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FOUNDATION FACTS

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X-Ray Diffraction Laboratory Established

Announcement is made of the establishment of a Department of Research in Chemical Physics at Mellon Institute which will be available to Industrial Hygiene Foundation and further augment the Foundation's services to member companies in maintaining good physical working conditions. This new division includes x-ray diffraction equipment which is essential for the accurate evaluation of factory dusts inasmuch as this method is more dependable than the older chemical or petrographic methods. Dr. Harold P. Klug, formerly of the University of Minnesota, heads the new department and will serve as a consultant to the Foundation. The new laboratory is located on the same floor as the Foundation in the Institute.

The availability of facilities for x-ray diffraction analyses is another important development in the Foundation's work of refining the measurement of dust hazards in the workplace. The I-H-F Composition Sampler permits the Staff to rapidly collect large dust samples from factory air for composition analyses. All dust samples are separated into portions above and below five microns to gain more accurate knowledge of the concentration which workmen may actually breathe.

Coming Publications

The Transactions of the Management Section of the program for the Tenth Annual Meeting will be sent to member companies in the near future. Practically all the papers presented at the annual meeting are now set in type and the proceedings, in four parts, will be published as rapidly as possible. The Management Section will be followed by the Veterans Panel discussion.

Meanwhile, a summary covering highlights of the Engineering Conference, held here on November 13, the day prior to the opening of the annual meeting, will be sent to member companies in a few days.

Industrial Health Codes

The Ohio State Health Department recently announced a proposed code on industrial health and toxicity which contains "maximum allowable concentrations" for a long list of gases, vapors, dusts and fumes. Copies of the proposed code are available to Members upon request. A somewhat similar code was recently adopted in Oregon and such regulations are under consideration or have been recently enacted in several other States.

Trustees Meeting:

A meeting of the Foundation's Board of Trustees will be held late in January.

pericarditis was found. It is believed the silica particles found their way into the pericardial cavity through the small superficial lymphatic channels of communication between the pericardial and pleural cavities. The fact that the firmest attachments were at the site of the densest pleuro-pericardial adhesions, at which point the pleura and both visceral and parietal pericardium were as one, was the major evidence in favor of this view. -- J.I.H.&T.

38 Silicosis - Its Prevention and Treatment. D.A. MacGregor. W. Va. Med. J., 41, 23 pp. (Sept., 1945)
The paper is a general discussion of silicosis, including a summary of recent work on aluminum therapy and aluminum prophylaxis.

39 Paligorskite, a Possible Asbestos Substitute. R.B. Fisher, R.L. Thorne and C. Van Cott. U.S. Bur. Mines, Inf. Circ. No. 7313, 5 pp. (Mar., 1945)
Paligorskite is probably a variety of asbestos usually termed mountain leather. A deposit of paligorskite has been found on an Alaskan island, and it may find a number of uses if present in sufficient quantity.

40 Some New Aspects and Approaches to the Problem of Dust Diseases. C.U. Dernehl and C.A. Nau. Texas Repts. on Biology and Med., 3, 227-237 (Summer, 1945); Ind. Med., 14, 744-754 (Sept., 1945)
The authors review progress on dust disease during the past few years, including (1) evidence from several sources refuting the silica solubility theory of silicosis; (2) aluminum therapy; (3) pulmonary lesions produced by cotton dust; (4) welders' siderosis. A dust exposure apparatus is described by means of which it has been shown that antimony trioxide is many times more toxic when inhaled as when administered intraperitoneally. Their experiments will be reported later in greater detail.

41 Health and Environmental Conditions in the Iron Industry. G.F. Keatinge and N.M. Potter. Brit. J. Ind. Med., 2, 125-141 (July, 1945)
A brief description is given of modern iron-founding methods. Environmental studies were carried out in two foundries employing over 200 workers. These studies included a survey of ventilation and heating, and the dust hazard. To assess the dust hazard in a foundry knowledge is required of (a) the dust concentration in the work atmosphere, (b) the duration of work spells, (c) the chemical composition of inhaled dust, and (d) its particle-size frequency. It is shown that fettlers of medium and large castings have the dustiest occupation in the foundry, and the dust here consists largely of silica particles. It is estimated that the silica hazard of the fettler of large castings is fifty times that of a worker in the general body of the foundry; medium fettling has a nine times greater hazard; and pneumatic mould-filling five times greater; workers in the core shop have the least exposure. The simplest way to maintain routine control of atmospheric pollution in a foundry is by mass concentration estimation of air-borne dust at breathing height. Sickness and accident rates among foundry workers as compared with those in the constructional department showed that: (1) the number of cases of respiratory disease was less although the average number of days lost per case was higher, and while some lungs showed evidence of "dust change" there was no case of silicosis; (2) skin affections were greater, with the most dermatitis among the core workers; (3) the incidence of rheumatic disease was greater; (4) accidents causing injury were fewer and caused less lost time; and (5) among foundrymen heat cramps are uncommon but not unknown. Preventive measures against accident and ill-health are (a) pre-employment medical examination, including chest X-ray; (b) improvement of ventilation by modern construction methods; (c) proper cloak-room, washing and bathing facilities; (d) attention to floors; (e) by adequate protective equipment for the individual worker; and (f) prevention of fumes and