

Draft minutes of the third meeting of the Project Team 1A of the CEN/TC 226 WG3

The meeting was held on Tuesday the 19th of May at the Danish Road Directorate, Copenhagen starting at 9:30 and planned to end at 16:00

Participation:

The following members of the TG 1A took part in the meeting: Jürgen Ewald, Tony McCaugherty, Maurice Jongen, Lenka Moravcikova, Liz Newell-Hart, Rik Nuyttens, Manuel Le Pape, Gernot Sauter, Kai Sørensen, Martin Toth and Peter Zehntner

Apologies for absence was received from: Mohamed Arbaoui, Darko Babic, Christian Bargaen, Milan Devera, Aad D.J. Godvliet, Gauthier Michaux, Andelko Scukanec, Roman Kaflinski.

Daft agenda:

1. Welcome and practical arrangements
2. Mutual presentation and updating of the member list of the PT 1A
3. Confirmation of the minutes from the PT 1A meeting on 4th November 2014
4. Information on the CEN/TC 226 WG3 meeting held on 4th February 2015
5. Consideration of proposals for retroreflection classes
6. Possible simplification of the thorough testing (Gernot Sauter)
7. Uncertainty of measurement of retroreflection
8. Consideration of the draft proposal of May 2015
9. Confirmation of agreements
10. How to report to the CEN/TC 226 WG3
11. Agreement on a next meeting
12. Other matters
13. Closure of the meeting

Re. 1: Welcome and practical arrangements

Kai Sørensen opened the meeting and gave some practical information.

Re. 2: Mutual presentation and updating of the member list of the PT 1A

The participants introduced themselves.

Re. 3: Confirmation of the minutes from the PT 1A meeting on 4th November 2014

The minutes were confirmed.

Re. 4: Information on the CEN/TC 226 WG3 meeting held at BAST on 4th February 2014

It was reported that the PT 1A was encouraged to hold an additional meeting, before this meeting, in order to prepare a proposal for retroreflection classes.

Re. 5: Consideration of the proposal for retroreflection classes

Initially, Kai Sørensen gave a survey of the work of the PT 1A including meetings, decisions, proposals and important e-mails.

The preparatory meeting held on 22 April 2015 was discussed. A proposal for retroreflection classes, prepared by Kai Sørensen before the meeting had been discussed. The proposal had classes 1, 2a, 2b, 3a and 3b. The classes 1, 2b and 3b were based on constant luminance, while the classes 2a and 3a had emphasis on retroreflection at smaller values of the entrance angle (longer distances). This proposal had been discussed in detail, resulting in a number of decisions accounted for in a note forwarded after the meeting together with a revised proposal.

Some members stated that there should be minutes of that meeting.

Note This was also requested by some members of the WG3 at the WG3 meeting on the following day.

Following this, Kai Sørensen gave a short account of the above-mentioned proposal after the meeting on 22 April 2015, while Gernot Sauter, Maurice Jongen, Tony McCaugherty and Jürgen Ewald explained their points of view as expressed in e-mails.

Gernot Sauter had requested a change of the philosophy, namely that classes of retroreflection should be based on the properties of retroreflective sheeting materials on the market. The term “clusters of retroreflective sheeting materials” was mentioned.

Maurice Jongen and Tony McCaugherty had both of them accepted the above-mentioned classes, but with changes of individual minimum values of the tables.

Jürgen Ewald had sent an account of the proposals of classes that had been discussed previously and an alternative proposal with three simple classes. Tony McCaugherty requested that the proposal by Jürgen Ewald should be made available to other manufacturers. Jürgen Ewald explained that he had expected that Kai Sørensen would forward the proposal. It was agreed that Kai Sørensen is to forward Jürgen Ewald’s e-mail as stated.

It was pointed out that there is some similarity between the points of view of Gernot Sauter, Maurice Jongen and Tony McCaugherty in the sense that Gernot Sauter aims directly at the properties of retroreflective sheeting materials on the market, while Maurice Jongen and Tony McCaugherty wish to adapt requirements to fit better to retroreflective sheeting materials on the market.

It was proposed that Gernot Sauter is to use his approach in order to provide classes with minimum values similar to those requested by Maurice Jongen and Tony McCaugherty. The proposal by Tony McCaugherty is the one with the most modifications and could serve as the starting point.

On the initiative of Liz Newell-Hart and Rik Nuyttens it was discussed if new classes of retroreflection should be presented in informative or normative parts of the draft. Advantages and disadvantages were mentioned, but the matter was not finally decided.

Note The approach by Gernot Sauter is to express a class by combinations of the application and retroreflection classes provided in the version of prEN 12899-6 that failed at the formal vote.

Kai Sørensen explained his concerns with this proposal:

- a. as with any proposal of classes, there will probably be negative votes from countries with existing national regulations for retroreflective road signs
- b. as with any proposal of classes, it may be difficult to obtain acceptance from the Commission,
- c. the above-mentioned difficulties would be more severe, when proposals for classes are not based directly of performance for road users,

- d. proposals based on retroreflective sheeting materials on the market leave little incentive for technical development and little guidance for road administrations,
- e. a draft standard without classes of retroreflection classes may well be adequate.

However, it was agreed to proceed with the above-mentioned proposal.

A letter from the German mirror committee, forwarded by Sandra Jacobi on the previous day, was considered. It was agreed to respond to this letter that the PT 1A wants to complete its work on retroreflection classes.

Re. 6: Possible simplification of the thorough testing (Gernot Sauter)

Kai Sørensen explained that the comprehensive test method is to be carried out only once for a family of retroreflective sheeting materials, and that it serves the purpose of taking lack of symmetries into account.

Gernot Sauter explained his worry that the comprehensive testing would become part of FPC for the sheeting manufacturers and possibly for the sign manufacturers as well. Martin Toth said that FPC is always simplified compared to the ITT test. Lenka Moravcikova added that FPC testing should be based on handheld retroreflectometers.

It was agreed that it is to be made clear that FPC testing is simplified and involves handheld retroreflectometers only. Kai Sørensen added that the comprehensive test method reveals the consequences of the pattern of the prisms of a microprismatic sheeting material, and that this pattern does not change and need not to be tested more than once.

The details of the comprehensive testing were discussed with a view of possible simplification. Lenka Moravcikova informed about automatic equipment and the time needed for a comprehensive test with such equipment.

The testing for possible lack of rotational symmetry of the retroreflected beam takes account of the complexity of the geometry of the vehicle and the road scenario and can probably not be simplified. Additionally, this test is not the most onerous as it provides average values.

The test for possible lack of rotational symmetry of the illumination direction (the sign position), on the other hand, may perhaps be replaced by an initial test. It was agreed that Gernot Sauter may propose simplification on this basis.

Re. 7: Uncertainty of measurement of retroreflection

Kai Sørensen admitted that he did not recall why this item was on the agenda and asked if uncertainty of measurement is a serious matter.

Lenka Moravcikova and Gernot Sauter informed that the uncertainty of measurement is of the order of 5%.

Re. 8: Consideration of the draft proposal of May 2015

Kai Sørensen explained that he had used a new template for EN's for this draft, and also has added the standard clause 6 for attestation and verification of constancy of performance and the annex ZA for CE marking in accordance with the CPR. However, the table 2 in 6.2.2 needs to be completed with the numbers of samples needed for testing.

Kai Sørensen questioned a previous statement by Gernot Sauter that it is not necessary to modify the definition of sheeting families. This is on the basis that the overlay film used in connection with UV printing modifies the aberration of a sheeting family and thereby modifies the width of the retroreflected beam. However, Gernot Sauter pointed out that this may very well be accounted for in the combination of comprehensive and simplified testing. Kai Sørensen admitted that this may be the case.

Kai Sørensen thought that the previous decision of keeping the classes RA1 and RA2 of EN 12899-1, with a change of the test regime, should be reconsidered. There was a discussion but no decision.

Note 1 Outside of the meeting, Manuel Le Pape pointed out that the expression $F = 0,8 \text{ kg} \pm 1 \text{ g} / 25 \text{ mm}$ in figure 3 for the adhesion test should be changed to $M = 0,8 \text{ kg} \pm 1 \text{ g}$ to represent the mass of a hanging weight.

Note 2 On the following day, Sophie de Vlieger pointed out that the sequence of the chromaticity points for dark green is wrong.

Re. 9: Confirmation of agreements

The following agreements were confirmed:

- Gernot Sauter interprets the proposals for retroreflection classes by Maurice Jongen and Tony McCaugherty as “clusters of retroreflective sheeting materials”,
- the question of informative/normative classes of retroreflection is to be decided,
- Kai Sørensen modifies the draft to make it clear that FPC involves simple testing of retroreflection only
- Gernot Sauter considers to replace the part of the comprehensive test related to the sign position with a symmetry test,
- It is to be decided what to do with the RA1 and RA2 classes of the EN 12899-1,
- one more meeting of the PT 1A is needed,
- the answer to the letter from the German mirror committee is that the PT 1A wants to complete its work on retroreflection classes.

Note 1 Gernot Sauter should still provide a proposal aiming at when to apply the comprehensive testing.

Note 2 The members of the PT 1A employed at the four sheeting manufacturers should still make a joint proposal for the percentage values for fluorescent colours.

Re. 10: How to report to the CEN/TC 226 WG3

The report will be the above-mentioned agreements.

Re. 11: Agreement on a next meeting

It was agreed to hold a next meeting (the fourth) in connection with the next WG3 meeting (after the WG3 meeting on the following day).

Note This will be on 21 September 2015 as the WG3 decided to have its next meeting on 22/23 September 2015.

Re. 12: Other matters

There were no other matters to consider.

Re. 13: Closure of the meeting

Kai Sørensen thanked the members for attending. The meeting was closed at approximately 16:00.