

'WINDCHILL' AND AIR MINIMUM TEMPERATURES IN THE UK: IMPLICATIONS FOR THE OPERATION OF TRACTION AND ROLLING STOCK EQUIPMENT

As a result of the weather-related disruption to rail services during the winter of 1986/87, in particular the severe conditions prevalent during the period 11-13 January, a Working Group was established. The Group set out, firstly, to identify any effects of 'windchill' upon traction and rolling stock and secondly, to establish guidelines for a common low temperature performance specification for incorporation into new build contracts.

As a result of detailed investigations into the 'windchill' effect and the occurrence of minimum air temperatures in Great Britain, the working group concluded that:

- Whereas the 'windchill' effect may well enhance the rate of cooling of an object, it cannot depress the temperature of that object by more than 1.3°C below that of the ambient air.
- A low temperature performance specification should ideally fall within the range of -20°C to -26°C, with the final figure being determined by the acceptability of risk (the probability of recurrence of that temperature) versus the costs involved with supplying equipment to that particular standard.