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**Economic Commission for Europe**
**Inland Transport Committee****Working Party on the Transport of Perishable Foodstuffs****8 October 2014****Seventieth session**

Geneva, 7-10 October 2014

**Item 5 (a)**


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**Proposed amendment on dimensions of panel vans****Revision of UK text**

Add the following text annex 1, appendix 2, paragraph 1.2:

"For calculating the mean surface area of the body of a panel van or other non-regular body, the competent authorities' appointed experts shall select from one or a combination of the following three methods.

Method A. The manufacturer shall provide drawings and calculations of the inside and outside surfaces.

The surface areas  $S_e$  and  $S_i$  are determined taking into consideration the projected surface areas of specific design features of the irregularities of its surface such as curves, corrugations, wheel boxes, etc.

Method B. The manufacturer shall provide drawings and the competent authority shall use the calculations according to defined schemes and formulae.

$$S_i = (((WI \times LI) + (WI \times LI) + (W_i \times W_i)) \times 2)$$

$$S_e = (((WE \times LE) + (WE \times LE) + (W_e \times W_e)) \times 2)$$

Where:

WI is the Y axis of the internal surface area

LI is the X axis of the internal surface area

$W_i$  is the Z axis of the internal surface area

WE is the Y axis of the external surface area

LE is the X axis of the external surface area

$W_e$  is the Z axis of the external surface area

Method C. If neither of the above is acceptable to the experts, the internal surface shall be measured according to the figures and formulae in method B.

The K value shall then be calculated based on the internal surface area, taking the insulation thickness as nil. From this K value, the average insulation thickness is calculated from the assumption that  $\lambda$  for the insulation has a value of 0.025 W/m<sup>2</sup>K.

$$d = S_i \times \Delta T \times \lambda / W$$

Once the thickness of the insulation has been estimated, the external surface area is calculated and the mean surface area is determined. The final K value is derived from successive iteration.

The panel van or other non-regular body dimensions shall be included in the test report with drawings. The maximum internal length and height along with the top and bottom width shall be included in Model No 1 A of the ATP, indicating which of the three testing methods was used.

The external dimensions shall be the internal dimensions with the insulation thickness added."

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