

RESPIRATORS FOR PROTECTION AGAINST ASBESTOS*

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OVER the past few years the British Standard for Respiratory Protection, BS.2091, has been undergoing a drastic revision. A new Standard, BS.2091:1969, *Specification for Respirators for Protection against Harmful Dusts and Gases* has now been published and is of direct interest in regard to protection against dust including asbestos, as it places the standards of protection offered on a scientific basis.

It does this by controlling facepiece leakage as well as filter penetration and valve slip, so enabling the overall standard of protection to be assessed. For ordinary respirators this protection factor is of the order of 20, that is, the external concentration is reduced to one-twentieth that inside the facepiece. If we use the standards suggested earlier such respirators should afford protection against prolonged exposure to 40 fibres/cm³ of chrysotile asbestos. This appears to be adequate to prevent danger during the operations of brake maintenance procedures, which we have been discussing today.

Perhaps I should mention that there is shortly to be published a new B.S. Specification *High Efficiency Dust Respirators*. These respirators will have a protection factor of 400 and will be suitable for short term protection against very high concentrations of chrysotile asbestos dust. Such respirators will be of the full facepiece or positive pressure type. Full facepieces are not, in general, acceptable for prolonged industrial use and the positive pressure dust respirator, while acceptable to the wearer, has a higher initial cost. A further British Standard *Positive Pressure Powered Dust Respirators* is in preparation, and should be issued later this year. It is unlikely however that during normal brake maintenance operations the concentrations of dust will be such as to require the use of equipment of this type.

An alternative approach is to utilise a half mask fed with compressed air from a suitable uncontaminated source. This type of apparatus offers complete protection for the wearer but suffers from the disadvantage of possible hose entanglement.

Respiratory protection should in general be regarded as providing protection for work where control is difficult or where the work is intermittent and of short duration. It is hoped that the control of the dust will be achieved by the methods indicated earlier and that respiratory protection will therefore only be needed for special work not of a routine nature.

*This paper was originally presented at a Conference on Exposure to Asbestos during Brake and Clutch Maintenance, held at Brentwood, Essex, March, 1969.