



Asbestos in warm air heating systems

1 This circular advises inspectors of the possible release of asbestos fibres from asbestos-containing insulation boards used to line the cabinets of some types of warm air heating systems.

Introduction

2 The particular types of heater concerned are those which recirculate air by means of a fan through a horizontal or vertical cabinet, using hot water and a heat exchanger as the source of heat. The cabinet normally has two louvred openings to provide inlet and output of air and may be installed inside the room, with a hinged lid, or built into the wall with a hinged front to give access for maintenance. Heaters of this type have been used extensively in the CLASP system of building, but are not confined to it. The CLASP system, however, has wide use by public authorities (particularly in areas subject to mining subsidence, for which it was primarily designed), in buildings such as schools, libraries, old people's homes and offices. It is likely however that a similar situation may exist in any blown air heating system where the air is passed over insulation which contains asbestos and which is not sealed.

Atmospheric sampling

3 Sampling of the atmosphere in several rooms served by heaters of this type revealed the presence of very low concentrations of asbestos fibres in most samples. The type of asbestos in the insulation boards used in the heaters concerned (Asbestolux) was identified as amosite. No sources of asbestos other than insulation boards in the heaters could be found. The highest results tended to come from the sampling positions nearest to the heaters, and there was some correlation between the highest results and those heaters in which the insulation boards had been damaged in some way.

4 All the concentrations measured were very low – none were higher than 0.025 ($\frac{1}{40}$ th) the current hygiene standard for amosite (2 fibres/ml) – but they did reveal the presence of amosite asbestos in the air of rooms where none would normally be expected.

Interpretation of results

5 At concentrations of this order, the existence of a risk to health can neither be confirmed nor denied, but is thought to be negligible. It is prudent however, to take into account the recommendation of the Advisory Committee on Asbestos that exposure to asbestos dust should be reduced

to the minimum that is reasonably practicable. The involvement of members of the public who may be exposed to these concentrations for very long periods in residential establishments, and who include large numbers of school pupils, is also a relevant consideration.

6 The best advice therefore is that those (mainly public bodies) with heaters of this type should introduce a planned programme of reasonably practicable measures to reduce to the minimum this potential exposure to asbestos. Such measures are comparatively simple and should be capable of eliminating exposure altogether. However, there is a problem of cost, since large numbers of heaters may be involved. For this reason a programmed approach is recommended.

Remedial measures

7 The following measures may be appropriate in individual cases:

- (a) cleaning out of heater cabinets to remove accumulations of dust (vacuum cleaners suitable for asbestos dust should be used);
- (b) replacement of asbestos-containing insulation by asbestos-free substitutes (broken panels should be given priority);
- (c) sealing of any exposed surfaces of insulation panels with a suitable surface coating (e.g. fire retardant paint), if replacement is not reasonably practicable. However replacement with non-asbestos board is very much to be preferred.

8 Those undertaking the work described (particularly the cleaning operations) will need an appropriate degree of personal protection, although the risk is not likely to be high.

Action by inspectors

9 There has already been some publicity given to this matter and it is likely that inspectors may be approached for advice by employers, employees or members of the public. In particular the CLASP Development Group is expected to pass information to all major users of their system. If approached, it is suggested that inspectors give advice on the above lines. Enforcement action is not considered to be appropriate.

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