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Industrial Hygiene Digest

INDUSTRIAL HEALTH NEWS

LITERATURE ABSTRACTS

MEDICAL

ENGINEERING

CHEMICAL

TOXICOLOGICAL

LEGAL . . . decisions and trends

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INDUSTRIAL HYGIENE FOUNDATION
4400 FIFTH AVENUE -:- PITTSBURGH 13, PA.

FOUNDATION FACTS

Foundation Facts is a monthly news-letter issued to industrial concerns holding membership in Industrial Hygiene Foundation. The Foundation is a non-profit association of industries for the advancement of healthful working conditions.

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Foundation Forms Air Pollution Committee

The Foundation announces formation of a committee on Air Pollution, recently authorized by the Board of Trustees. Members of the committee are:

Mr. Alex D. Bailey	Vice President, Commonwealth Edison Company
Mr. Ward F. Davidson	Research Engineer, Consolidated Edison Co., of New York
Mr. Henry F. Hebley	Research Consultant, Pittsburgh Consolidation Coal Co.
Dr. George R. Hill	Dir., Agricultural Research, American Smelting & Refining Co.
Dr. Raymond Hussey	Scientific Dir.,Council on Ind. Health, American Med. Assn.
Dr. L.C. McCabe	Chief, Office of Air & Stream Pollution, U.S. Bureau of Mines

The new committee takes its place with the other professional and technical committees in the Foundation's organizational structure, which are: Medical, Legal, Preventive Engineering and Chemical and Toxicological.

ACS Holding Symposium on Industrial Health and Safety

A feature of the American Chemical Society meeting in Detroit, April 16-20, will be a panel on Industrial Health and Safety. Participants in the panel are:

Dr. W.P. Yant, Mine Safety Appliances Co.	:	"Course & Scope of Industrial Hygiene"
Dr. H.F. Smyth, Jr., Mellon Institute	:	"Field of Chemical Hygiene"
Mr. W.R. Bradley, American Cyanamid Co.	:	"Ind. Hyg. in Plant Location & Design
Mr. H.H. Fawcett, General Electric Co.	:	"Laboratory Safety"
Dr. J.N. Sterner, Eastman Kodak Co.	:	"Plant Health Control, Medical Aspects"
Mr. W.A. Cook, Zurich Insurance Co.	:	"Plant Health Control, Engineering Phases"
Dr. D.D. Irish, Dow Chemical Co.	:	"Products, Their Use and Misuse"
Dr. H.H. Schrenk, Ind. Hyg. Foundation	:	"Air Pollution"

John F. McMahon, Managing Director of the Foundation, will preside.

News Briefs: Dr. Schrenk will speak on Pure Air for America in a broadcast over the Columbia Broadcasting System station, WTOP, from Washington, from 3:15 to 3:30 on Saturday afternoon, April 8. He will appear on the Adventures in Science program conducted by Watson Davis, Director of Science Service.

Field studies during the past month took members of the Foundation's technical staff to a New Brunswick, B.C., foundry, an Idaho smelter, a glass plant in Alabama, and an asbestos operation in Georgia.

John F. Knudsen has been appointed Director of the Industrial Hygiene Department, Kennecott Copper Corporation, Garfield, Utah. He succeeds R.T. Pring, who recently became Technical Director of the Dust and Fume Division, American Wheelabrator and Equipment Co.

I-H-F

354 The Method of Demonstration by Micro-localization and Optical Crystallogical Identification of the Dust Deposits in Silicotic Tissues. J.R. Ruttner and F. DeQuervain. Ztschr. f. Unfallmed. u. Berufskrankh. 40 10pp. (1947) (German).

This article consists of a brief description of the method of micro-incineration and its applications in the demonstration of dust particles in the lungs. It consists in the incineration, in an electric oven at a constant temperature of 500° C., of frozen sections fixed to the slide with five per cent gelatin. After "ashing" in this way for 50 minutes, all organic matter is removed and the inorganic skeleton of the tissue with its impregnated dust particles can be examined with the polarizing microscope. When this has been done the ash can be treated with selective chemical reagents to remove various components, which leaves on the slide only the silica-quartz component. In this way polarization roentgenographic analysis can be carried out at various stages. A practical example is given.

-- Condensed from Bull. Hyg.

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355 Tuberculosis as a Complication of Silicosis. C.H. Marcy. Penna. Med. J. 53, 39-40 (Jan. 1950).

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A brief general paper on silicotuberculosis, presenting the problems in diagnosis. The sputum test is recommended for positive diagnosis, though sometimes difficult to obtain. Malignancy, fungus infections, pulmonary suppuration, bronchiectasis, infectious bronchitis, and pulmonary fibrosis may be mistaken for tuberculosis. Treatment and management are the same as in simple tuberculosis. The death rate from silicotuberculosis is high, and the only good preventive measure is the elimination of dust.

356 Impairment of Pulmonary Function in Anthracosilicosis. H.L. Motley, B. Gordon, L.P. Lang and P.A. Theodos. Arch. Ind. Hyg. & Occ. Med. 1, 133-159 (Feb. 1950).

360

An accurate evaluation of the degree of impairment of pulmonary function requires measurements of ventilation, residual air, oxygen uptake from the air breathed, oxygen saturation of arterial blood and pulmonary circulation. The wide individual variations encountered in these determinations preclude the using of any one single measurement as satisfactory for the appraisal of disability in all types of cases. Strain on the right side of the heart as indicated by electrocardiographic changes is found only in cases with a significant degree of emphysema, and as the degree of emphysema increases, a greater incidence of the strain is noted. There is no apparent correlation between the roentgenographic stage of silicosis and the degree of impairment of pulmonary function in many cases.

-- Condensed from Authors' Summary and Conclusions

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357 Pulmonary Asbestosis; Anatomicopathologic Study of a Case. A. Franchini and G. Canepa. Med. d. Lavoro. 40, 161 (June-July, 1949) Italian.

A man 40 years old had worked in a factory for 22 consecutive years, applying insulating material to articles of asbestos. He never complained about respiratory disorders, and he died as the result of a streetcar accident. During the necropsy the lungs were found to be the seat of

extensive asbestosis. The author's direct attention to the disproportion between the gross features described and the awareness of trouble. The results prove the importance of prophylactic and therapeutic treatment and economic assistance to asbestos workers generally, particularly to those who apply insulating material. -- Condensed from Arch. Ind. Hyg. & Occ. Med.

58 Pseudo-tumoral Pneumoconiosis, simulating Silico-Tuberculosis in a Bauxite Miner. A. Germain, P. Brugere, and P. Cluzel. Bull. Acad. Nat. Med. 133, 273-276 (1949) French.

The case is reported of a man who had been employed in mining bauxite for 20 years previous to 1938. He then left this work to be taken on at the French Arsenal, when an x-ray of his lungs showed no abnormalities. Nine years later the case presented a typical picture of silico-tuberculosis. Since the man had no exposure to dust except during the 20 years he was employed in mining bauxite, the claim is made that bauxite dust was the cause of his condition. Comment is made to the effect that a single case does not constitute proof. -- Condensed from Bull. Hyg.

59 Pneumoconiosis and Tuberculosis in Dockers Dealing with Grains and Seeds. L. Dunner. Brit. J. Radiol. 22, 717-722 (Dec. 1949).

One hundred dockers who had inhaled the dusts of grain, seeds, and chemical material were sent to a tuberculosis dispensary because of chest trouble and were examined. Of the 100, 22 showed pneumoconiotic lesions on x-ray films, 43 were found to be tuberculous, and 3 doubtful which of the two. Three were suffering from bronchial carcinoma.
(Editor's note: There is no information on the extent of exposure or composition of the dust.) -- Condensed from Author's Summary

60 Pneumoconiosis after Exposure to Sulfur Dioxide Fumes and Dust from Coke Fires. L. Dunner, R. Hardy, and D.J.T. Bagnall. Lancet 257, 1214-1217 (Dec. 31, 1949).

Pneumoconiotic lesions have been found radiologically among workers in a group of workers whose common history was exposure to sulfur dioxide fumes and dust from coke fires. Chemical analysis of a fraction of the dust with a particle size of about two microns has revealed iron and siliceous matter. The authors' tentative conclusion is that this pulmonary disease arises from the sulfur dioxide or coke dust, or both. However, it is admitted that the evidence now at hand is not conclusive. No dust counts or gas concentrations are given. (Discussion of the paper appears in Lancet, Jan. 14, 1950, and Dr. Dunner's reply, Feb. 11, 1950.)

61 The Morphology of Bauxite-Fume Penumoconiosis. J.P. Wyatt and A.C.R. Riddell. Am. J. Path. 25, 447-465 (May, 1949).

A description is given of the pathological characteristics found in six fatal cases of this disease, together with a short description of the manufacturing process with which the disease is etiologically connected, and notes on the history and clinical findings in each case. The disease