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Editorial Office: 2525 North High Street, Columbus 2, Ohio
Publication Office: 20th and Northampton Streets, Easton, Pa.

Ceramic industry in Sudeten Germany. ANON. *Keram Rundschau*, 46 [44] 515-18 (1938).—The state of the ceramic industry in Sudetenland and its organization, output, and raw materials at the time of its return to Germany are discussed. M.V.C.

Comparison of methods for the determination of CO. F. H. GOLDMAN AND A. D. BRANDT. *Amer. Jour. Pub. Health*, 32 [5] 475-80 (1942).—The following methods for determining CO were compared: Hoolamite detector, palladium chloride ampoules, British palladium chloride method, Hopcalite indicator, iodine pentoxide, and pyro-tannic acid. The results indicated that, if the time factor is considered, the Hopcalite indicator is the best, although in concentrations of 0.01 to 0.1% CO, the British palladium chloride method gave good results. The Hoolamite detector was considered the least satisfactory of all. Details of test procedures are given. B.C.R.

Control and collection of industrial dust: III. E. D. POWERS. *Rock Products*, 45 [9] 48-49, 51 (1942).—Recent developments in high-efficiency cyclones and the selection of the proper type are discussed. For Parts I and II see *Ceram. Abs.*, 21 [8] 175 (1942). B.C.R.

Correct power-station lubrication not based on rules of thumb. HOWARD COOPER. *Combustion*, 13 [7] 30-32 (1942).—C reviews the principles underlying the lubrication of power-plant equipment and the various conditions that must be investigated by the lubrication engineer before prescribing the correct oil for the individual case. H.E.S.

Dust diseases. ANON. *Chem. Eng. & Mining Rev.*, 34 [405] 275-77 (1942).—The most frequent types of dust diseases, chemical and physical characteristics of dusts, and means of dust control are considered. B.C.R.

Dust problems in burning blast-furnace gas under steam boilers. A. R. MUMFORD. *Combustion*, 13 [11] 35-37 (1942).—A survey of a number of installations indicates that dirty gas, when not supplemented with other fuels, is satisfactory for burning under boilers, even with refractory settings. When supplementary fuel, such as oil or pulverized coal, is employed, the higher resulting gas temperature may cause the dust to fuse and produce slagging on the heating surfaces. In such cases, segregation of the burning zones is desirable. The cost of boiler cleaning, however, is usually much less than that of subjecting the gas to primary washing and appears to justify the use of dirty gas. H.E.S.

Grate temperatures a measure of ignition penetration. WALTER H. WOOD. *Combustion*, 13 [8] 31-32 (1942).—When the rate of ignition penetration of a stoker fuel bed is known, it is possible to apply air for combustion most effectively in each zone. A convenient means of ascertaining the ignition penetration is through the measurement of grate temperatures by means of thermocouples. Directions for their installation and use are given. H.E.S.

Guide for inventors. L. T. PARKER. *Combustion*, 13 [10] 47-49 (1942).—P. presents facts for engineers who contemplate applying for a patent. He points out the things that are and are not patentable and the various factors that govern patentability. Commonplace examples are cited, and each point is verified by reference to reports of higher court decisions as listed in the bibliography. H.E.S.

Importance of invention to the nation. H. A. TOULSON, JR. *Chem. Industries*, 51 [6] 690-99 (1942).—The American and European patent systems are compared. The following points are discussed: economic importance of inventions, economics of inventions, results of inventions, public policy behind patents, England and colonial inventions, economic justification for patents, and patent rewards. T. attributes America's great industrial and economic development to her unique patent system. E.D.M.

Increased steel-mill production by protective lubrication. ANON. *Lubrication*, 28 [7] 73-84 (1942).—The Texas Co., New York, N. Y., has enhanced the usefulness and met the

demands of the modern steel mill's production line by providing protective lubrication. Factors which promote effective maintenance and methods of extending the useful life of steel-production machinery are discussed. H.E.S.

Is acute lobar pneumonia a complication of silicosis? D. C. PIERPONT. *Jour. Ind. Hyg. & Toxicol.*, 24, 238-40 (Oct., 1942).—P. investigated the incidence and mortality rate of acute lobar pneumonia in the northern counties of Michigan and Wisconsin where iron mining is the chief industry. No incidence rates of value could be obtained, but mortality tabulations from these counties showed lower rates than those occurring in the U. S. as a whole. In the Gogebic range in Gogebic County, Mich., and in Iron County, Wis., mortality rates for underground workers are practically the same as for surface workers of the same age. In the iron-ore mines of the Upper Peninsula, 20 years of underground work were required for silicotic nodules to become large enough to be seen on an X-ray film, and miners with silicosis who contracted pneumonia did as well as those with no silicosis. Workers with advanced silicosis often recovered from the pneumonia without any specific treatment. The 18 pneumonia deaths occurring among 6000 employees of mining companies during a 4-year period would give a yearly mortality of 65 per 100,000, which is the same as that for policemen, who have no silicosis. P. concludes that acute lobar pneumonia is an infectious, communicable disease but not an industrial disease. K.F.

Low draft loss flue-dust collectors at Connors Creek powerhouse. H. E. MACOMBER. *Combustion*, 14 [4] 30-35 (1942).—M. describes the development work leading up to the present design of wedge-type flue-dust collector, operating on the Van Tongeren principle, which is installed on five of the stoker-fired boilers. Test results are included. H.E.S.

Modern turbine developments. J. R. CARLSON. *Combustion*, 13 [9] 43-48 (1942).—C. reviews the progress in steam-turbine design as closely related to advances in metallurgy, discusses creep, shows how expansion is compensated, explains blade resonance, describes means for handling the problem of moisture and blade erosion in the low-pressure stages, and illustrates how cyclic vibrations of the generator are overcome. H.F.S.

1825-lb. pressure topping unit with special reference to forced-circulation boiler. F. S. CLARK, F. H. ROSENCRANTS, AND W. H. ARMACOST. *Combustion*, 14 [6] 32-38 (1942).—A general consideration and certain design details are presented of the new high-pressure C-E Controlled Force-Circulation steam-generating unit which is nearly double the capacity of any installed abroad. Recent operating and performance data are also included. H.E.S.

Pennsylvania post-graduate course in industrial medicine and hygiene. ANON. *Ind. Med.*, 11, 604 (Dec., 1942).—During January and February an advanced course in industrial medicine and hygiene is being presented in Philadelphia under the auspices of committees of county and state medical societies. The February sessions are devoted to dust hazards (minor organic and inorganic silica and the silicates, including asbestosis and silicosis) and to pottery-making as a siliceous occupation. K.F.

PATENTS

Artificial stone making method. P. W. JONES AND J. W. SWEZEY (Rostone Corp.). Can. 409,055, Dec. 1, 1940 (May 29, 1939).—A method of producing synthetic stone comprises mixing finely divided anhydrous aluminous material, aluminosilicic acid material, and an alkaline earth base, wetting thoroughly with water, forming and subjecting to a moist heat. C.M.H.

Synthetic ore. H. M. KRANER (Bethlehem Steel Co.). U. S. 2,308,984, Jan. 19, 1943 (June 14, 1941).—A synthetic ore comprising fine iron oxide containing material substantially free of silica and carbon intimately mixed with limestone to aid in fusion and fused and cast in molds as desired.