together in the future so that misunderstanding may be avoided.

It is unlikely that the matter will rest. In the further controversy ahead the report will form a valuable document for those who take part and the hard work of the Committee has not been wasted.

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Occupational health and safety in Great Britain 1972

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When reviewing the several reports concerned with safety and health at work for 24 million employed people in the United Kingdom one is immediately struck by the differences of presentation rather than the similarities; from the thick glossy to the thin

paper-back; and a lack of uniformity in the statistical tables.

For example, it took some time to assemble the figures on injuries in the following Table, and even so comparisons are only approximate which adds

Place of work	No. of workers	Fatal accidents		Reportable injuries		Reportable diseases
		Total	Per 100 000	Total	Per 100 000	
Factories	14 000 000	468	3.3	258 000	1 843	274
Agriculture	700 000	118	17	5 711	814	25
Shipping	90 000	113	125	—	—	134
Coal mines	297 000	72	24	77 000	25 700	3 256
Quarries	?	36	?	3 217	?	?
Shops and offices ..	8 000 000	30	0.3	18 000	225	—
Totals	23 087 000	837		361 928		

weight to the recommendation of the Robens Report *Safety and Health at Work*, 1972) that these various activities should be brought together.

This table supports the findings of the Committee of Inquiry into Trawler Safety (Board of Trade, 1969) that shipping, and in particular fishing, is a more dangerous occupation than coal mining.

The reports which will attract most attention from doctors in industry are those of the Chief Inspectors of Factories (Department of Employment, 1973b), and of Mines and Quarries (Department of Trade and Industry, 1973), and the Report on Alkali etc. Works, 1972 (Department of the Environment, 1973).

The Report of the Department of Health and Social Security (1973) is of passing interest to industrial doctors but is of more interest to welfare officers since most of it is devoted to Social Security benefits and facilities. From the 24 million insured workers there were 9½ million claims for sickness benefit and 700 000 for industrial injury. The total expenditure of the Department was almost £5 000 million, of which half was taken by retirement pensions. There is also a comprehensive review of the National Health Service with commentaries on training and pay awards on the hospital side.

Reference is made to the data sheets which are now issued for all new pharmaceuticals, which are very much in line with the hazard data sheets which have proved so useful to doctors in industry, allowing rapid reference to a summary of information. A full table giving all the prescribed diseases is no longer published but can be obtained from the Department of Health and Social Security.

The Shipping Casualties and Deaths Return for 1971 (Department of Trade and Industry, 1972), is very short, and three-quarters of its contents, as the title implies, are devoted to ships rather than to the people who sail in them. There were 247 deaths at sea, 134 due to various diseases and 113 to injury. The difficulties of collecting data are appreciated but nevertheless it is apparent that this is an area where a great effort is required to attain standards of safety in keeping with land-based operations.

The Offices, Shops and Railway Premises Act (Department of Employment, 1973a) applies to some 8 million people in three-quarters of a million establishments. The administration of this Act lies largely with local authorities, and inevitably the degree of inspection and enforcement varies between localities.

In general, observance of the Act shows improvement with the exception of the fire provisions. Blockage of exits and stairways is still the subject of much adverse criticism despite the fact that there have been spectacular examples of deaths in fires from this cause. This report will interest mainly those who have a large retail outlet for their products.

The Report of the Chief Inspector of Factories (Department of Employment, 1973b) will be of major interest to occupational physicians. This is an excellent document which seems to improve each year and is full of information in both the narrative and the statistical tables.

New working methods of the Inspectorate include concentrating on large factories, and on those with known hazards or where management has been ineffective. More advanced training to M.Sc. standard is being undertaken, more sampling and measuring instruments are being provided, and more publicity is being given to the workforce and general public about hazards and how they are controlled.

Nevertheless the Chief Inspector has found it necessary to repeat some fundamental principles: 'The manager is responsible for the safety and health of his employees' and 'planning out of hazards at the drawing board stage is rewarding—major failures are no longer acceptable'.

Accident experience, despite a shortfall in reporting by some industries, shows a decrease in real and comparative terms with the exception of the construction industry in which 190 persons were killed. Two-thirds of all fatalities could have been prevented had management and the deceased exercised their responsibilities.

Study of the many statistical tables shows the recurring nature of causes of accidents, and that the lowest incidence occurs in factories employing over 1 000 persons, which is not surprising since larger factories tend to employ specialist safety advisers and to operate joint consultative procedures.

Lead is the subject of a separate chapter, which is in keeping with the times, despite only one death from this cause since 1950. A new look is being taken at this age-old problem partly because of a raising of standards in lead works, and more public awareness of the community aspects.

The Inspectorate's tougher attitude is reflected in an increase in prosecutions and in the closure of unsatisfactory premises: for example, the lead zinc smelter incident at Avonmouth (Windeyer Committee, 1972) is related at length. An advanced technology was employed and the hazards were anticipated, but insufficient control and communication led to a large number of men being suspended because of high blood lead levels.

Surveillance and the application of lead regulations is to be applied to other industries beyond the traditional ones, for example, to scrap metal reclamation where lead-painted material has to be cut up. In such cases extensive atmospheric sampling and biological monitoring is called for together with the provision of bathing facilities, protective clothing, and the wearing of adequate respirators in some situations. There is reference to the new blood lead sampling technique using capillary as opposed to venous

blood. As a screening technique this test is proving extremely useful, but there are reservations about its use in the control of individuals in whom increased lead absorption has taken place.

A Joint Committee of Management, Trade Unions, and the Inspectorate have produced *Lead—Code of Practice* (Department of Employment, 1973c), a splendid document which can only lead to a better understanding and control of the lead problem.

In compressed air work a medical Code of Practice (Construction Industry Research and Information Association, 1973) has been produced by the Medical Research Council Decompression Sickness Panel on which the Employment Medical Advisory Service and the Factory Inspectorate are represented. This includes new decompression tables based on 14 psig, as opposed to the older one at 18 psig, which has resulted in a reduction in decompression sickness. Training courses for doctors and paramedical personnel are available at the Medical Research Council Decompression Sickness Central Registry at Newcastle upon Tyne University.

The report of the Chief Inspector of Mines and Quarries includes, in addition to coal mines, reference to 99 mines producing a variety of minerals—potters' clay, tin, fluorspar, ironstone, etc. A new potash mine has been sunk with a tunnel 2 000 yards out to sea.

In quarries the rate for fatal accidents was four times that of coal mines, two-thirds of which were caused by falls of ground as opposed to one-third in coal mines, suggesting that working methods in quarries need revision. Much of the report is technical and would be of interest only to those conversant with the particular industry.

There is common ground with the Report of the Chief Inspector of Factories in the problems of dust and the pneumoconioses, tar, bitumen, and skin cancer. There were 623 new cases of pneumoconiosis, the same level since 1964, i.e., 2.2 cases per 1 000 employed, but the progression index of radiographic changes has increased from 6.6 in 1965 to 8.8, showing the effects of increased mechanization, and there is an increase in unapproved faces since 1960 despite improved methods of water spraying and increased exhaust ventilation. Much apparently remains to be done to avoid contamination of intake air from development headings.

As in the Report of the Chief Inspector of Factories, noise merits special mention as a hazard to which increasing resources and technology are being devoted.

Under the Alkali, etc. Works Regulation Act (Department of the Environment, 1973), the Inspectorates, apart from their main responsibility for 2 170 registered chemical works, act as consultants to local authorities both in the planning stage of new

plant and process and also in dealing with complaints about pollution and smells arising from some 3 274 separate processes in existing plant.

There are four main groups of registered works—chemical and allied, metal, fuel, and other industries.

Of particular interest is an account of the problems which have been encountered in the Billingham works of Imperial Chemical Industries over the last 50 years. The story is one of continuous success in the removal of dust and chemicals from the atmosphere despite the enormous growth in size and complexity of the plant.

In the metal industries section the difficulties encountered at a batch of electric arc steel furnaces in arresting dust and fume are described. The problem was recognized on the drawing board but the elaborate extraction and electrostatic plant proved inadequate. Further roof extraction and bag filtration plant have brought fume arrest to 99.85% efficiency at a cost of £2.7 million.

Both of these episodes are a splendid example of the degree of co-operation which can be attained between the Alkali Inspectorate, local authorities, and industry.

To summarize, the three major reports, on factories, mines and quarries, and offices and shops, are compulsory reading for those having responsibility for safety and health at work. Their value would be greatly improved if the statistical tables were presented in a uniform manner.

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