at work, 4 fibres/cm³ for 25 years, or 10 fibres/cm³ for 10 years. The British Occupational Hygiene Society Hygiene Standards Sub-committee on Asbestos expressed the view that a proper and reasonable objective would be to reduce exposures to below this level and thereby reduce the risk of contracting asbestosis to less than 1 per cent of those who have a lifetime's exposure to the dust. For such workers, who may possibly work for 50 years, the long term average concentration to which they are exposed would need to be less than 2 fibres/cm³. For others, who will be exposed to asbestos dust in air for shorter periods, the long term average concentration need not be so low, as long as their exposure will amount to less than 100 fibre years/cm³.

The possibility was considered that short periods of very high concentration for a few weeks or less might be disproportionately important in determining the risk of asbestosis. However, the evidence for this was not conclusive and the committee were satisfied that the risk can be satisfactorily expressed with respect to an average concentration over 3 months and can safely be kept below 1 per cent by ensuring that a man's accumulated exposure does not rise above 100 fibre years/cm³.

The exposure measured by making fibre counts on membrane filter samples can be converted into exposure measured with an impinger, the American method, by examining the results of side-by-side comparisons of the two instruments. Such comparisons made by the United States Public Health Service in asbestos textile plants have shown that an accumulated exposure of 100 fibre years/cm³ corresponds to 15 million particle years/ft³ by standard impinger methods (AYER, LYNCH and FANNEY, 1965). The present American Threshold Limit Value is a concentration of 5 million particles/ft³ (mp/ft³) which, if it persisted, would result in an accumulated exposure of 250 million particle years/ft³ over 50 years.

These American hygiene standards, called Threshold Limit Values, are a system for summarising published information on air contaminants in a convenient form for the day-to-day practice of industrial hygiene. The present American standard for 8-hr averages is thus 17 times higher than the British standard for 3 monthly averages. However, there is a published intention to revise the American standard in view of recent knowledge.

However, the difference between the American and British standard is not primarily due to conflicting evidence on the adverse affects of asbestos. It is because of a different attitude now adopted over the degree of protection which ought to be given against asbestosis.

The American Threshold Limit Value of 5 mp/ft³ was recommended by Dreessen and his co-workers in 1938 after studying 541 employees in 4 asbestos textile plants where massive exposures to chrysotile occurred (DRESSEN *et al.*, 1938). Only 3 doubtful cases of pneumoconiosis were found at the time of the study in those exposed to dust concentrations under 5 mp/ft³, whereas numerous well-marked cases were found above 5 mp/ft³.

A conference held in 1965 on the biological effects of asbestos called attention to the very real probability that the 5 mp/ft³ limit recommended by Dreessen is inadequate to give complete working-lifetime protection against all forms of asbestos (SCHALL, 1965). Medical data on which the limits had been based were inadequate; more than half of the asbestos workers studied by Dreessen and his co-workers were under 30 years of age and thus had insufficient exposure time for much asbestosis to

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