ASBESTOS TEXTILE INSTITUTE ABSTRACTS

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AIR HYGIENE:

1. Electrical Method for Investigating the Nature and Behavior of Small, Air Borne, Charged Particles. J. H. Daniel and F. S. Brackett. J. Ap. Phys. 22:542-54. My '51.

2. Engineering Phases of Plant Health Control. W. A. Cook. Chem. & Eng. N. 29:1517-18. Apr. 16 '51.

3. Health and Air Pollution. A Study on a Limited Budget. H. Heirmann. A. M. A. Archives. Ind. Hygiene & Occup. Med. 3:399-407. Ap. '51.

4. Investigation of Small, Air Borne, Charged Particles by an Electrical Method. J. H. Daniel. F. S. Brackett. A.M.A. Archives. Ind. Hygiene & Occup. Med. 3:505-19. May '51.

5. Plant Designed for Employees' Welfare; Controlling asbestos dust at Asten-Hill Mfg. Co. Arch. Rec. 110:121-3 N '51.

Check List of Air Pollution Control Ordinances. Iron Age 169:454. Ja 3 '51.

7. Sonic Agglomeration--A New Solution. Gordon Kiddoo, Chem. Eng. 58:154-156, May 1951.

In a sonic agglomeration aerosols--dusts, smokes, fumes, fogs or mists--are subjected to high-intensity sound. This sound causes the gas-borne pollutants to vibrate, collide and adhere together in clusters of different size for removal from the gas phase in a secondary separator such as a cyclone. The effeciency of sonic agglomeration is dependent upon 1) the frequency of the sound, 2) the size of particle, 3) the density of the particle and 4) the velocity of the gas. Ordinarily, only the first two factors are of commercial importance. The primary factor of a sonic agglomeration is to agglomerate the aerosol particles into larger particles of sufficient size to permit their removal from the gas in a secondary collection. Little separation of the pollutants from the gas if effected in the agglomerator itself. The particle collection efficiency of a sonic agglomeration system can be increased by introducing a fine spray of water into the agglomeration chamber. Devices for the generation of sound fall into three groups: 1) piston, 2) whistle and 3) siren. The piston-type sound generator includes magnetostriction devices, electro-magnetic devices and piezoelectric crystals. These are essentially low out-put devices and have not had large commercial application. Whistles have such low efficiencies that they are of no interest. The siren-type sound generators develop large amounts of power and are being successfully used in commercial application.

TECHNICAL:

8. How to Apply Insulation on Steam Turbines. Power Eng. 55:76-7. S '51.

9. Two Ways to Insulate Flanges, Valves and fittings. R. L. Davis. Pet. Eng. 23: C 54 Jl 15 '51.

10. Double Insulations for Safe Service. Safety Maint. & Prod. 101:51. Ap. '51.

11. Heat Insulation V. J. D. Blakeley. The Steam Engineer XXI, 247, 269-72, Ap. '52

Comparative performance as heat insulators evaluated for 1) 85% magnesia, 2) Kieselguhr, 3) white asbestos (chrysotile), 4) Fawn asbestos (amosite), 5) Blue asbestos (crocidolite), 6) glass wool and glass silk, 7) Rock wool and slag wool, 8) Expanded materials such as foamed concretes and slags, insulating refractory brick, expanded polymers, expanded virmiculite and related micaceous materials. Thermal conductivity curves for rigid slabs and pipe sections reveal that rigid rock wool slabs 18 lbs per cubic foot exhibit best performance above 500°F.

12. Heat Insulation IV. J. D. Blakeley. The Steam Engineer XXI, 246, 223-225.

Limiting hot face temperatures for various insulating materials are listed as follows:

Insulating Material	Limiting hot face temp.
Laminated Cellulose paper	150
Cork	160
Asbestos + 20% cotton	300
Asbestos + 5 % cotton	450
Glass fibre with starch bond	500
85% Magnesia	575
Asbestos-unbonded	800
Asbestos-bonded with silicate of soda	900
Glass fibre-unbonded	950
Rock wool	1200-1400
Kieselguhr-raw	1600
Kieselguhr-calcined	1800

GENERAL

13. Magnitude of Canadian Asbestos Industry. P. M. Malouf. Can. Min. J. 72:84-6 S '51.