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Transmitted by the expert from Japan

Status Report on Flexible Pedestrian Legform Impactor Technical Evaluation Group (Flex-TEG)

Atsuhiro Konosu Chairperson of Flex-TEG, Japan

1. Delegations (appointed members/parties)

<u>Chairperson</u>

A. Konosu (J-MILT/JARI)

Secretariat

B. Been (FTSS-Europe)

Governmental Parties

EU/EEVC, Korean government, J-MLIT

Industrial Parties (related to car product) ACEA, JAMA

Independent Parties UTAC, TUV

Dummy Product Makers FTSS, JASTI

and other interested parties are welcome!

2. Tasks

Task 1: Evaluation and Modification of usability, repeatability, reproducibility, and durability of Flex-PLI as a tool for GTR/PS legform test. And shows the comparison results of all the above issues between the TRL-LFI (used in the current PS/GTR draft) and Flex-PLI.

Task 2: Review for Injury Risk Functions

Review for injury risk functions/curves related to the Flex-PLI, and propose threshold values.

Task 3: Technical Feasibility

- Can develop a car which complies Flex-PLI tests with the proposed threshold values.
- Evaluation of car design and car design process.

Task 4: Evaluation of Protection Level provided by the Flex-PLI and the proposed threshold values

Evaluate protection level provided by the Flex-PLI and the proposed threshold values, and compare with that of the current PS/GTR draft.

3. Term

Originally planned by end of 2007

•The time schedule is based on an informal document No.GRSP-36-15.

4. Activities

1st Flex-TEG MT (OICA office, Paris, 5-6 Sep. 2005)

2nd Flex-TEG MT (BASt, Bergisch Gladbach, 22 Nov. 2005)

3rd Flex-TEG MT (BASt, Bergisch Gladbach, 24 April 2006)

4.1 Activities (1st Flex-TEG MT, 5-6 Sep. 2005)

- Confirmation of TOR for this working group
- Introduction for the Flex-PLI type G (Flex-G)
- Test results for the Flex-G (component tests and car tests)
- Discussion
- Confirmation of future action plan
- Additional test results are required for detail discussions

4.2 Activities (2nd Flex-TEG MT, 22 Nov. 2005)

- Test results for the Flex-G (repeatability tests, reproducibility tests, and car tests)
- Tour for the Flex-G testing (at BASt/BGS)
- Discussion
- Confirmation of future action plan
- Usability, Repeatability, Reproducibility of Flex-G is seemed as good in component tests and assembly calibration tests. (those evaluations under car tests are still needed)
- The Flex-G, however, tends to reach at its knee bending limit (around 20 deg.) in car tests, impact velocities therefore had to be reduced. (In general, Flex-G test results were much more severe than that of Flex-PLI 2004)
- > As a results, enlargement of its knee bending limit is required, especially to conduct high speed impact tests to cars.

4.3 Activities (3rd Flex-TEG MT, 24 April 2006)

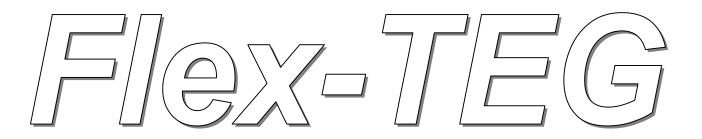
- Information on the alpha version of Flex-GT (Flex-GT α)
- > Several modifications are applied onto the Flex-G.
 - 1) Enlargement of knee bending limit (around 30% increased)
 - 2) Improvement of its injury assessment ability
- Evaluations on injury assessment ability of Flex-GT α
 - 1) Comparison of Flex-GT α , Flex-G, and a Human FE Model
 - 2) Reconstruction Tests on the PMHS Test Using Flex-GT α
 - 3) Reconstruction Tests on Car-Pedestrian Traffic Accidents Using Flex-GT α
- > This group members are evaluating above results in detail now. (by end of May 2006)
- Discussion
- Confirmation of future action plan*
- Finalize Flex-GT specifications (by mid of June 2006)
- Develop of Flex-GT 1.0 (by end of July 2006)
- Conduct initial evaluation tests of Flex-GT 1.0 (by end of Aug. 2006)
- > Will have 4th Flex-TEG MT in Sep. 2006.

* will re-discuss more detail at end of May 2006

5. Current Overall Schedule

Schedule for Flex-TEG Activities		2005										20	06							2007										
(8 May 2006)	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11 1	
Flex-TEG Meeting			•		•					•					0						С	>					0			
Development (Modification)																														
Modification Activities					•		J - M	LIT, I	J AN	IA		•													AMA					
Production of Modified Impactor	↓ Flex	► <- G							GT			 Flex-	• GT													Fl	ex-G	TR		
<u>Evaluation of Flex-PLI</u> as a Regulatory Test Tool																									- (us		ty me	<mark>od. or</mark>	ily) —	
Usability	[BAS	t, J - N	/LIT,	► , J AM	A						J - M	LIT, I		A, B/	ASt	AC	EA,	Kore		ıd an	iy ot	her i	ntere	ested	mer	nbers			
Repeatability		BASt	r 1	/LIT,	J AM	A						J - M		∢► J AM						<mark>a, an</mark>		iy ot	her i	ntere	ested	men	nbers			
Reproducibility		BAS1	t, J - N	/LIT,	J AM	A						J - MI			А, В А		AC	EA,	Kore		ıd an	iy ot	her i	ntere	ested	men	nbers			
Durability		BASt	t, J - N	/LIT,	J AM	A						J - M		▲► J AM	A, B.	ASt	AC	EA,	Kore		ıd an	iy ot	her i	ntere	ested	mer	nbers			
Comparison for above issues		BAS	t, J - N	/ILIT	► , J AM	IA						J-M		∢► J AM						· a, an		iy ot	her i	ntere	ested	mer	nbers			
(TRL-LFI and Flex-PLI)																														
Review of Injury Risk Functions																														
Leg (review and propose threshold values)																∢			TEG	 2 2										
Knee (review and propose threshold values)																∢		All-	TEG			•								
Evaluation of Technical Feasibility		↓ BA	St, J A													↓	JA	 AMA,	ACI	EA, a	nd ii	+ ntere	ested	mei	mbers	s				
Evaluation of Lower Limb Protection Level (provided by the Flex-PLI with																∢			TEG			•	-							
the proposed threshold values)						-																								
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will re-discuss more detail at end of May 2006



Thank you for your attention!

http://www.unece.org/trans/main/wp29/wp29wgs/wp29grsp/pedestrian_FlexPLI.html