

CLEPA Comments on Informal document NR. 1 of the 83 th GRSG

The obligation to mark glazing with a light transmission of less than 40% does not serve a practical purpose. We do not know of any country applying a 40% transmission limit for glazing installed to the rear of the driver i.e. in the rearward field of view. If there are no requirements related to the light transmission of less than 40%, then there is no purpose in applying a mark. Indeed, it would only lead to confusion.

CLEPA has examined the ICE report “PPAD 9/33/39: Quality and field of vision-A review of the needs of drivers and riders” mentioned in informal document n° 17 to 80th GRSG session (April 2001) and feels that the content does not justify the views expressed by UK, Belgium and the representative of the EC during the discussions on light transmission in the driver’s rearward field of vision. Our comments are as follows:

1. The ICE report, which is well prepared, is an in depth study of the requirements relating to the performance of motor cycle helmet visors which appears to have been extended to cover motor vehicle windscreens.
2. The first 50 pages consist of a comprehensive survey of published work and a summary of existing regulations which includes most of the items already considered by GRSG. In the case of windscreens some very small loss in seeing distance under low contrast conditions is reported in certain published work i.e. up to 5% when comparing untinted and tinted windscreens. Apart from one paper from the USA the researchers were not able to find any published accident data that related to the transmission of visors or vehicle glazing: *Tinted Windscreens don’t increase accident risks-A.M. Gittleson: Automotive Engineering 1973.*
3. In order to obtain further information ICE conducted a series of laboratory and road trials The laboratory trials were carried out using a model road in a light proof box with built in facilities for adjusting the lighting and contrast levels. Six samples of glazing were used with a range in light transmission from 82% down to 19.6 %.

Pedestrian or disc targets were presented at one of six positions in the road scene corresponding to left kerb, right kerb or road centre at 23m or 73m distance from the participant. These distances equate to an approximate stopping distance i.e. thinking and breaking distance, for a vehicle travelling at 30mph and 60mph respectively. Pre-trial testing indicated that it was only necessary to assess the pedestrian target at 73m since it could be consistently detected at 23m for all the light transmission samples. Participants were required to indicate when a target was present.

The field trials were carried out at a disused airfield where there was no street lighting using scaled 23m and 73m disc targets. Participants were required to indicate the presence of “Left” or “Right” positioned targets and the detection distance was recorded.

Results / Conclusions

The overall conclusion reached was, that for a simulated forward driving speed of 60mph, reducing the light transmission does not result in any significant decrement in the detection distance until it falls to a value somewhere between 47% and 33.4%

The report also includes an assessment of other factors affecting driving visibility such as windscreen wear and haze which could be relevant to any requirements for the roadworthiness inspection of vehicles.

The relevance of the ICE report to Discussions at GRSG - Glazing to the rear of the driver

It is difficult to understand how the work carried by ICE relates to the rearward field of view. The recommendations are based on experimental conditions designed to simulate the forward field of view requirements at a driving speed of 60 mph. Indeed, with the larger targets, which represented 30 mph, the differences in the results were much less significant.

It must be concluded that the results of this work add nothing to the discussion that has already taken place at GRSG meetings.