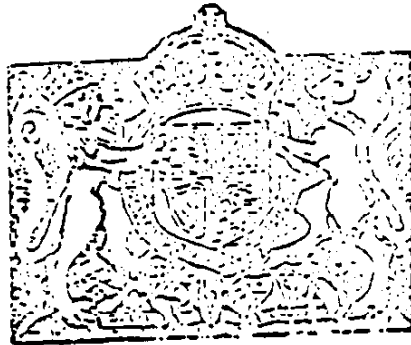


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FACTORIES

ANNUAL REPORT OF THE
CHIEF INSPECTOR OF
FACTORIES

FOR THE YEAR

1947

*Presented by the Minister of Labour and National Service to Parliament
by Command of His Majesty*

January 1949

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Pneumoconiosis etc. The usual Tables have been brought up to-date and are set out below

TABLE XXXI
DEATHS FROM FIBROSIS OF THE LUNG, INCLUDING SILICOSIS, ASBESTOSIS,
PNEUMOCONIOSIS AND BYSSINOSIS (ENGLAND AND WALES)
1940-1947

	1940	1941	1942	1943	1944	1945	1946	1947
SILICOSIS:—								
1. Refractories industries ...	16	12	7	7	6	9	5	10
2. Pottery, Manufacture of ...	53	45	47	41	32	41	49	54
3. Sandstone Quarrying and Dressing ...	42	24	14	24	26	21	20	12
4. Sandstone masons ...	67	58	40	53	31	44	41	43
5. Metal Grinding ...	24	13	13	11	7	11	6	9
6. Sandblasting ...	13	4	4	6	7	6	4	5
7. Steel dressing and cleaning of castings ...	4	9	9	4	10	5	22	13
8. Stone, rubble, flint and sand crushing ...	5	1	2	1	4	—	—	3
9. Scouring powders, Manufacture of ...	—	2	—	1	1	1	—	—
10. Abrasive wheel Manufacture ...	—	—	—	1	1	2	1	—
11. Glass cutting and bevelling ...	—	1	2	—	—	—	2	—
12. Millstone dressing ...	—	—	1	—	—	—	—	—
13. Slate quarrying and dressing ...	7	6	4	6	7	6	13	10
14. Granite quarrying and dressing ...	1	1	3	2	—	1	—	4
15. Tunnel mining (Sewage works, etc.) ...	1	—	5	4	4	4	5	—
16. Coal Mining ...	232	196	250	276	277	323	343	347
17. Gold Mining (South Africa) ...	10	7	7	4	9	4	7	5
18. Tin Mining ...	21	17	12	14	11	19	14	12
19. Iron ore (haematite) mining ...	20	4	7	5	7	2	9	6
20. Lead mining ...	—	1	3	1	1	2	1	2
21. Copper mining ...	—	1	2	1	—	—	—	—
22. Barytes mining ...	3	3	—	4	—	2	—	1
23. Clay mining ...	—	—	—	1	—	1	—	—
24. Mining Engineers ...	—	—	3	1	—	—	1	1
25. Miscellaneous ...	2	1	2	2	4	5	6	11
Total—Silicosis ...	522	405	417	470	445	508	553	558
ASBESTOSIS ...	11	17	11	8	10	11	16	13
PNEUMOCONIOSIS:—								
Coal Mining ...	—	—	—	—	34	64	78	230
Other Industries ...	—	—	—	—	3	11	5	12
BYSSINOSIS ...	—	—	6	7	1	10	3	4
OTHER CASES OF FIBROSIS	650	461	443	493	531	559	568	616
GRAND TOTAL ...	1,181	884	877	978	1,024	1,132	1,223	1,415

TABLE XXXII
FATAL CASES INVESTIGATED UP TO END OF 1917

	Number of Deaths	Average age at Death	Duration of Employment in years		
			Longest	Shortest	Average
SILICOSIS					
Pottery:—					
Silicosis	503	60.9	62.0	2.8	39.0
Silicosis with Tuberculosis	357	55.2	67.0	5.0	31.6
Sandstone:—					
Silicosis	200	58.9	60.0	9.0	39.4
Silicosis with Tuberculosis	204	56.6	55.0	5.0	37.2
Grinding of Metals:—					
Silicosis	91	55.2	56.0	11.0	36.3
Silicosis with Tuberculosis	136	53.5	53.0	2.3	32.7
Sandblasting:—					
Silicosis	57	48.7	25.0	1.7	12.0
Silicosis with Tuberculosis	91	45.3	26.0	2.0	13.2
Manufacture of Scouring Powders:—					
Silicosis	12	38.1	37.0	2.3	8.4
Silicosis with Tuberculosis	6	40.8	11.2	2.0	7.0
Miscellaneous:—					
Silicosis	172	51.1	57.0	1.3	22.9
Silicosis with Tuberculosis	172	50.0	50.0	0.7	23.7
Total:—					
Silicosis	1,037	55.2	52.0	1.5	34.3
Silicosis with Tuberculosis	1,046	53.6	67.0	0.7	31.3
ASBESTOSIS					
Asbestosis	160	47.5	45.0	0.5	14.9
Asbestosis with Tuberculosis	72	37.0	29.0	0.8	10.4

Asbestosis and Carcinoma of Lung

During the 23 years 1924 to 1946 inclusive, 235 deaths, either caused by Asbestosis* or in which Asbestosis has been proved at autopsy have come to our notice.

Cancer of the lungs or pleura was found to be present either as a cause of death or as a concomitant in 31 (13.2%) of these 235 cases. One case, a male aged 77, diagnosed post mortem as "Sarcoma" of lung has been excluded and is not included in the above or subsequent figures, as the diagnosis was considered to be unreliable.

The 235 cases of asbestosis and the 31 cases of asbestosis complicated by carcinoma of the lungs or pleura grouped according to age are shown in Table XXXIII. A further grouping according to age and sex is shown in Table XXXIV. It will be seen that of the 128 male deaths, 22 (17.2%) were complicated by carcinoma of the lungs or pleura and of the 107 female deaths 9 (8.4%) were similarly affected.

TABLE XXXIII

Age in Years	Asbestosis	Asbestosis and Carcinoma of lung	Per cent.
15-24	9	—	—
25-34	42	2	4.8
35-44	71	4	5.6
45-54	53	10	18.9
55-64	43	12	25.6
65 and over	17	4	23.5
Total	235	31	13.2

* The expression "Asbestosis" here includes Asbestosis accompanied by Pulmonary Tuberculosis.

TABLE XXXIV

Age in Years	Males			Females		
	Asbestosis	Asbestosis and Carcinoma of lung	Per cent.	Asbestosis	Asbestosis and Carcinoma of lung	Per cent.
15-24	3	—	—	6	—	—
25-34	9	—	—	33	2	6.1
35-44	30	—	—	41	4	9.8
45-54	16	9	25.0	17	1	5.9
55-64	37	11	29.7	6	—	—
65 and over	13	2	15.4	4	2	50.0
Total ...	128	22	17.2	107	9	8.4

Age at Death

The mean ages at death of the cases of asbestosis and of asbestosis complicated by carcinoma of the lungs or pleura are shown in Table XXXV. The mean ages distinguished for males and females are shown in the first four columns and combined in the last two columns.

The mean age at death for asbestosis is 44.2 years and for asbestosis with carcinoma of the lung, 52.1 years.

TABLE XXXV

	Males		Females		Total	
	Asbestosis	Asbestosis and carcinoma of lung	Asbestosis	Asbestosis and carcinoma of lung	Asbestosis	Asbestosis and carcinoma of lung
Mean age at death in years ...	49.2	55.2	38.2	44.6	44.2	52.1
Standard Deviation	12.2	5.9	10.1	13.96	16.9	12.3
Range in years...	15-77	45-70	22-72	21-71	19-77	22-71

Exposure to Asbestos Dust

The mean durations of exposure in years to the hazard of breathing asbestos dust are shown in Table XXXVI to compare the exposure of the cases of asbestosis and asbestosis and carcinoma of lung. The sexes are differentiated in the first four columns and combined in the last two.

Those cases of asbestosis developing carcinoma of the lung show a mean exposure of 26.5 years compared with 13.4 years exposure for those cases dying with no evidence of carcinoma of the lung.

An attempt was made to classify the cases according to dustiness of occupation. This had to be abandoned owing to the frequency with which workers are transferred from process to process and to the fact that dusty and less dusty processes are often carried out in close proximity.

TABLE XXXVI

	Males		Females		Total	
	Asbestosis	Asbestosis and carcinoma of lung	Asbestosis	Asbestosis and carcinoma of lung	Asbestosis	Asbestosis and carcinoma of lung
Mean duration of exposure in years ...	18.5	20.1	7.8	7.6	13.4	16.5
Standard Deviation	13.5	9.9	5.8	4.6	8.7	10.3
Range in years	2-40	6-40	0.5-32	1.5-16	0.5-48	1.5-40

Asbestosis and Carcinoma of Lung compared with Silicosis and Carcinoma of Lung

For the purpose of comparing the above figures of cases of Asbestosis and Carcinoma of the lung with some similar disease the 6,884 cases of silicosis occurring between 1930 and 1946 were analyzed.

Ninety-one of these 6,884 cases of silicosis or 1.32% were found to have carcinoma of the lungs or pleura at post mortem.

The average age at death of those dying of silicosis and carcinoma of the lung was 59.4 years.

Summary

Thirty-one cases of carcinoma of lungs and pleura were found at autopsy of 235 cases of Asbestosis. That is 13.2%.

The average age at death of those suffering from carcinoma of lung was 34.2 years compared with 44.2 years for those with asbestosis alone.

The average duration of exposure to asbestos dust was 16.5 years for those cases complicated by carcinoma of lung, compared with 13.4 years for those not so complicated.

Out of 6,884 cases of silicosis at post mortem, 91 (or 1.32%) had carcinoma of the lungs and pleura.

The average age at death of these cases of silicosis and carcinoma of lung was 59.4 years.

Dermatitis in 1947.

There were in 1947, 4,884 voluntarily notified cases of dermatitis. The corresponding figure for 1946 was 6,156. A more satisfactory system of classification of dermatitis is being devised and at present no analysis of the 1947 cases has been made.

At a firm engaged in developing and processing colour films, 10 cases of dermatitis, among about 600 workers, occurred. While metol, a developer, was believed to have given rise to some cases, it was thought possible that a mould, the growth of which coincided with the use of phosphoric acid in some of the dye solutions might have caused some of the skin lesions. The mould thrived on the inside and outside of ducting woodwork and was easily dislodged by cleaning. The part played by this mould in the occurrence of dermatitis has not been proved conclusively but in two of the suspected cases there was an extension of the affected skin areas after work had ceased, while clinically the skin lesions appeared infective in origin. An interesting point was the presence in the mould of mites identified as belonging to the family Anoctidae and probably a species of *Histiogonia Yostro serratum meguin*.