

Table 1 Dust exposure of men employed in certain years

Year	Mean dust level (f/cm ³)	Percentage of men exposed to <2f/cm ³	2.1-5f/cm ³	>5f/cm ³
1936*	13.3	0	0	100
1941*	14.5	4	0	96
1946*	13.2	2	2	96
1951†	10.8	3	8	89
1956†	5.3	2	40	58
1961	5.2	6	35	59
1966	5.4	23	22	55
1972	2.9	32	65	3

*There were no dust measurements in these years and the dust levels given are considered to be lower limits.

†Fibre counts not made in these years (see text).

less than 2 fibres (f)/cm³, 2-5 f/cm³ and more than 5 f/cm³ for certain years, for those men in the study who were working in production areas on 31 December of the year concerned.

From 1933, most of the asbestos used in the factory, amounting to many thousands of tonnes, has been chrysotile. In addition, about 2500 tonnes of crocidolite have passed through all the textile processes.

PREVALENCE AND INCIDENCE

The results are quoted as either prevalences or incidences. The prevalence is the proportion or percentage of men with a defined condition at one point in time. The incidence is the rate of appearance of conditions in previously unaffected men, and is given as the proportion or percentage per annum.

Results

NUMBER OF MEN WITH CREPITATIONS, POSSIBLE ASBESTOSIS AND CERTIFIED ASBESTOSIS

Eighty-two men were recorded as having crepitations when last examined, 58 had possible asbestosis, and 34 were certified as having asbestosis. There was considerable overlap between these three conditions

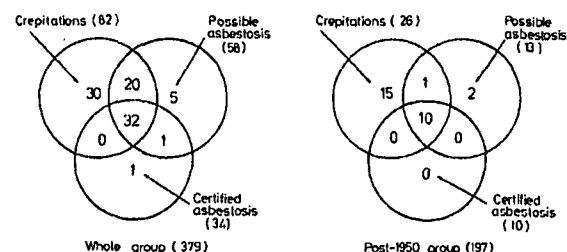


Fig. 1 Number of men with combinations of conditions (crepitations, possible asbestosis and certified asbestosis) for whole group and for those first employed after 1950.

and 89 had one or more of them (Figure 1).

One man was certified on post-mortem findings. In addition, out of 19 deceased non-certified cases, there were three where asbestos exposure was considered contributory to death, and who might have been certified if an application had been made. None of these four men had been suspected of suffering from asbestosis during life. Eight men who had been certified during life have since died. In three of these, asbestosis was not recorded at post-mortem examination; however, histological material for two of these three cases was reviewed later, and there was evidence of slight asbestosis in both.

Table 2 summarises various aspects of exposure at the factory, and ages are given. For those with signs (crepitations, possible or certified asbestosis) and the three men who could have been certified at death, the cumulative exposures, years since first exposure and ages have been calculated up to the first occurrence of the signs. This means that, within exposure categories, the data cannot be interpreted as prevalences; for example, for those first employed after 1950 although 4 (11%) out of 36 with less than 50 f-yr/cm³ had signs, the other 161 men are known to have reached 50 f-yr/cm³ without signs. The prevalences can be calculated using life-table methods and at 50 f-yr/cm³ the prevalence is 2%, not 11%.

Most of the signs were first observed after 30 June 1966 and, for men first employed after 1950 and whose cumulative exposure was less than 100 f-yr/cm³ in 1966, the incidence rates since then were 1.6, 0.7 and 0.5% per annum for crepitations, possible asbestosis and certified asbestosis respectively.

COMPARISON OF RECORDS OF CREPITATIONS BY FACTORY MEDICAL OFFICER AND BY PNEUMOCONIOSIS MEDICAL PANEL (PMP)

All except two of the men in the study had been seen at some time by the PMP. The recording of crepitations by the factory medical officer and by the PMP are summarised in Table 3. Although there was agreement on the proportion of men with crepitations, there were 58 men for whom the records of the factory medical officer and the PMP did not agree. Some of these discrepancies were attributable to the time of the examination; for example, seven of the men read as positive by the factory medical officer and negative by the PMP had been seen more recently by the former. Other discrepancies were probably caused by the transient nature of the sign in some men and also, no doubt, by genuine observer differences. More detailed analysis showed that there was a significant excess ($p < 0.01$) of men with low exposures among those