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CIS Abstracts

Mechanical and ultrasonic treatment of fibres may change their physical and chemical properties. Amosite, chrysotile, crocidolite and glass fibres were ground in a ball mill for 1-7 days, and low-energy ultrasonification was applied to water suspensions of the fibres; size distribution and particle shape and crystal structure of asbestos fibres were changed. Ultrasonic energy (50kHz) has practically no influence on crystal structure, but it does affect fibre size and concentration in the long term. Ball milling is not suitable for comminution of fibrous material. (33937)

CIS 80-1255 Asbestos-cement products in building and civil engineering (Asbestzementerzeugnisse im Hoch- und Tiefbau). Bornemann P., Braunstorfinger M., *Industrie der Steine und Erden*, Nov.-Dec. 1979, Vol.89, No.6, p.206-215. Illus. (In German)

In view of the large quantities of fine dust released when grinders are used to cut asbestos-cement products, and the concentration limits established by the West German safety regulations, tools giving rise to considerably less dust were developed: presentation (applications, price, dust concentration) of hand tools and portable electric tools (scribing, sawing, cutting, drilling, grinding) which through their design or their being equipped with an exhaust system do not give rise to harmful dust concentrations. These tools are designed for working plates and small-diameter pipes. Electric tools and equipment designed for work on large pipes in situ are described. These tools give rise to large dust particles without danger, or are fitted with an exhaust arrangement. (33944)

CIS 80-1256 Health hazards of asbestos protective clothing (Pathologie de l'amiante et vêtements de protection). Sors C., Heintz C., Cabasson B., *Archives des maladies professionnelles*, Nov. 1979, Vol.40, No.11, p.987-995. 24 ref. (In French)

Two cases of pneumopathy (malignant pleural mesothelioma and pulmonary asbestosis with calcified pleural plaques) associated with the wearing of asbestos gloves are reported. In both cases the presence of ferruginous bodies with a visible central fibre was established. The hazards of other types of asbestos clothing are discussed. The chief prevention measures recommended are: prevention of release of pathogenic fibres by means of better production methods for fabrics and clothing; discarding of protective clothing as soon as it shows signs of wear. The importance of medical prevention and early detection of pneumopathies associated with asbestos is stressed. (33983)

CIS 80-1257 Pulmonary fibrosis associated with work with cemented carbides (Fibrose pulmonaire liée au travail des métaux durs). Bery J.P., Berruchon J., Fournier M., Touaty E., Teyssier L., Pariente R., *Archives des maladies professionnelles*, Nov. 1979, Vol.40, No.11, p.997-1002. 24 ref. (In French)

The case of a 59-year-old worker employed in boring cemented tungsten carbide workpieces, suffering from pulmonary fibrosis, is reported. In addition to the classic signs observable by light microscope, investigation of a lung biopsy specimen by electro microprobe indicated the characteristic tungsten mark. This case is typical for disease caused by cemented carbide dust. Given the incidence and characteristics of hard metal fibrosis, it should be included in the list of occupational diseases in France. (33984)

CIS 80-1258 Radiographic and pulmonary function study in 150 subjects exposed to asbestos (Etude radiographique et fonctionnelle respiratoire chez 150 sujets exposés à l'amiante). Contassot J.C., Massonnet B., Vallat F., Monestier F., Croisille M., Tolot F., *Archives des maladies professionnelles*, Nov. 1979, Vol.40, No.11, p.1024-1031. Illus. 28 ref. (In French)

Time-weighted average concentrations measured at a gasket manufacturing facility (150 workers) ranged from 0.5 to 2 fibres/ml. Radiographic and pulmonary function studies revealed one case of asbestosis and 16 workers requiring medical surveillance. (33987)

CIS 80-1259 Cotton dust sampling. Health and Safety Executive., Guidance Note EH 25, HM Stationery Office, P.O. Box 567, London SE1 9NH, United Kingdom, Mar. 1980. 3p. Illus. 5 ref. Price: £0.30. ISBN 0-11-883197-6 (In English)

The method of sampling used by the Health and Safety Executive is described (equipment, procedure, selection of sampling positions, other considerations). While not mandatory, its use is desirable in order to obtain comparable results throughout the industry. The hygiene standard recommended in the United Kingdom is 0.5mg/m^2 total cotton dust less fly. (33996)

CIS 80-1260 Test for screening asbestos. Kim W.S., Carter J. W., Kupel R.E., DHEW (NIOSH) Publication No.80-110, National Institute for Occupational Safety and Health, 4676 Columbia Parkway, Cincinnati, Ohio 45226, USA, Oct. 1979. 5p. 3 ref. (In English)

This colorimetric test is applicable to the detection of magnesium (II) and iron (II) from asbestos in bulk samples, including sprayed-on asbestos and ceiling tiles. The test is simple and can be readily used in the field to screen for the presence or absence of asbestos. Sections discuss: principles; interferences; sensitivity, precision and accuracy; apparatus; reagents; procedure (mag-

CIS 80-1261 Respiratory morbidity in workers exposed to dust containing phenolic resin. Sparks P.J., Peters J.M., *International Archives of Occupational and Environmental Health*, Mar. 1980, Vol.45, No.3, p.221-229. 8 ref. (In English)

73 men and women exposed to phenolic resin and/or processed cotton dust in a factory producing sound-deadening material were studied. There was an acute drop in FEV_1 and FVC in garnett-line workers exposed to phenolic resin dust, but not in pickers exposed to cotton dust only. 35% of workers who smoked and had worked in the plant 5 years of more had an FEV_1 less than 80% of the predicted value. The FEV_1:FVC ratio was inversely proportional to duration of exposure. Exposure to phenolic resin dust had both acute and chronic effects on pulmonary function. (34006)

CIS 80-1262 Industrial dusts (Pył przemysłowy). Szymczykiewicz K., Instytut wydawniczy CRZZ, Warszawa, Poland, 1979. 57p. Illus. 9 ref. Price: Zl.9.00. ISBN 83-202-0013-X (In Polish)

This booklet gives basic data on the biological effects of dust, evaluation of the hazards (dust measurement methods and apparatus and prevention, control measures). Contents: characteristics of dust; biological action (silicosis, silicatosis and other occupational lung diseases); evaluation of exposure (determination of concentration, degree of dispersion and free silica content); exposure limits (USSR and Poland); control measures. Appended: International ILO U/C Classification of Radiographs of the Pneumoconioses and description of a colorimetric free silica determination method. (34041)

CIS 80-1263 Dust in the industrial utilisation of peat (Pölу turpeen teollisessa hyväksikäytössä). Itkonen A., Kangas J., Husman K., Turunen E., Tutkimuksia 161/1979, Työterveyslaitos, Laajaniityntie 1, 01620 Vantaa 62, Finland, 1979. 35p. Illus. 38 ref. Price: Fmk.15.00. ISBN 951-801-162-1 (In Finnish)

The Finnish 8h TLV for peat dust, classified as an inert dust, is 10mg/m^3. In a horticultural peat baling department the TWA concentrations evaluated by personal samplers were less than 3mg/m^3; in a horticultural pelletizing department corresponding values were less than 2mg/m^3; in the briquette packers' breathing zone dust concentrations varied around 5mg/m^3; in a peat-coke plant the highest exposures were ± 20mg/m^3; in 4 peat-fired electric power plants dust exposures were highest among the workers at the peat receiving station and cleaning women (average 11mg/m^3 and 17mg/m^3). Dustiest locations in the power plants were peat unloading halls, crushing stations and conveyors. The respirable fraction of peat dust was ±80% by count. The concentrations of 11 trace elements appear to present no significant health hazards. Dust control measures suggested: airtight enclosures for dusty operations and conveyors, exhaust ventilation, wet dust control and use of a central vacuum cleaning system. (34057)

080 NOISE, HEARING, VIBRATION

CIS 80-1264 Noise pollution - A guide to information sources. Bragdon C.R., Vol. 5, Man and the Environment Information Guide Series, Gale Research Company, Book Tower, Detroit, Michigan 48226, USA, 1979. 524p. Price: US$24.00. ISBN 0-8103-1345-6 (In English)

This annotated bibliography from over 4,000 reference sources is classified under: physiological effects; behavioural effects; engineering and architectural controls; governmental and administrative controls; community noise; environmental impact; acoustics; education; primary and secondary reference periodicals. The information is updated to 1979. (33824)

CIS 80-1265 Noise reduction in sawing and cut-off grinding of rolled stock (Lärmminderung beim Sägen und Trennschleifen von Walzgut). Fritz A.H., *Stahl und Eisen*, 1979, No.20, p.1097-1102. Illus. 9 ref. (In German)

Cutting of incandescent stock during rolling by circular saw produces noise levels of up to 115dB(A). Laboratory studies on cutting speed, blade excitation, instability of the blade in the cut, are reported. Technical measures and modifications to the blade were not effective in reducing the noise by more than 1-5dB(A). The use of abrasive cut-off wheels instead of saw blades produced a reduction of 15dB(A) and gave satisfactory results from the technical and economic points of view. (33863)

CIS 80-1266 Reduction of noise of plate shears (Réduction du bruit émis par une cisaille). André G., Barbry J.L., Burgert J.C., *Travail et sécurité*, Jan. 1980, No.1, p.12-21. Illus. (In French)

Sound levels of plate shears can reach 95-100dB(A) when cutting sheet iron. Impulsive sound pressure levels produced by the cut section when falling are also very dangerous. The construction and operating principle of plate shears is described, with considerations on the origin and characteristics of the noise emitted; soundproofing measures (damping the noise on the inclined table with soundproofing materials; results (attenuation of 10dB(A)). (33878)

CIS 80-1267 Vibration isolators for portable vibrating tools: 1. A grinder - 2. A rock-drill of leg-type - 3. A pneumatic baby-rivet-