BOOK REVIEW

International Labour Organisation. Third International Conference of Experts on Pneumoconiosis. Sydney. February–March, 1950. Record of Proceedings. Vol. I, Part 1: Proceedings; Part 11: Papers presented to the Conference (pp. 323, mimeographed). Vol. II: Papers presented to the Conference and Index (pp. 337, mimeographed). Geneva: International Labour Office. 1953.

These two volumes contain a vast amount of information on pneumoconiosis, which has come, during this century, to be recognized as the outstanding occupational disease. It came into notoriety with the recognition of silicosis with tuberculosis superimposed. At first the tendency was to regard silica dust as the one toxic dust, next asbestos demonstrated its power for evil, and others followed, among which anthracite and coal are now the chief.

The contents of these two volumes are evidence of the research already done and of that in progress, and also of the world-wide recognition of the importance of the pneumoconioses. The conference which took place in Sydney was attended by experts from Norway, Sweden, France, Great Britain, the Netherlands, Belgium, British Columbia, Western Australia, South Africa, the United States of America, Canada, and other countries.

In addition to an account of the 15 sessions and to the conclusions, there are 34 original communications from experts, each dealing with some special aspect of the subject.

The international character of the conclusions give them peculiar importance. Pneumoconiosis is defined as a diagnosable disease of the lungs produced by the inhalation of dust, the term "dust" being understood to refer to particulate matter in the solid state, but excluding living organisms. The dust concerned should be named or the industry or process concerned. Much research is needed to determine how dusts act in producing diseases of the lungs. For most mineral dusts the smaller the particles of dust, the more injurious they are; the lower limits in size have not yet been determined. Particles in excess of 3μ are of little pathological interest until fibrous dusts, such as asbestos, are encountered. The inhalation of aluminium dust does not prevent the development of silicosis in man, nor has it value as a therapeutic agent; it may even be harmful, especially in aggravating tuberculois in animals. Infection, especially by the tubercle bacillus, aggravates, and is aggravated by pneumoconiosis, hence this infection should be excluded from dusty occupations. There are no sure tests today useful for routine and periodic examinations of workers; a diagnosis of pneumoconiosis can only be made after (a) a history of exposure to dust, (b) a clinical finding of pulmonary efficiency, and (c) an x-ray examination of the chest. An international scheme was adopted for classifying such pulmonary radiographs, which divides them into two

major classes (I) discrete opacities, and (II) coalescent or massive shadows. Class I is subdivided into three main categories, according to the sparseness or profusion on the discrete opacities. Class II is also subdivided into four main categories, starting with opacities more than 1 cm. in diameter which are commonly coalescing, and extending to large massive shadows appearing in three or more anterior rib spaces on either side. Sets of radiographs setting forth these various categories should be prepared and distributed to observers in every country. Certain descriptive terms should be abandoned, such as "pinhead", "micronodular", "nodular", "cobweb", "angel wings", and "pseudo-tumoral"; in particular "reticulation" should never be used. X-ray appearances are not necessarily related to the severity of the pneumoconiosis. Pulmonary cancer is found not to be more prevalent than usual among men exposed to silica or coal dusts. The quantity and kind of dust found in lungs could not be accepted as a criterion of the presence or degree of pneumoconiosis. Protection of the worker must lie in (a) abolition of processes creating harmful dusts, (b) substitution of harmless for dangerous material in dusty processes, (c) suppression of dust at source, (d) removal of dust at its point of origin, (e) reduction of dust concentration by ventilation, (f) suppression of dust by wetting, (g) electrostatic precipitation, and, as a last resort, (h) personal respiratory protection of the worker. Only non-siliceous abrasives should be used in sand-blasting, but modern methods of dust control can dissipate hazardous exposure. Dust arising when handling cereal cargoes needs to be controlled.

The subject of compensation for pneumoconiosis as an industrial disease was fully considered and the difficulties in assessing degrees of disability were recognized. Rehabilitation also was found to present a series of problems all calling for solution and research.

Among the more notable of the many original contributions mention must be made of one from A. J. Vorwald telling of the researches carried out at Saranac by means of animal experiments. The radiological diagnosis of silicosis is dealt with by S. W. Verster with an excellent series of reproduced radiographs. Another important paper is by T. F. Hatch stating the analytical requirements for appraising dust exposures, nor should C. M. Fletcher's contribution, dealing with the control of coal-miners' pneumoconiosis by means of periodical x-ray examinations, be overlooked. W. E. George tackles excellently the determination of disability and the standards of compensation in pneumoconiosis.

This publication must for long be a standard work of reference regarding the whole complicated subject of occupational pneumoconiosis.

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