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Item 5 (b) of the provisional agenda

Proposals of amendments to ATP: New proposals

Interpretation of external surface area measurement for panel vans¹

Transmitted by the United Kingdom

I. Introduction

1. This topic was originally raised at the sixty-sixth session of WP.11 and led to misunderstandings over the problem experienced, which results in some van structures receiving slightly lower K values than they otherwise might be entitled to.
2. The text of the ATP for the measurement of the external surface area of insulated vans is not practical for all shapes and sizes of vehicle. The smooth contours of a van body make it difficult to establish the most accurate datum point to take measurements from. For example the width of the floor is often different from the ceiling and the front can be narrower than the rear where a side door is installed.
3. Measurement of the external surfaces of a van cannot account for unfilled voids within the structure. Panel voids might also include steel structures that bridge the external heat to the outer edge of the insulated wall panels (grey panel in the diagram below).
4. The point is illustrated in the diagram below. The grey shade represents the main insulated panel and the black voids represent varying thicknesses of foam infill. The question is whether the external surface should be considered as the outer edge of the grey part or should it include the voids and be loosely considered as the external metal surface.

¹ Submitted in accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106; ECE/TRANS/2010/8, programme activity 02.11).

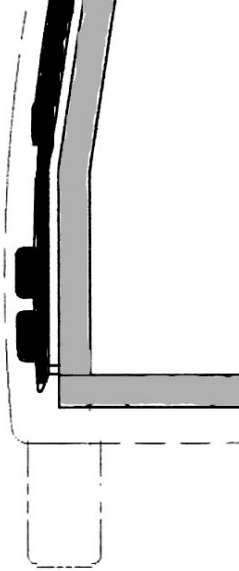


Diagram: Left rear corner of an insulated van.

II. Proposed amendment

4. For the purpose of measuring the external area it is proposed to disregard the wall voids/infill where the thickness is inconsistent. In simple terms the external wall should be the internal wall area expanded by the thickness of the main insulation panels only.

5. The following text should be added to Annex 1, Appendix 2, paragraph 1.2 as follows:

"For insulated panel vans the external surface area should be considered as the outer skin of each insulated wall panel. For example, in the case of the van floor the external surface would be the line where the original equipment manufacturer floor level is."

III. Impact

6. There is no financial impact to industry. The affect would be that some panel van structures have a small increase in the measured K value due to the effect of making the calculation using a smaller measurement for the external surface area.

7. The proposal would ensure that measurements made on panel vans are consistent between different engineers. That benefits the body assembler who would be reassured that the precise K value is not dependent on which test station or which individual person conducts the test.
