

Report on the 57th JASIC Asia Expert Meeting in Thailand
(on R48, R53, and SLR)

Finalized: September 24, 2019

Drafted: September 6, 2019

Dates: Thursday, August 8 - Friday, August 9, 2019

Place: Hotel Grand Mercure Bangkok Fortune, Bangkok

Participants:

Thailand:

Mr. Annop Hankij, Director of Automotive Engineering Bureau, DLT, Thailand

Ms. Jiraporn Kaewkraisorn, Chief of Vehicle Regulations Branch, Automotive Engineering bureau

Mr. Mohd Fizri Bin Zailan, Vehicle Examiner, JPJ, Malaysia

and other participants from TAIA, TAPMA, etc. (about 60 people in total)

Japan:

Mr. Nakatani, Chief representative of JASIC Jakarta Office; Mr. Teruyoshi Fujita from Toyota/JAMA; Mr. Tadashi Suzuki from Stanley Electric/JAPIA; Mr.

Kenichi Yamamoto from NTSEL; Mr. Tsuburai from JASIC Headquarters; and

Mr. Minoru Maruo from Kawasaki Heavy Industries/JAMA.

Overview:

- This expert meeting seems to be held to refresh the knowledge of the DLT staff, considering in particular that: many of them have changed since the last time an expert meeting on lighting and light-signaling devices was held; the regulations R48 and R53 have been revised; and SLR, a new field of work, required taking stock of the present situation.

- A presentation was given on what R48 (on the installation of lighting and light-

signaling devices on four-wheeled vehicles) and R53 (on the installation of lighting devices on motorcycles) are about, respectively, as well as how tests are conducted.

- A presentation was given on the background, purpose, and current state of the discussion on the simplification of lighting and light-signaling regulations (SLR).
- DLT expressed its wish to keep the good relationship with JASIC and hold the expert meeting on other subjects.

Day 1: Thursday, August 8, 2019

1. Opening Speeches

1.1 Welcome address by Mr. Annop Hankij

Mr. Annop Hankij gave a welcome address at the opening of the meeting.

1.2 Greeting by Mr. Nakatani from JASIC Jakarta Office

I would like to thank all of you attending here today's expert meeting. The purpose of those expert meetings is to exchange views on the 1958 Agreement, UN Regulations, and to build up good relationship between the peoples of Asia. The expert meeting today focuses on lighting and light-signaling devices. I am confident this will give you a good opportunity to gain a better understanding of the recent development of discussion at UN on lighting and light-signaling devices and hope you will best benefit from today's meeting. Finally, I hope that today's expert meeting will be an effective contribution to DLT and all who work in the automotive industry and that we can keep developing an even stronger relationship with DLT.

2. R48

2.1 Briefing on the technical requirements of R48

Mr. Fujita from Toyota/JAMA gave a briefing on technical requirements of R48, regarding specifically:

- How R48 has been revised numerous times to reflect the latest technological developments and how to decipher the document 343 on a UN website showing the history of revisions to UNECE agreements and regulations.
- The categories of vehicles to which those requirements apply as well as R.E.3 documents on UN websites by which we can check categories ourselves.
- Definition of each lighting and light-signaling device, technical requirements, whether they are mandatory or not.
- Gist of major amendments to R48:
 - 03 series: Full AFS, ESS requirements added;
 - 04 series: DRL, “Y” lamps, clarification made that it shall be always possible to manually switch on/off main-beam headlamps and to manually switch on/off the automatic control of the main-beam headlamps; clarification on ADB and D/Y lamps; the hazard warning signals made automatically activatable;
 - 05 series: For vehicles with DRL, automatically switching the headlamps ON/OFF made mandatory.
 - 06 series: Sequential lamps accepted.

Q&A

Q1: For paragraph 6.2.6, can we use a period (.) instead of a comma?

A1: It's given just as an example. Either a comma or a period would be fine as long as it's clear it means “1.3%”

Q2: In paragraph 6.2.6, some values don't have equal signs. What if what we get is the exact value?

A2: Sorry please refer to Annex 9, way down the Regulation, on requirements for COP with equal signs. Indeed, equal signs are missing in paragraph 6.2.6, we may need a revision for that.

Q3: A question regarding leveling devices. We see here a hysteresis loop, but I would like to know a little more about its characteristics. How do you check a leveling device?

A3: See Annex 6, paragraph 5.5.3.3, which discusses hysteresis loop.

Q: We have a presentation on the test method. OK, I'll ask further questions there.

A: Yes, Mr. Yamamoto will be giving a presentation in the afternoon.

=> Someone asked a clarification in the morning, so I checked with my Department and they seem not to have such an experience. It looks like what they call a hysteresis loop is the state where a load is loaded and unloaded. Seems the requirement is to measure the top and bottom values and calculate the average.

2.2 Test methods of R48

Mr. Yamamoto from NTSEL explained the test methods of R48:

- Preparation for the test; what the test vehicle is like; how the actual lamps are confirmed identical to those the type approval is given;
- General and detailed test requirements; a video presentation on how the test actually proceeds.
- Test courses; If the manufacturer does not have a suitable size of test course, JARI offers one. It has test courses for a variety of situations, including high speed proving grounds (presentation with photos.)

Q&A

Q4: Is there a simulation test for ESS?

A4: No, there isn't.

Q: How long does it take to perform the test?

A: Half a day or so. If you test also ABS, it will take a little longer.

Q: How long does it take to test ADB?

A: At JARI, it once took as long as 5 hours or so, from 7 to 12 pm.

3. Simplification of Lighting and Light-Signaling Regulations

Mr. Suzuki from Stanley Electric/JAPIA gave a briefing on the simplification of lighting and light-signaling regulations (SLR):

- JASIC compiles information documents by extracting relevant information from sources at UNECE website. The documents are accessible to you all present here, too.
- The background, purpose, and current status of the efforts at WP.29 for the simplification of regulations related to lighting and light-signaling devices, presented with an organigram of existing regulations and new regulations they will be reshuffled into.
- In the stage 1, we reached an agreement on all documents concerned. In the stage 2, we will review relevant regulations on installation of these devices to make them technology-neutral. We plan to reach an agreement at WP.29 session in November 2022.

Day 2: Friday, August 9, 2019

4. R53

4.1 Technical requirements of R53

Mr. Maruo from Kawasaki Heavy Industries/JAMA, gave a presentation on the scope, definitions of terms, general specifications, and individual specifications of the R53:

- 02 series amendments to R53: So far, it's been possible to use headlamps of classes B, C, D, and E in R113, but note that the headlamps of class B, popular in Asia, are no longer available. Please be careful from now on.
- Basically R53 has many provisions common to R48. We recommend you give R48 a run-through, which will be helpful in understanding R53.
- There will be new lamps added to the regulation in the future. We will talk about a few new lamps in the next presentation on the test methods of R53.

Q&A

Q5: There is a requirement that the headlamps of an electric vehicle should automatically light ON when the engine gets started. How about electric motorcycles?

A5: There are provisions for electric vehicles, but it is yet to be done for electric motorcycles. When they do, I guess they will require the same as electric vehicles, i.e., that the headlamp should turn ON when the propulsion system gets ready.

Q: This is not for any specific function, but LED lamps in general, of which the light scatters. How do you test the range of geometric visibility?

A: The light sources are not determined, so you have to check them in the same way as bulbs. For geometric visibility, we check the range of visibility of the apparent surface declared by the manufacturer.

Q6: I have a question about P17: What do you take as reference when

measuring α and β ?

A6: We take the apparent surface as reference. The apparent surface is the positive projection of either the illuminating surface or light emitting surface as declared by the manufacturer.

Q: You say the range is from an end to the other end of the retro reflector. Can I understand that here you refer to the illuminating surface?

A: It would be that range if the manufacturer defines it with the illuminating surface, but if the manufacturer defines it with the emitting surface, then the range will be those of the emitting surface. It depends on the range declared by the manufacturer.

4.2 Test methods of R53

Mr. Yamamoto from NTSEL, explained how tests are performed under R53:

- How tests are prepared; what the test vehicle is like; how the actual lamps are confirmed identical to those the type approval is given.
- General and detailed test requirements; how detail tests proceed using photos of test vehicles.
- Video presentation on emergency braking lights and the test requirements.
- Presentation of additional light sources, using a video of Kawasaki Ninja: the bending light lights on on the side the rider leans inward. The number of lights increases as the leaning angle increases. While banking, the cutoff line for the motorcycle rider inclines and their field of vision ahead narrows, but adding bending lights widens the range of illumination ahead; Presentation was given also on the test method.

Q&A

Q7: Question about paragraph 5.9.2. If it is difficult to test at 25m in the dark room, can we do that at any distance?

A7: Yes, any distance will do.

Q: If it's narrower than 25 m, does the regulatory limits of 1m and 2.2m still apply?

A: If you have calculated it, you need to use it as a basis for calculating the regulatory value.

5. Closing Speeches

5-1. Greeting by Mr. Jiraporn

On behalf of DLT, I would like to thank JASIC for their support. We would like to hold many more expert meetings with JASIC and we would appreciate your continued cooperation. Thank you very much.