

TABLE 3. - Rock-dusting in West Virginia

Year	Rock dust used, tons	Rock dust used per ton of coal mined in rock-dusted mines, pounds	Mines using rock dust	Rock dust used per mine, tons	Commercial mines
1936	32,495.00	-	133	244	542
1937	40,775.78	1.297	162	245	549
1938	42,698.83	1.562	179	239	536
1939 ^{1/}	12,587.62	1.596	168	-	-

^{1/} January to March.

It is common for interior surfaces of coal mines in many parts of the United States to "sweat" during the summer months as moisture in the air is deposited on the roof, ribs, and timber. In some mines the rock dust on the ribs and roof becomes "slimy" mud while in others it may be dry or moist. This absorption of moisture virtually destroys the effect of the rock dust. If coal dust, usually difficult to wet, is mixed with rock dust the entire mixture becomes wet; a thin layer of coal dust settling later on the surface of the wet rock dust is likely to become wet also, but the top of a thick layer of coal dust may remain dry.

On drying, some dusts remain caked and will not disperse readily, if at all, while others virtually regain their original dispersibility.

Sampling. - Passageways should be sampled at regular intervals to give an accurate cross section of the condition of the mine with respect to dust.

Analysis of dust sample. - A comparatively simple fire analysis may be used to determine the total combustible matter, except when limestone is used. The Bureau of Mines modification of the Taffand volumeter may be used to determine the combustible content of any kind of rock dust and is accurate within practical limits.

Extent of rock-dusting. - The Bureau of Mines recommends that all coal mines except anthracite be rock-dusted in every part and that rock-dust barriers be used as a secondary precaution but not in lieu of general dusting.

TYPES OF DISTRIBUTORS

Mechanical rock-dust distributors were assembled as early as 1911, in which year W. J. Murray, of the Victor American Fuel Co., developed a rock-dust distributor employing a fan, hopper, and flexible hose. This machine was used in the Delagua mine in Colorado. In 1914 the Bureau of Mines assembled a fan, nozzle, hopper, and rubber hose and mounted them on a truck, which was used principally for demonstration purposes.