FILE NAME: Sprayed Asbestos (SPRA)

DATE: 1964

DOC#: SPRA020

DOCUMENT DESCRIPTION: Medical Journal Abstract

...een wind velocity and direction were also ...corded

The dust fall varied between 29 gm. m in 30 days, ... distance of 250 m. to 16 at 460 m. At least ...alf the total emission of pollution travelled 500 m. ...from the sources. No dwelling houses should be ...built within 500 m. of installations of similar capacity ...tons a day) to leeward of the prevailing wind ...directions. C. N. Davies

...GNER, G. C. H. A propos des concentrations maxima ...olerables pour les poussières textiles végétales. **[The Maximum Allowable Concentration for Vegetable Textile Dust]** *Arch. Mal. Professionnelles.* Paris 1963 July Aug., v. 24 Nos 7 8 644 51.

This investigation was made to determine the ...ximum allowable concentration of dust in ...getable textile factories and to study the role of ... dusts. Among 645 workers in such factories ...re 2.. patients who were sensitized to the dust ...d showed Monday dyspnoea. Of these, 26 were ...ously affected, their disease reaching Schilling's ...g II. They suffered from asthma, chronic bron...is, emphysema or cardiac insufficiency and were ...aded at the age of 50 to 55 years.

...ng data concerning the 645 workers are tabulated ...ording to their workshops or machines. The dust ...which they were exposed is expressed as a mean ...mgm. m. and the number of the particles per ... less than ... The size of the particles was ...rmined in accordance with the method adopted ...pneumoconiosis, and the smallest size measured ...from that recorded by McKerrow *et al.* [this ...*n.* 1962, v. 37, 352] which was up to 7 ... What... the limit adopted, the distinction between the ...and larger particles is of importance. In cotton ...ies there was no Monday dyspnoea in workers ...ged in spinning and roving. In linen factories, ...way occurred at all stages up to and including ... [see also Tyrk *et al.* *ibid.*, 1961, v. 36, 530] ...ese tables the workers are divided according to ... of service with for each period the stages of ...osis according to a modification of Schilling's ...f progression.

...e sensitization produced is irreversible and is not ...ated when the workers are moved to work ... concentration of dust would not sensitize a ... subject. Suggestions on modernizing plants ...uce the quantity of fine dust include the appli... of exhausts to individual machines along with ...ement in the general atmosphere.

There is a note on the role played by histamine. As regards the maximum allowable concentration in cotton factories the limit of 1 mgm. m ... quired by Schilling can be attained except during the short period of cleaning when masks should be worn. In linen factories the maximum concentration should be the same but the reduction in concentration is here more difficult. *Charles L. Sutherland*

LAUB, G. Der Unfall und Gesundheitsschutz der Beschäftigten bei der Be und Verarbeitung von Asbest. **[Accident and Health Protection of Workers in the Manipulation and Manufacture of Asbestos]** *Zent. f. Arbeitsmed. u. Arbeitsschut.* 1963, Apr. & Aug., v. 13, Nos 4 & 8, 77 81, [5 refs.]; 181 6 [10 refs.]

In the first part an account is given of the variety of fibrous minerals included under the general name of asbestos and of their properties. The industries in which a danger of asbestosis occurs are mentioned, such as the asbestos textile industry, asbestos cement production and the manufacture of brake linings. The use of asbestos in the manufacture of insulating materials is declining in favour of the cheaper ... and glass wool.

Theories as to the effect of asbestos fibres in the development of asbestosis are discussed and it is mentioned that in the new version of the regulation in which asbestosis and asbestosis in combination with cancer are specified there is the addition "disease caused by mixed (chemical physical) action."

The differences in the symptoms and course of silicosis and asbestosis are compared. In asbestosis the diagnosis by X ray film is difficult, especially in early cases. The prevention of this disease by medical examination plays only a secondary part to the technical measures and the two should be associated. The value of Maximum Allowable Concentration is still in dispute. Accidents in this industry are usually caused by unfenced machinery, especially in respect of carding machines.

The second part is concerned mainly with the technical prophylactic measures adopted in the Hamburg asbestos firms. A table shows the various occupations in which workers suffering from asbestosis were found; not only carding but other occupations produced cases. Tables also showed that from the dust concentrations present, spinning, weaving and braiding were dangerous processes. Dust suppression measures were applied to the extent that in one factory they required one third of the total electr...

used by the factory. In the preparation of raw asbestos for manufacture, spacing of the machines, fitting them with exhausts and part enclosure are the dust suppression measures used. Cleaning the dust chambers is done on Saturdays by workers provided with masks and special clothing to protect the skin from the fibrous dust.

One or two special branches of the industry are discussed. Mat making is safe compared with asbestos spraying. The workers using sprays may have to spray overhead and they often smoke cigarettes while doing so. This has been corrected. The spraying should be done when other workers are absent. Sawing of asbestos cement boards should be done under exhaust and the workers should have masks. A warning is given that masks should keep out the fine dust. The old rubber sponge masks and fresh air masks are not recommended.

Accident prevention is mainly a matter of fencing machinery. Some of the special machinery used in asbestos factories, for example carding, is difficult to fit with side protection. As most of the workers employed on such machines are women there is the danger of clothing, dresses and aprons becoming entangled in moving machinery. It appears however that, in general, accident prevention in the Hamburg asbestos factories is carried out in a satisfactory manner. *Charles L. Sutherland*

VISWANATHAN, R., DE MONTE, A. J. H., SHIVPURI, D. N., VENKITASUBRAMANIAN, T. A., TANDON, H. D., CHANDRASEKHAR, S., JAIN, S. K., GUPTA, I. M., PRITPAL SINGH, GUMBHIR, K. K., RANDHAWA, H. S. & SINGH, V. N. **Bagassosis.** *Indian J. Med. Res.*, 1963, May, v. 51, No. 3, 563-633. 1 text fig. & 19 figs. on 6 pls. [Numerous refs.]

Bagasse is being increasingly used in India for the manufacture of paper and insulation boards. The appearance of several cases of bagassosis in the paper industry led to this comprehensive enquiry which was carried out at a factory employing some 160 workers. 60 of these were engaged by contractors so that there was a considerable turnover of workers, new recruits being taken on.

Bagasse dust consists of pith particles mixed with some bundle and rind fibres. Particle counts made in different sections of the factory showed that the largest numbers of particles found in the air were in (1) the place for the breaking up of the bales of bagasse, (2) the bagging pit where unusable portions of bagasse were collected in bags, and (3) the dust chamber which had to be cleaned out 3 times a day. The particle size varied from below [illegible] 45 [illegible] being from 2 [illegible] The particle [illegible] as a guide for dust concentrations in [illegible] ments. Examinations were made at inter[illegible] recruits who were employed at the most dus[illegible] so as to shed light on the development of [illegible]

The first examinations were carried out [illegible] factory in 1957 and were repeated each [illegible] 1960. These examinations were very exten[illegible] results showed that over 98 [illegible] of work[illegible] bagasse dust developed respiratory [illegible] pared with 6.7 [illegible] in a control group. [illegible] symptoms as shown by the new recru[illegible] cough, then dusty sputum and breathlessness [illegible] new recruits developed these in 1 to 6 mont[illegible] often there were remissions in the sympto[illegible] periods of leave. The radiological findings [illegible] characteristic, although prominent bronchovascu[illegible] markings were seen to increase durin[illegible] period of 3 years. The skin tests yielded [illegible] result to the whole bagasse antigen [illegible] workers but in very few to the carbohydr[illegible] tein fractions; only 10 new recruits we[illegible] Pulmonary function studies showed th[illegible] capacity was decreased in most of the w[illegible] but no significant change was observed [illegible] mum breathing capacity or the mid expir[illegible] rate. The dyspnoea which seem[illegible] increasing exposure cannot be accounted [illegible] obstructive type of pulmonary insufficienc[illegible] There is probably some diffusion defect [illegible] by the thickening of the alveolar walls as [illegible] seen in experimental animals exposed to [illegible] only one case was an acute disease [illegible] corresponded to the type reported [illegible] investigators such as CASTLEDEN and [illegible] PATTERSON [*Brit. J. Radiol.*, 1948, v. 18, 134] and H[illegible] and PERRY [*ibid.* 1946, v. 21, 747]. Wh[illegible] found in the present study is a chronic [illegible] mild form of gradually progressive [illegible] in the workers exposed to heavy concentration[illegible] bagasse dust. This has not previously been repor[illegible] in medical literature.

A series of laboratory studies including [illegible] experiments and biochemical investigations [illegible] carried out at the Patel Chest Institute, Del[illegible] methods used are fully described. Various [illegible] dusting experiments on animals, in which both [illegible] and sterilized bagasse dust was used, produced [illegible] interstitial pneumonitis with alveolar exudates [illegible] omes with foreign body giant cells. With [illegible]