concerns raised regarding safety issues with the use of the higher pendulum mass for certification test with head restraint

Certification Procedures
for the
BioRID II
U.S. Test Dummy

November 2010

Progress reached so far (3)

Spine set-up for different seat back angles (Japan, PBD) - postponed

Background: at present the BioRID is designed/used for dynamic tests at torso angles/seat back angles around 25 degree. For some cars (e.g. Vans) the torso/seat design angle lays around 20 degree or even steeper. For regulatory purposes dynamic testing at design angle is appropriate.

- New spine adjustment tool provided by Denton
- Tests performed by PDB and Japan
- At steeper torso angle interaction of the jacket
- Data provided by OICA that at majority of cars seat back angle is between 20 and 25 degrees
- Further work is needed – postponed to a future phase of GTR No. 7

Progress reached so far (4)

Repeatability and Reproducibility (Humanetics, Ford, PDB et al.)

Several issues identified which seems to influence R & R

- Issues: jacket (e.g. stiffness), cable exit at head, friction of steel ropes, neck pins, lower spine?
- Differences are assumed to be identified by new certification procedure(s)
- General issue if results are presented/compared: are we talking about the same dummy status/built level/up-grade?
- Future test data should be based on the use of BioRIDs that have passed the new draft certification procedure and are of latest built level as defined by PADI checklist (should be the case from serial no. 100 onwards)

General remarks / Outlook

- Drawings, draft PADI, check list for built level, draft certification procedure available
- Attendance at the WebEx meetings is good
- Fruitful discussions and in general good support by the attending organisations
- New certification procedure in use since beginning of 2011
- Testing/research/further investigations in progress

Thank you for your attention!

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