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FACTORIES

ANNUAL REPORT OF THE
CHIEF INSPECTOR OF
FACTORIES
FOR THE YEAR
1949

*Presented by the Minister of Labour and National Service to Parliament
by Command of His Majesty
February 1951*

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1937 Act) judging by an
for this group.

ss in 2,874 instances are
led certificates of fitness,
authorities, and these are
ative bodily development"
of young persons in 1949.
osis (presumably capitis),
out of every 131 girls

subject to re-examination,
1,077 cases), while in a
te (in force for 21 days)
ons of girls. Among the
f fitness had pediculosis,
a — conditional and pro-

ave errors insufficiently or
rtant cause of rejection.
concern the girls, out of
in 313, while comparable

ase is higher than in the
of boys examined. Much
ne girls seems to be true
or throat, for which 113
ditional certificates subject
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e provisional certificates,
granted on this account.

the liaison between the
officer is growing, to the

in the outskirts of London
persons in 1949, "several
s the year. Provided they
If they were given an
ve precautionary notices.
to attend school".

Pneumoconiosis

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

TABLE XIV

DEATHS FROM FIBROSIS OF THE LUNG, INCLUDING SILICOSIS, ASBESTOSIS,
PNEUMOCONIOSIS AND BYSSINOSIS (ENGLAND AND WALES), 1940 TO 1949

	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
SILICOSIS:—										
1. Refractories industries ...	16	12	7	7	6	9	8	10	13	13
2. Pottery, manufacture of ...	53	45	47	41	32	41	49	54	48	63
3. Sandstone quarrying and dressing ...	42	24	14	24	26	21	20	12	28	15
4. Sandstone masons ...	67	58	40	53	31	44	41	43	40	36
5. Metal grinding ...	24	13	13	11	7	11	6	9	8	14
6. Sandblasting ...	13	4	4	6	7	6	4	5	5	5
7. Steel dressing and cleaning of castings ...	4	9	9	4	10	5	22	13	13	18
8. Stone, pebble, flint and sand crushing ...	5	1	2	1	4	—	—	3	1	3
9. Scouring powders, manufacture of ...	—	2	—	1	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	20	16	21
14. Granite quarrying and dressing ...	1	1	3	2	—	1	—	4	1	1
15. Tunnel mining (sewage works, etc.) ...	2	—	5	4	4	4	5	—	3	2
16. Coal mining ...	232	196	230	276	277	323	343	347	322	336
17. Gold mining (South Africa) ...	10	7	7	4	9	4	7	5	4	4
18. Tin Mining ...	21	17	12	14	11	19	14	12	11	20
19. Iron ore (haematite) mining ...	20	4	7	5	7	2	9	6	12	9
20. Lead mining ...	—	1	3	1	1	1	1	2	—	1
21. Copper mining ...	—	1	2	1	—	—	—	—	—	1
22. Barytes mining ...	3	3	—	4	—	2	1	1	—	3
23. Clay mining ...	—	—	—	1	—	1	—	—	—	1
24. Mining engineers ...	—	—	3	1	—	—	1	1	2	1
25. Miscellaneous ...	2	1	2	2	4	5	6	11	7	7
Total—SILICOSIS ...	522	406	417	470	445	508	553	558	534	575
ASBESTOSIS ...	11	17	11	8	10	11	16	15	15	17
PNEUMOCONIOSIS:—										
Coal Mining ...	—	—	—	—	34	64	78	230	317	420
Other Industries ...	—	—	—	—	3	11	5	12	19	14
BYSSINOSIS ...	—	—	6	7	1	10	3	4	8	7
OTHER CASES OF (NON-OCCUPATIONAL) FIBROSIS ...	650	461	443	493	531	529	568	616	651	554
GRAND TOTAL ...	1,183	884	877	978	1,024	1,133	1,223	1,435	1,544	1,587

Even in the home of this staple industry there are hardly any unoccupied weaving sheds, and what premises have been available have not complied with either the whole or parts of Regulation 7 of the Cotton Cloth Factories Regulations. The main difficulty has been in complying with Regulation 7(a), which prescribes that the average height of a shed shall not be less than 14½ feet and Regulation 7(b), which prescribes that the lights shall face between north-east and north-north-west. In a number of suitable cases exemptions from parts of Regulation 7 have been granted, but there have been several cases where applications from firms to use unsuitable premises for weaving have been rejected on the grounds that the premises have been so patently at fault from the viewpoint of the Regulations that District Inspectors have unhesitatingly advised the people concerned to seek alternative premises.

Inspectors report that the number of "dry" sheds, i.e., those in which no steps are taken to humidify the atmosphere by artificial methods, is undoubtedly increasing, due in part to changes in the type of cloth woven, better sizing and the introduction of rayon yarns into cotton sheds. Where artificial humidity is used, it is reported as a great deal less on the whole than was the custom at the time of the introduction of the Regulations.

The long warm summer last year gave ample opportunity for observing conditions in weaving sheds when outside temperatures were high, and it was interesting to find that in only very few cases did the Inspectors in cotton districts find contraventions. These cases were mainly among firms weaving very fine cloths where 75 per cent relative humidity was stated to be required to avoid warp breakages. As the temperature rose, readings in excess of 72½° F. were found on the wet bulb, whilst humidity was still required to attain 75 per cent relative humidity. Complete air conditioning plant which would entail the installation of refrigerating plants to deal with the very few hot dry days on which such conditions occur in the normal English summer, whilst a possible solution of the problem, is not a practical one from the financial and economic standpoint.

Another marked change over recent years is the fact that temperatures are rarely found too low on cold mornings — the use of unit heaters and air conditioning plants and combined heating and ventilating plants has materially improved conditions in the sheds, and temperatures can now be raised much more quickly than by former methods. Far more cotton-weaving factories have now installed plant whereby the temperature can be automatically controlled.

Asbestos Regulations

The Code of Regulations dealing with the dangers arising in the handling of asbestos has been in force since 1931, and reports show that constant vigilance is necessary in order to ensure that there is no slackening in the fulfilment of the precautionary measures laid down. In factories where processes scheduled under the Regulations are carried on, the maintenance of dust control, particularly adequate exhaust ventilation at all possible points where dust may be evolved, is of the utmost importance. Those firms which have had long experience with the product and realize how the incidence of asbestosis arises are fully alive to the many problems involved, and from the inspection point of view, it is very necessary to keep an ever watchful eye for the new use of asbestos in some manufacturing or other process, for example, on ships or buildings where the work may be undertaken by someone not fully realizing the necessity of preventing as far as possible the inhalation of asbestos fibre and dust.

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It is well known in this industry as in others where there is a dust hazard, that there is scope for research and experiment in the effective application of exhaust ventilation to a variety of processes and machines. The weaving of asbestos is one such process, and reference is made to one weaving factory where it had been the practice to wet the asbestos before weaving and it was realized that there would be certain advantages if this wetting could be dispensed with. The local application of exhaust ventilation above and below the warp, behind the heald and at the "beat up" have been tried with only partial success and it was thought that it might be possible to place each loom in an exhausted enclosure so that the weaver remained outside and all the dust produced at various parts of the loom thus extracted without entering the air of the shed. This was tried experimentally on a pair of looms. The enclosures were built up of light hardboard panels some hinged and some removable to give access to the loom when necessary. Panels of transparent plastic material were fitted in the top of the enclosures and artificial lighting provided inside. The enclosures were exhausted from the top. It was found that this was an effective way of dealing with the dust, but there were so many other difficulties with regard to lighting, heating and handling to overcome that the firm decided not to extend the idea. It was finally considered that reorganization involved in filling a weaving shed with large box-type enclosures was too complicated to make the idea worth-while. Other methods of exhaust ventilation are now being considered.

The main method of preventing the escape of dust into the air of another weaving shed consists of a combination of an extensive exhaust ventilation system and wet processes. The weft pirns are steamed in cabinets situated alongside the looms and the warp is damped as it passes over a roller which revolves in a trough of water mounted in front of the warp beam. Exhaust ventilation is also applied above and in front of the shuttle race and beneath the reeds and healds. Blending for the textile product at this works is at present carried out by hand on the floor of one workroom, mechanical exhaust ventilation being provided in this room by means of a duct at a height of 7 ft. 6 in. on the walls with many openings fitted with slides which can be opened or closed as required. Experiments are in hand, however, with a mechanical drum blender in which an oil spray is injected as the drum rotates and the whole plant installed in an enclosure provided with exhaust ventilation.

One large asbestos factory has instituted a scheme for replanning and reorganizing part of the works where opening and mixing processes are carried on, because they were dissatisfied with the existing methods of dust suppression and realized that having regard to the old premises in which these particular processes were housed nothing short of re-siting and reconstruction would solve their difficulties. At the same time, on the medical side, the firm has started a new scheme of medical examinations, and has appointed a part-time works' doctor who has a thoroughly good knowledge of the asbestos industry and the risks of working therein. The new scheme includes an initial clinical examination and X-ray screening, followed by a clinical and/or X-ray examination every year of workers employed in scheduled areas. Arrangements have been made to buy screening apparatus and to have X-ray films taken. It is proposed to alternate clinical examinations carried out by the works' doctor with those carried out by the Pneumoconiosis Medical Panel and for this purpose the firm is anxious to work closely with this Panel and have made a request to the local doctor in charge. The scheme should be well under way in 1950 and its development will be watched with the greatest interest.

Portable asbestos spraying plants are used to an increasing extent by contractors on buildings, ships, etc., for insulation purposes. Asbestos is fed into

the spraying machine by hand, and conveyed by means of a small spiked band to a small card cylinder which takes the fibre from the travelling band and feeds it in a flocculent condition to a fan by which it is blown to a spray gun where it is ejected by means of compressed air. The spray gun consists of a centre jet for asbestos, surrounded by four jets of water which converge on the asbestos spray at about 1 foot from the end of the gun. Also a fine spray of water is provided over the spike band conveyor in the actual machine. The control, by means of a valve on the spray gun, is so arranged that the water jets must be in operation before asbestos can be delivered to the gun. If the water supply fails the supply of asbestos is automatically stopped.

In view of the risks to health unless proper precautions are taken in the spraying of asbestos by means of these portable plants, the firm from which they are hired runs a school where employees of various insulation contractors are given a course of training in their proper use and manipulation, lasting about 14 days, and representatives attend these courses from overseas as well as from the British Isles.

Several Inspectors refer to the unsatisfactory practice of packing raw asbestos fibre into unlined hessian or jute bags (frequently it is shipped at the country of origin and delivered to a factory in this manner) which renders workers handling them liable to considerable exposure to dust and fibre. The Regulations prohibit the use of such sacks or bags for transport of the material within the factory — for which purpose only containers constructed of impermeable material kept in good repair are permitted. In handling packages which are not impermeable, the use of an approved type of respirator by all workers concerned is very important.

Clay Works (Welfare) Special Regulations, 1948

These Regulations have now been in force for over a year and it is possible to give a better assessment of the degree of compliance than was possible last year. It appears that this is variable from works to works; on the whole a serious attempt to fulfil the requirements is being made in the larger works, but much remains to be done in the smaller places. These small works are faced with their own special problems; many of them work only intermittently and some have remained closed for long periods. Demand varies and they are not always able to compete with the larger firms; they are often situated in remote areas without sewerage or piped water supply. In some localities it seems that employers have decided not to act unless pressed, particularly on the provision of protective clothing, and several Inspectors suggest that legal proceedings may be necessary before this attitude is changed. In one District a completely non-co-operative firm was prosecuted and fined, and now shows signs of improvement. In another, a firm fined for breaches of the safety sections of the Act has had a general change of attitude and is now setting about the provision of amenities.

The best progress is reported in the provision of washing facilities, sometimes in the face of very real difficulties of water supply and drainage. Many reports tell of new basins with hot water laid on; some works have shower-baths and a number of ablutions blocks are approaching completion. Where the provision is of good standard and well placed, it is found to be well patronized and abuse is rare. Poor provision rapidly becomes worse as there is no incentive to treat it well.

There has been steady development in the provision of canteens. In the smaller works, snack meals are popular. Some messrooms have been transformed by colour schemes.